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Fruit Tree Cultivars For Nebraska

William A. Gustafson, Jr., Professor and Extension Horticulturist

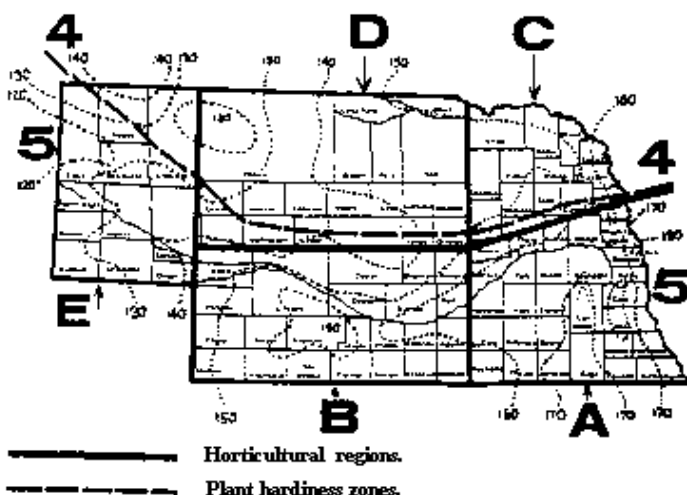
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Proper fruit cultivar (variety) selection is important for successful and satisfying results from the home gardener's efforts. Selection should be based on family preferences, available space and intended use of the fruits. Harvest can be spread over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

It is important that homeowners select the kinds of fruit plants or cultivars that are best adapted for cultivation in their area of the state. They must have adequate hardiness to survive the winter, heat and drought tolerance to thrive in the summer, and the ability to survive spring frosts.

Select plants of the proper size to fit the space available, and consider their aesthetic value in the landscape. Strawberries can be an effective ground cover, spring bloom of plums can be very attractive and fragrant, and similar attributes can be valued additions from fruits.

Fruit trees require pruning and other cultural practices. Most fruit plants require several pesticide applications per season to prevent insect and disease damage. Plant only as many plants as you have the time to care for.



Plant Hardiness Zones

Nebraska has two major plant hardiness zones -- Zone 4 and Zone 5 as shown on the map. If the cultivar listed has your zone number or lower it may be hardy in your area. The USDA Plant Hardiness Zones are subdivided into smaller units called "A & B" (not shown on the map) which represents 5-degree differentials within the 10-degree zone. These hardiness zones are based solely on average minimum winter temperatures.

Horticultural Regions

The horticulture regions (A-E) shown on the map 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 effect of all these factors determine true plant adaptability.

Rainfall, soil type, and summer heat must also be suitable for plant growth. Some conditions may be controlled by irrigation, soil modification, wind protection, partial shade, or humidity control. Frost dates, length of growing season and minimum winter temperatures are among the least readily controllable of the major factors governing the geographic adaptability of plants. Close adherence to these factors is important in cultivar selection.

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 you go west in Nebraska, it becomes more difficult to grow fruit trees. This difficulty results from low rainfall, low humidity, high wind movement and elevation and higher soil pH.

Woody fruit plants that are adapted to the very cold winters of Canada and the New England states will not survive the cold, semi-arid winters of Nebraska. This apparent lack of hardiness is mainly because of high wind velocity and low humidity associated with cold. The effect is called desiccation or drying out. A good example is the 'Jonathan' apple which is supposedly adapted to plant hardiness zones 4 & 5, but not horticulture region "E," because of the high elevation, lack of rainfall and desiccation by wind.

Length of Growing Season

The dotted lines on the map indicate the length of days of the frost free growing season for your area of the state. This information can be helpful in selecting fruit tree cultivars that will mature during your growing season. This map is only a guideline, however. Many fruit plants may be hardy to your geographic region and will bear fruit, but these fruit will not ripen.

Some areas of the state have "micro-climates," which refers to the climate of a small area. The climates 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, due mainly to protection offered by the many houses, streets and trees with their warming effect on the environment and protection from wind exposure. Microclimatic variations are due to exposure, slope, vegetation, and thermal capacity and conductive characteristics of the soil. These variations should be considered when selecting plants for adaptation out of their natural plant hardiness zones or horticultural regions.

There are many fruit tree cultivars that will grow in Nebraska _this NebGuide recommends only a few of each species. Recommendations are based on hardiness, maturity, adaptability and quality. The cultivars are listed in order of maturity (ripening). Mail order sources are listed at the end in alphabetical order by number.

APPLE CULTIVARS (Ripening season early July - mid-October)

Pollinizer Number	Cultivar	Zone (s)	Region (s)	Pollen Source Cultivars'	Use	Brief Description
1.	Lodi*	4-5	A-D	2,3,7,9,10	Fresh Dessert	Early blooming (biennial) early summer apple; clear yellow, crisp 13,or 14 flesh, fair quality. Fruit has short

	75-100□				Cooking	shelf life. Requires several pickings (<i>Sources - 4,5,6,7,8,10,11</i>).
2.	Jerseymac* 110-115	4-5	A-E	1,3,7,9,10 13, or 14	Fresh Dessert Cooking	McIntosh-type apple that is more attractive than McIntosh, and seems to color well under hot late summer conditions. Fruit bright red with good size, shows bruises easily and will store about one month. Susceptible to scab and fire-blight (<i>Source - 10</i>).
3.	Wealthy* 120-125	-5	BE	1,2,8,10,13 or 14	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 (<i>Sources - 3,4,5,7,8,11</i>)
4.	Spartan* 120-140	4-5	A-E	1,2,3,7,8,9,10 13, or 14	Fresh Dessert Cooking	A firmer, attractive McIntosh type, with more color than McIntosh. Excellent dessert quality (<i>Sources - 8,11</i>).
5.	Honeygold* 125-140	4-5	A-E	1,2,3,4,6,8,9 10,11,12,13, or 14	Fresh Dessert Cooking	A hardy substitute for Golden Delicious. Susceptible to fire blight. Medium to large size, golden to yellow green. Flesh is crisp, yellow, juicy, and has a flavor similar to Golden Delicious (<i>Sources - 4,7,11</i>).
6.	Haralson 130-145	4-5	B-E	9	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 (<i>Sources - 1,3,4,5,6,8</i>).
7.	Jonathan and Jonathan types 130-150	4-5	A-D	1,2,3,8,9,10 or 13	Fresh Dessert Cooking	Susceptible to cedar-apple rust and fire-blight. Excellent fall apple, good for cider making, excellent for pies and desserts (<i>Sources - 3,4,6,7,8,9,13,14</i>).
8.	Northwestern Greening* 135-155	4-5	B-E	7,9,10,13,or14	Cooking	Culinary apple; large fruit with smooth, clear pale yellow skin. Flesh is crisp and mild; good winter storage (<i>Sources - 1,4,5,9</i>).

9.	Golden (Yellow) Delicious* 140-160	4-5	A-D	1,2,3,7,8,10 13,or14	Fresh Dessert Apple Sauce	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 (<i>Sources - 3,4,6,7,8,11,13,14</i>).
10.	Red Delicious** 140-160	4-5	A-C	1,2,3,6,8,9 13,or14	Fresh Dessert	A popular dessert cultivar grown throughout the apple producing area of the country. No processing value. Difficult to grow properly; buy from your local commercial orchard (<i>Sources - 2,3,5,7,9,10,11</i>).
11.	Grimes Golden** 140-150	4-5	A-D	6,7,8,9,10,13, or 14	Fresh Dessert Cooking	Hardy yellow winter apple with good keeping quality. Spicy flavored; flavor improves with storage (<i>Sources 2,6,8,9,10,11</i>).
12.	Rome* 150-160	5	A-B	5,6,9,10,11,13 or 14	Cooking	Excellent baking and cooking apple, late blooming, pleasant flavor, firm. Keeps through mid-winter (<i>Sources - 7,10,11</i>).
13.	Regent* 150-165	4-5	A-E	1,2,3,4,5,6,7 8,9,10,11,12 or 14	Fresh Dessert Cooking	Hardy, high quality dessert apple that is medium size, bright red, with obscure stripes. Flesh is crisp and juicy. Susceptible to fire blight and scab (<i>Sources - 4,7,8</i>).
14.	Fireside 150-165	4-5	A-E	1,2,3,4,5,6,7 8,9,10,11,12 or 13	Fresh Dessert Cooking	Extra hardy, excellent keeper, Red Delicious type, large size, attractive red. Flavor is rich and very high quality, sweet (<i>Sources - 4,5</i>).
15.	Winesap** 160-180	5	A	1,2,3,5,8,9,13 or 14	Fresh Dessert Cooking	Good quality winter storage apple that has good keeping qualities. Flavor peaks in February (<i>Sources - 3,4,5,6,7,8,9,11,14</i>).

‡ Days to mature fruit from bloom.

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

** Self-unfruitful.

§ Refers to pollinizer number in first column.

APRICOT CULTIVARS(Ripening season - July.) Apricots are hardy to Zone 5, but they bloom very early in the spring and so the flowers and small fruits are often killed by a late spring frost. Some homeowners have had excellent results with seedling trees. Trial plants of cultivars listed in nursery catalogs can be used (Sources - 3,4,5,6,7,8,10,12,13).

CHERRY CULTIVARS (Ripening season - July)

Pollinizer Number	Cultivar	Zone (s)	Region (s)	Pollen Source Cultivar (s)'	Brief Description
Sweet Cherry Cultivars - trial plantings only (plant in a very protected location).					
1.	Starkrimson	5	A-B	Self-fruitful	Semi-dwarf 1014 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 (<i>Source - 11</i>).
2.	Yellow Glass or Gold 75-85 [‡]	5	A	1	Hardest of sweet cherries, large bright yellow fruit, very high quality (<i>Sources - 2,3,6,7,11</i>).
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 (<i>Sources - 2,4,5,6,7,8,9,10,11</i>).
2.	Montmorency [†]	5	A-E	Self-fruitful	Less hardy than North Star or Meteor (<i>Sources - 2,3,5,6,7,8,10,11</i>).
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 (<i>Sources - 3,4,5,6,7,8,9,11</i>).
[‡] Days to mature fruit from bloom. * All cultivars listed are self-fruitful and self-pollinating. † The Montmorency cultivar can be bought on dwarfing rootstock, but is not always dependable.					

NECTARINE CULTIVARS (Ripens late July - early August). Difficult to grow, susceptible to insects and disease.

Pollinizer	Zone	Region	Pollen Source
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Number	Cultivar	(s)	(s)	Cultivar (s)	Brief Description
1.	Hardired 100-105□	5	A-B	Self-fruitful	Hardest, uniform ripening yellow freestone, red skin color, good quality tolerant of bacterial spot and brown rot disease.
<p>* No pollinizer cultivar is needed. ‡ Days to mature fruit from bloom.</p>					

PEACH CULTIVARS (Ripens mid-July to late August). For very protected sites peaches are a backyard fruit in the city wide a good microclimate exists.

Pollinizer Number	Cultivar	Zone (s)	Region (s)	Pollen Source Cultivar (s)	Brief Description
1.	Reliance 85-105□	5	A-B	Self-fruitful	Hardest, yellow-fleshed, freestone, fair quality (<i>Source - 2,3,5,7,9,10,11</i>).
2.	Redhaven ¹ 95-105	5	A-B	Self-fruitful	Hardy, very early ripening, firm, gold flesh, freestone, high quality (<i>Source - 1,2,3,4,6,7,10,11</i>).
3.	Madison 125-130	5	A-B	Self-fruitful	Extra-hardy, yellow-fleshed, freestone, medium quality (<i>Sources - 7,9,10,11</i>).
<p>† Most peach cultivars are available on dwarfing rootstocks, not totally reliable. Seedling rootstocks are more dependable. * All cultivars listed are self-fruitful and self-pollinating. ‡ Days to mature fruit from bloom. ¹ The Redhaven cultivar is also available in a natural genetic dwarf.</p>					

PEAR CULTIVARS (Ripens early August early October). Dwarfing rootstocks are not suggested for pears because the quince rootstocks are very susceptible to fireblight, and are also more susceptible to winter injury than seedling rootstocks.

Pollinizer Number	Cultivar	Zone (s)	Region (s)	Pollen Source Cultivar (s)	Brief Description
1.	Moonglow 105-130□	5	A-B	4 or 5	Very resistant to fire blight, good flavor, early-ripening (<i>Sources -2,6,8,10,11</i>).
2.	Magness ¹ 115-140	5	A-B	1,4 or 5	Very resistant to fire blight, fruit light colored, sweet and aromatic (<i>Source - 6</i>).
3.	Seckel 120-140	5	A-B	1,4 or 5	Some fire blight resistance, easy to grow, small fruit, excellent flavor, yellow-brown pear (<i>Sources - 2,3,6,8,10,11</i>).

4.	Lincoln* 125-145	4-5	AD	1 or 5	Hardest of the pear cultivars, good flavor. Produces heavy crop yearly (<i>Source - 5</i>).
5	Luscious* 155-165	4-5	A-D	1 or 4	High quality, hardy, dessert pear for north. Introduced from South Dakota. Resistant but not immune to fire blight (<i>Sources - 2,4,8</i>).
<p>§ This cultivar does not produce good pollen so must be planted with two other cultivars if all are to produce fruit. ‡ Days to mature fruit from bloom. * Partially self-fruitful, requires pollinizer for good yields.</p>					

PLUM CULTIVARS

Pollinizer Number	Cultivar	Zone(s)	Region (s)	Pollen Source Cultivar (s)'	Use	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 (<i>Sources - 3,4,5,6,7,8,10</i>).
2.	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 (<i>Sources - 2,3,4,5,6,7,8,9,10,11</i>).
3.	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 (<i>Sources - 3,6,7,10,11</i>).
4.	Toka (American type)	4-5	A-E	5	Fresh Dessert Preserves	Very hardy plum; medium-sized, richly flavored, apricot colored (<i>Sources - 1,3,4,8,9</i>).
5.	South Dakota (American type)	4-5	AD	4	Fresh Dessert Preserves	Hardy, vigorous, productive; medium size fruits, with reddish-yellow skin. Ripens in September (<i>Source - 5</i>).
<p>**Self-unfruitful, requires pollinator to be fruitful.</p>						

Names and Addresses of Sources*

Source, Nursery Name, Address and Telephone

1. Bergenson Nursery, Rt. 1, Box 84, Fertile, MN 56540, (218) 945-6988
2. Burpee, W. Atlee & Co., 300 Park Ave., Warminster, PA 18974-0001, 1-800-333-5808
3. Early May Seed & Nursery Co., Shenandoah, IA 51603
4. Farmer Seed & Nursery Co., 818 NW. 4th St., Fairbault, MN 55021, (507) 334-1623
5. Gurney Seed & Nursery Co., Yankton, SD 57079
6. Henry Field Nursery Co., Shenandoah, IA 51644
7. Hilltop Nurseries, Inc., P.O. Box 578, Hartford, MI 49507, 1-800-253-2911
8. Inter-State Nurseries, 1800 Hamilton Rd., Bloomington, IL 61704-9609 (309) 663-9551
9. Jung, J.W. Co., Randolph, WI 53956-0001, (414) 326-4100
10. Mellinger's, 2310 W. South Range Rd., North Lima, OH 44452-9731, (216) 549-9861
11. Stark Bro's Nurseries & Orchards Co., Louisiana, MO 63353, 1-800-325-4180
12. Nolin River Nut Tree Nursery, 797 Port Wooden Rd., Upton, KY 42784 (502) 369-8551

*This listing is not complete. Check with your local nursery and/or garden center, and with other nursery catalogs for suggested fruit and nut tree cultivars.

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