Edible Forest





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RTH DAKO









Del Rae and Ron Williams Bell Bank West Acres Development, LLP Doosan Bobcat Thrivent Action Team Seed Money Ina Lyon

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Plant cultivars/selections in or planned for the edible forest – Summer, 2020

<u>1a Apple Twist</u> - 2 trees with trunks twisted together, so get two kinds of apples in the space taken by one tree. The trunks will supposedly grow together over time. Several cultivar combinations are available locally. This tree has Candycrisp and Haralson apples. (Menards)

1a1. <u>Candycrisp</u> – Crisp, juicy and sweet, with aroma of pears. Similar to Golden Delicious in appearance – golden skin with a pink blush. Tree is vigorous, upright, and a heavy bearer. An all-purpose apple, but best for fresh eating. Cold-hardy in zone 4a. Ripens in early October.

1a2. <u>Haralson</u> – Very firm and tart. A natural semi-dwarf tree that produces medium-sized red fruit. Stores several months. Excellent for pies and also for fresh eating for those who prefer eating hard, tart apples. Cold-hardy in zone 3a. Ripens in mid- to late October.

<u>1b Multi-variety apple</u> – 1 tree with multiple cultivars of apples to be grafted onto different branches. The base tree is a Dolgo crabapple, which is a near-full-size tree rootstock. Dolgo crabapple is hardy to zone 2, has a vigorous root system, is graft compatible with most apple cultivars, and is a great pollenizer of other apples. Multii-variety apple trees can be purchased on-line or grafted yourself. Purchased trees tend to have three or five cultivars, often not all hardy in ND, and the form is difficult to maintain. On-site grafting allows a choice of preferred cultivars and selections, and a good yield of multiple kinds of apples rather than an excess of one kind of apple. (Northern Tree Specialties)

2a1. Dwarf Honeycrisp apple – Honeycrisp apple grafted onto Vineland-1 rootstock, which will result in a tree about 10 feet tall. Trees on dwarf rootstocks need to be staked because the root system doesn't reliably hold them upright. The fruit on dwarf trees is full-size and tends to start production sooner than semi-dwarf or full-size trees. Apple trees on dwarf rootstocks tend to have a relatively short lifespan in our region. New production methods in orchards use dwarf rootstocks with the apples supported by a trellis system. <u>Honeycrisp</u> – aptly named for its sweet and exceptionally juicy fruit that is often described as "explosively crisp". The tree has low to medium vigor and excellent scab resistance. Primary use is for fresh eating. Hardy in parts of zone 4a, but has cold-hardiness issues some years in areas colder than Fargo. Ripens in late September. (Fedco Seeds)

<u>2a2. Semi-dwarf Honeycrisp apple</u> – Honeycrisp apple grafted onto M111 rootstock, which will result in a tree about 15 feet tall. Staking not needed. The fruit on semi-dwarf trees is full-size. As with dwarfing rootstocks, the lifespan on semi-dwarf rootstocks is shorter than on standard rootstocks without special care. (Fedco Seeds)

<u>2a3. Standard Honeycrisp apple</u> – Honeycrisp apple grafted onto a standard rootstock, which will result in a full-size tree, about 25 feet tall. (Fedco Seeds)

<u>2b1. Zestar! apple</u> – Large, crunchy, juicy red fruit with a sprightly sweet-tart flavor. The tree is vigorous, upright and very susceptible to apple scab. Excellent for both fresh eating and cooking. Cold-hardy in zone 4a and at least some zone 3b sites. Ripens in late August to early September (the combination of crispness and early ripening is unusual). On standard rootstock. (Sheyenne Gardens)

<u>2b2. SnowSweet apple</u> – Medium-size, bronze-red over cream fruit with firm to crisp, persistent snowywhite flesh that's sweet with a slight tart balance and rich overtones. Cold-hardy in zone 4a and at least some zone 3b sites. Above average fire blight resistance, average or better apple scab resistance. Late ripening, about 2 weeks after Honeycrisp. On standard rootstock. (To be planted in 2021, from Sheyenne Gardens)

<u>3a. Multi-variety pear</u> – 1 tree with multiple cultivars of pears to be grafted onto different branches. The base tree is a McDermand pear which is a near-full-size tree rootstock. McDermand pear is hardy to zone 2 and has a vigorous root system. Multii-variety pear trees can be grafted yourself. On-site grafting allows a choice of preferred cultivars and selections, and a good yield of multiple kinds of pears rather than an excess of one kind of pear. (Northern Tree Specialties)

<u>4a. Dwarf Shipova</u> – Pear (*Pyrus communis*) x Mountain-ash (*Sorbus aria?*) hybrid, designated x *Sorbopyrus auricularis*. Fruit is semisolid, buttery, sweet, and fragrant. They are yellowish-brown, sometimes with a reddish blush, and look like a somewhat flattened pear (similar to Asian pears) and about 2 inches diameter. Dwarf Shipova trees are reported to fruit a few years sooner than standard Shipova, possibly as soon as 3 to 4 years. Cold hardy to zone 3. Shipova is somewhat self-fertile, but can have improved fruit set with a pear pollenizer. (Burnt Ridge Nursery)

<u>4b. Rabina Mountain-ash</u> – A cultivar of European mountain-ash. Has good tasting fruit with a sweettart, non-bitter flavor. The fruit turns bright orange in late summer. The tree grows to about 15 feet tall. The fruit is good for fresh eating, juice, preserves, pastry and wine. Somewhat self-fertile, but generally more productive when pollenized by pear or Shipova. Cold-hardy to zone 3. (Burnt Ridge Nursery)

5. Juneberry – Cultivars of *Amelanchier alnifolia* alone or hybridized with *A. stolonifera*. Also called saskatoon berries. The berries appear similar to blueberries, but they are in the apple family. The purple to black berries are generally sweet, with varied flavors among cultivars, somewhat similar to blueberries, but with an almond background flavor. The seeds are larger than in blueberries, but are soft and tasty. The fruit is mostly used for fresh-eating and baking. The shrubs range in height from 4 to 20+ feet tall, and in form from squat to columnar. Spread by suckers is variable among cultivars. The fruit usually ripens the end of June or early July in the Fargo area.

5a. <u>Honeywood</u> – Mid-sized berry with sweet/tangy mix of flavors. Mid-sized shrub, about 15 feet tall. Relatively high yield. Relatively late blooming. Low suckering rate. Currently one of the most popular cultivars. (HoneyberryUSA)

5b. ND1-2 – NDSU Experimental Line (Northern Tree Specialties)

5c. ND71-1 – NDSU Experimental Line (Northern Tree Specialties)

<u>6a. Multi-variety apricot</u> – 1 tree with multiple cultivars and selections of apricots to be grafted onto different branches. The base tree is a Manchurian apricot seedling from a tree that is very vigorous, self-fertile, and annually productive in the Fargo area. Multii-variety apricot trees can be grafted yourself. On-site grafting allows a choice of preferred cultivars and selections, and a good yield of multiple kinds of apricots rather than an excess of one kind of apricot. (Northern Tree Specialties)

<u>6b. Brookcot apricot</u> – Juicy with a good flavor for fresh eating or canning. Semi-freestone. Bright yellowish-orange with a red blush. Fruit size is about 1.25" diameter. Self-pollinating, but yields are higher with cross-pollination. Relatively late-blooming. Tree growth habit is upright, to 20-25 feet tall. Cold-hardy to zone 3. (Planted in 2021, Sheyenne Gardens)

<u>7a. Pembina plum</u> – Juicy and sweet yellow flesh with a tart skin. Skin is red with a bluish waxy coating. Large fruit, about 2 inches diameter. For fresh eating, baking, and canning. Half-freestone. Cold-hardy to at least zone 3. Tree about 15 feet tall. *Prunus nigra* x *P. salicina* hybrid. Requires cross-pollination from another cultivar (*Prunus americana* best). (Sheyenne Gardens)

<u>7b. Multi-variety plum</u> – 1 tree with multiple cultivars and selections of plums (and other stone fruits) to be grafted onto different branches. The base tree is a Bounty plum, *Prunus nigra* hybrid, which is reportedly non-suckering. Multi-variety plum trees can be grafted yourself. On-site grafting allows a choice of preferred cultivars and selections, and a good yield of multiple kinds of plums rather than an excess of one kind of plum. (Northern Tree Specialties)

<u>8a1. Northstar cherry</u> – A red-skinned, red-fleshed tart cherry, primarily for baking. Heavy producer. Cold-hardy to zone 4. Self-pollinating. Naturally dwarf tree, growing to about 15 feet tall. (Sheyenne Gardens)

<u>**8a2. Meteor cherry**</u> – A red-skinned, yellow-fleshed tart cherry, primarily for baking, very similar to Montmorency cherry. Cold-hardy to zone 3. Self-pollinating. Naturally dwarf tree, growing to about 10 feet tall. (Fedco Seeds)

<u>9. Hardy peach</u> – Fruit is 1.5-2.5 inches diameter, fuzzy light yellow skin with red blush, white- or yellowish-white flesh, mixed sweet and tart flavor. The flavor won't remind you of a typical peach, so it is best to think of these almost as a different fruit. It is the only peach that has good fresh-eating and baking qualities that is relatively hardy in this region. Good for fresh eating, excellent for pie. Self-pollinating. Flower buds hardy at -40, but twigs may have some dieback at below -30. (Northern Tree Specialties)

10. Hybrid hazelnuts – Hybrids from a local on-going breeding program using American and European genetics, with an emphasis on developing large nuts with excellent flavor, a thin shell on plants with good form. The fresh-eating nut selections have the typical filbert flavor, but are more buttery or smooth. The plants grow to about 12 to 18 feet tall and have limited suckering. Selections 2N-25N and 5-63 are clones of the best current fresh-eating selections and selection 2T-160-3 is a seedling of an excellent pollenizer. (Riverbend Hazelnuts)

<u>11a – Ultra-Northern pecan</u> – A seedling of cold-hardy pecans, selected as a pollen source for Burton hican. The source was selected as being exceptionally cold-hardy, with nut production as a secondary consideration. It will produce pecans, but not of commercial quality. The tree may reach about 70 feet tall. Nuts may not mature every year in Fargo. Grafted onto a pecan rootstock. (Perfect Circle Farm)

<u>11b – Burton hican</u> – A grafted hybrid of shagbark hickory and pecan. The nuts look similar to pecans, and have a flavor with a mix of hickory and pecan, and is thought by some to make the best flavored nut in existence. Burton hican is a regular bearing hican with a nice-sized nut. The tree may reach about 45 feet tall. Nuts may not mature every year in Fargo. Grafted onto a pecan rootstock. (To be replaced)

<u>11c – Weschcke hickory</u> - A shagbark/bitternut hickory hybrid, among the few with nuts that mature early enough for Zone 4a, and possibly 3b with shelter. Nuts mature late September to early October in North Dakota. Relatively small-sized, thin-shelled nuts that break out in half kernels with excellent flavor. Tree is hardy to Zone 3. Pollen-sterile, so another tree is needed as a pollen source, or a pollen source can be top-work grafted when the tree is large enough. Pecan rootstock. (Grimo Nut Nursery).

<u>11d – Porter shagbark hickory</u> – Produces high quality nuts that mature relatively early, about two weeks after Weschcke. Medium-sized, thin-shelled nuts that break out in half kernels with good flavor. This cultivar will pollenize Weschcke hickory and is partially self-fertile, so can be grown as a pollenizer, but the nuts will not mature in North Dakota every year. Tree is hardy to zone 3. (Grimo Nut Nursery)

<u>12. Seedless grapes</u> – These represent the most cold-hardy seedless table grapes available.

12a1. <u>Somerset seedless grape</u> – A small red grape with a sweet, unique, somewhat strawberry-like flavor and a juicy, firm texture. Early mid-season ripening. Edible from the time it becomes pink in August, and changing flavor as it fully ripens to a medium red. Forms small to medium-sized clusters on medium-sized vines. This is the most cold-hardy seedless grape cultivar, reportedly to -35 F. Primarily for fresh eating, but also good for juice and jelly. Will die to the ground after some winters unless sheltered. (Sheyenne Gardens)

12a2. <u>Trollhaugen seedless grape</u> – A medium-sized blue (almost black) grape with a sweet, mild Concord-like flavor and a slip-skin. Very early ripening. Forms tight medium-sized clusters. Suitable for fresh-eating and wine. Cold-hardy to about -22 F, and will die to the ground most winters unless sheltered. (Planted in 2021, Northern Tree Specialties)

12b1. <u>Mars seedless grape</u> – A medium-sized blue grape with a typical table grape (labrusca) flavor and texture, and thick slip-skin. Produces medium clusters. Early ripening. Color is very dark blue when fully mature. High yielding. Generally reported as hardy to -15 F, (but some reports of much colder) so will die to the ground most winters unless sheltered. (Planted 2022, Jung Seed)

12b2. <u>Reliance seedless grape</u> – A medium-sized red grape with a strawberry-like labrusca flavor and aroma, and a very thin tender slip-skin. Produces large, loose clusters. Early ripening. Suitable for fresheating and juice. Relatively disease-susceptible. Generally reported as hardy to -15 F (but multiple reports to about -30 F), so may die to the ground most winters unless sheltered. (Pense Nursery)

12c1. <u>St. Theresa seedless grape</u> – A medium-sized blue grape with a Concord-like flavor and a slip-skin. Late ripening. Color is almost black when fully ripe. May contain small crunchy pits rare enough to be considered seedless. Cold-hardy to -30 F, so may die to the ground some winters unless sheltered. Also called 'Montreal Blues'. (Paul Bunyan Nursery)

12c2. <u>Petite Jewel seedless grape</u> – A small red grape with sweet, rich, spicy flavor. Very early ripening. Produces medium-sized clusters on vigorous vines. Generally considered cold-hardy to -20 F, but multiple reports of hardy to about -30 F, so may die to the ground some winters unless sheltered. (To be planted)

<u>13. Arctic beauty kiwi</u> – *Actinidia kolomikta*, also called kolomikta kiwi, grows as a vigorous vine. Coldhardy to zone 3. Some cultivars have variegated leaves and are planted as ornamentals.

13a. <u>September Sun arctic beauty kiwi</u> – Produces sweet, flavorful, medium-large emerald-green fruit. Relatively productive. Has attractive green leaves with pink and red overlays. Also called Sentyabraskaya where it originated in Russia. Requires kolomikta male to set fruit. (Burnt Ridge Nursery)

13b. <u>Red Beauty arctic beauty kiwi</u> – Produces sweet, flavorful, raisin-sized fruit. Requires kolomikta male to set fruit. (To be replaced)

13c. <u>Arctic Beauty male kiwi</u> – A male selection to serve as a pollen source for female cultivars. It has variegated green, white, and pink leaves. (Burnt Ridge Nursery)

<u>13d. Viktor arctic beauty kiwi</u> – Produces sweet and tasty fruit, up to twice as large as any other Arctic Beauty variety. Requires kolomikta male to set fruit. (To be replaced)

14. Honeyberries – Also called haskaps. Some people refer to the Japanese varieties as haskap and to the Russian varieties as honeyberry, and some lump them together into one or the other name. The fruit was developed in Russia and Japan, and is now also being bred in North America. They are generally grouped into early, mid-season and late groups based on when the fruit ripens. Mostly early-ripening cultivars were planted here because they ripen before spotted wing drosophila becomes a problem in most years. Two plants that have overlapping flowering times are required for cross-pollination. Many cultivars are exceptionally cold-hardy, to zones 1 or 2. The flavor is difficult to describe. The usual description of a combination of blueberry and raspberry does not seem to fit. They take a bit of getting used to. They are used for fresh-eating, baking, juice, wine, and drying.

14a. <u>Aurora</u> – A very large berry (2.7 g) that has among most people's favorite flavor. The shrub is 5-6' tall, 5' wide. An early mid-season ripener, but blooms with early-season cultivars. Very productive. Uneven ripening. (Northern Tree Specialties)

14b. <u>Berry Smart Blue</u> – Also known as Czech 17. A medium berry that is tube-shaped. One of the more tart cultivars when not fully ripe. The shrub is 6-8' tall, 6' wide. An early ripener. Very high yielding. (Fedco Seeds)

14c. <u>Boreal Beast</u> – A large berry (2.0 g) with excellent flavor and nice aftertaste and aroma. Fruit is very firm with a thick oval shape. Good productivity. A late bloomer and ripener. The shrub is upright in form with fast growth. (HoneyberryUSA)

14d. <u>Cinderella</u> – A medium berry with relatively sweet flavor. An early season ripener. The shrub is 3-4' tall and 3' wide (smaller than most), with a generally upright and rounded overall form. (Planted in 2021, Sheyenne Gardens)

14e. <u>Tundra</u> – A medium berry (1.5 g) with a relatively mild flavor. The shrub is 4-5' tall, 6' wide. An early ripener. Open bush, which allows good visibility when picking. Ripe berries detach easily. Relatively low yield. (Pense Nursery)

14f. <u>Indigo Treat</u> – A small berry (1.3 g) that is relatively sweet and very firm. The shrub is 4-5' tall, 5+' wide. A somewhat open bush. An early ripener. High yielding. (Fedco Seeds)

14g. <u>Indigo Gem</u> – A small berry (1.3 g) that is relatively sweet and has a slightly chewy texture. The shrub is 4-5' tall, 5+' wide. An open shrub. An early ripener. (Planted in 2021, Bergeson Nursery)

14h. <u>Boreal Blizzard</u> – A very large berry (2.8 g) with excellent flavor similar to Aurora. Fruit is firm with a surfboard shape. Highly productive. A late bloomer and ripener. The shrub is 6-7' tall and upright in form with fast growth. (HoneyberryUSA)

14i. <u>Blue Banana</u> – Large berry with very sweet flavor. The shrub is 5' tall and wide. An early ripener. (Planted in 2021, Berries Unlimited)

14j. <u>Honey Delight</u> – Medium berry with very sweet flavor. The shrub is 5' tall and wide. An early ripener. (Planted in 2021, Berries Unlimited)

15. Aronia berries – Also called black chokeberries. Native to central and eastern North America, but first developed as a fruit species in northern Europe. The plant is in the rose family, and the fruit is a pome, like an apple. The ½ inch diameter berries are too astringent for most people to eat fresh, but some people say the astringency is tolerable when the berry is fully ripe. The berries ripen in late summer in clusters on the outside of the plant and can be left for a few weeks after ripening without loss of quality. The fruit is used primarily for juice, but also for jelly, baking and wine. The plants thrive in a wide range of conditions, and are cold-hardy to at least zone 3. Self-pollinating. Among the most care-free fruiting plants.

15a. <u>Viking</u> – Violet-black berries. Shrubs are 3-6' tall. Developed in Finland (1980). (Paul Bunyan Nursery)

15b. Nero – Jet-black berries. Shrubs are 3-4' tall. Developed in Poland. (Whitman Farms)

15c. <u>McKenzie</u> – Purplish-black berries. Shrubs are 6-12'tall. Russian seed source released by NRCS Plant Materials Center, Bismarck, ND (2008). (Burnt Ridge Nursery)

<u>16. Red Currants</u> – There are many cultivars. Those most likely to grow well and be good for fresheating were selected. Hardy to zone 3.

16a. <u>Rolan</u> – Large glossy red berries in long strigs. Taste is sweet with slightly acidic flavor. Used as dessert variety, but also for processing. Ripens mid-season. Shrub is upright. Resistant to leaf spot and mildew. (Whitman Farms)

16b. <u>Jonkeer von Tets</u> – Variable-sized (avg. medium size) dark red berries in short to medium strigs. Taste is relatively sweet, and had the most pleasant flavor of those tested at the Carrington Research & Extension Center. Shrub is relatively short, with erect stems and vigorous growth. Ripens early. Relatively resistant to powdery mildew. (Whitman Farms)

16c. <u>Cascade</u> – Large, bright, shiny-red berries. Taste is relatively sweet and excellent. Ripens early. Bush lodges, so needs appropriate pruning or support. Resistant to mildew and leaf spot. (Planted in 2021, Whitman Farms)

<u>17. White currants</u> – Actually red currants with little or no red pigment. Tend to be much less tart than red currants and more likely to be good for fresh-eating. Hardy to zone 3.

17a. <u>White Imperial</u> – Medium to large white, translucent berries with a pinkish blush in large clusters. Among the best-tasting white currants. Ripens mid-season. Shrubs are about 4' tall, vigorous, spreading and productive. Excellent resistance to powdery mildew. (Whitman Farms)

17b. <u>White Cherry</u> – White, translucent berries. Reported to be one of the most delicious currant cultivars. Shrubs are upright and vigorous. (Planted in 2021, Whitman Farms)

17c. <u>Pink Champagne</u> – Medium-sized pink translucent berries on long strigs. Flavor is sweet and less acidic than red currants, suitable for fresh-eating, baking, and preserves. Ripens late season. Shrubs 3-5' tall. Resistant to powdery mildew. (Whitman Farms)

<u>18. Black currants</u> – There are many cultivars. Those most likely to grow well and be good for fresheating were selected. Hardy to zone 3. Black currants are rarely for fresh-eating, so the best ones may be marginal.

18a. <u>Titania</u> – Large black berries on medium long strigs. Berries have high acidity, mild flavor, are aromatic, and are used primarily in juice and jam. Berries ripen uniformly in early to mid-summer, and keep well on the shrub. Shrubs are about 6' tall and wide with medium density. High-yielding, but fruit weight can cause canes to sprawl. Resistant to white pine blister rust and fairly resistant to powdery mildew. (Whitman Farms)

18b. <u>Black Down</u> – Large jet-black berries. Berries are juicy, sweet, very flavorful, and aromatic. Used for fresh-eating, juice, and preserves. Produces consistent large crops. Shrub is small and upright. Resistant to powdery mildew. (Whitman Farms)

18c. <u>Minaj Smyriou</u> – Large, firm black berries. Berries are mild-flavored and are used primarily for drying and cooking. Ripens early season. Shrub grows vigorously to 6' tall, and needs regular pruning. Immune to white pine blister rust and very good resistance to powdery mildew. (Whitman Farms)

<u>19. Gooseberries</u> – Gooseberries like half day to full sun and well-drained soil. They are self-fertile, often hardy to minus 40°F., USDA Zone 3, and grow 2-3 ft. in height. Some cultivars have many thorns. Powdery mildew is a disease of concern.

19a. <u>Hinomaki Red</u> – Medium-sized (3.6 g) dark red berries. Outer skin is tangy while the flesh is sweet and juicy with excellent flavor. It was the only recommended gooseberry in NDSU Carrington Fruits Project among 13 tested cultivars, based on fresh flavor and disease resistance. Used for fresh-eating pie, and preserves. Ripens early season. Shrub is vigorous and upright. Very productive. Good resistance to powdery mildew. (Whitman Farms) 19b. Jahn's Prairie – Large ¾ inch oval-shaped reddish-pink berries. Berries are a sweet-tart mix and flavorful. Eric Bergeson says it's the best fresh-eating gooseberry he knows of – a sweet and sour mixture of good flavor. Minimally thorny. Shrub is upright, grows to about 5' tall, and can have sprawling branches. Very productive. Very resistant to powdery mildew and leaf spot. (Whitman Farms)

19c. Jeanne – Medium-sized (5 g) deep maroon-red, thin-skinned berries. The flavor is full and sweet, and this is considered a dessert gooseberry. The owner of Whitman Farms finds Jeanne to be the only gooseberry that is favorable for growing, due to the limited thorns and disease resistance combined with its delicious flavor. Even with medium-sized berries, yields are higher than other cultivars due to disease resistance. Shrub tends to be spreading, growing about 5' tall and wide. Late-season ripening over a period of one week. Highly resistant to powdery mildew and white pine blister rust. Damage from aphids and sawflies is less severe than other European gooseberries. (Whitman Farms)

20. Red Raspberries – Red and yellow raspberries are of two basic types, based on whether they bear fruit on previous year's canes in early summer (floricane) and/or on current-year canes in late summer (primocane). For floricane production, the canes need to be cold-hardy enough to survive the winter. For primocane production, the primocanes need to flower early enough for fruit to ripen before the first fall freeze. Most second-year canes die, or at least grow poorly, after their second winter, so should be pruned off before new growth begins. If only primocane production is needed, all canes can be cut or mowed off each spring, which makes pruning simple.

20a1. Joan J – Floricane and early primocane production in Fargo area. Medium-sized, firm dark red berries, Very good flavor. Medium yield. Thornless. Good floricane cold-hardiness in Fargo area. (NDSU trial)

20a2. <u>Caroline</u> – Floricane and early primocane production in Fargo area. Large, firm medium-red berries. Very good flavor. Good floricane cold-hardiness in Fargo area. (NDSU trial)

20a3. <u>Polana</u> – Floricane and very early primocane production in Fargo area. Medium-sized, very firm dark red berries. Very good flavor, with low sugar, but not tart. High yield. Excellent floricane cold-hardiness in Fargo area. (NDSU trial)

20b1. <u>Killarney</u> – Floricane production in Fargo area, with relatively early ripening. Medium-sized, firm, red berries. Very good flavor. Medium yield. Very good floricane cold-hardiness in Fargo area. (NDSU trial)

20b2. <u>Nova</u> – Floricane production in Fargo area. Medium-sized, very firm red berries. Good to very good flavor. High yield. Very good floricane cold-hardiness in Fargo area. (NDSU trial)

20b3. <u>Prelude</u> – Very early floricane and some primocane production in Fargo area. Small to mediumsized, moderately firm, dull-red berries. Good flavor. Because of it's very early ripening, substantial harvest can occur before spotted wing drosophila becomes a problem. Excellent floricane cold-hardiness in Fargo area. (NDSU trial)

20c1. <u>Latham</u> – Floricane production in Fargo area, with late ripening. Small, moderately firm, mediumred berries. Good flavor. Medium yield. Very good floricane cold-hardiness in Fargo area. (NDSU trial)

20c2. <u>Autumn Bliss</u> – Floricane and early primocane production in Fargo area. Small, moderately firm, medium-red berries. Very good flavor. Medium yield. Fair floricane cold-hardiness in Fargo area. (NDSU trial)

20c3. <u>Heritage</u> – Floricane and late primocane production in Fargo area. Medium-sized, firm bright red berries. Good flavor, with high sugar. Medium yield. Good floricane cold-hardiness in Fargo area. (NDSU trial)

<u>21. Yellow raspberries</u> – Same species as red raspberries, but without the red pigment. Different flavor than reds. May be less attractive to spotted wing drosophila.

21a. <u>Fall Gold</u> – Floricane and primocane production in Fargo area. Medium-sized, moderately firm, golden-yellow berries. Very good to excellent flavor. Medium-high yield. Good floricane cold-hardiness in Fargo area. (Sheyenne Gardens)

21b. <u>Honey Queen</u> – Floricane production in Fargo area. Large, soft, peach-yellow berries. Sweet, honeyflavored berries. Spiny canes. Good floricane cold-hardiness in Fargo area. (Planted 2021, Berries Unlimited)

21c. <u>Anne</u> – Floricane and primocane production in Fargo area. Large, firm, pale-yellow berries. Very good flavor, and very sweet. Medium yield. Fair floricane cold-hardiness in Fargo area. (NDSU trial)

22. Trader mulberry – Small to medium-sized (3/4 to 1 ¼ inch long), firm, dark purple (appear black), juicy berries. Everbearing production from mid-July to mid-September. Very good flavor, sweet/tart if picked when first ripe and very sweet after a few more days. Used for fresh-eating, pie, juice, jelly, wine, and drying. Tree grows to 35 feet tall and is very long-lived. The berries may stain cement and furniture under a tree. Not affected by spotted wing drosophila. From a Russian white mulberry tree planted near Valley City in about 1892 that is still growing. (Northern Tree Specialties)

<u>23. Strawberries</u> – Only early-bearing cultivars were selected for the first round, with cultivars based on personal communications and NDSU and Minnesota extension recommendations. June-bearers were selected to avoid spotted wing drosophila.

23a. <u>Honeoye strawberries</u> – Large, firm red berries with excellent flavor. A mid-season cultivar. High yields. Lacks disease resistance. Very good cold-hardiness. (Indiana Berry)

23b. <u>Jewel strawberry</u> – Large, firm red berries with excellent flavor. A late-midseason cultivar. High yields. Good disease resistance. Fair cold-hardiness. (Indiana Berry)

23c. <u>AC Wendy strawberry</u> – Large, firm red berries with excellent flavor. Earliest of June-bearing cultivars. Moderate disease resistance. Good cold-hardiness. (Indiana Berry)

<u>24. Black raspberries</u> – Most black raspberry cultivars are very similar in growth and fruit characteristics. All except the late-fruiting MacBlack and the primocane fruiting Niwot ripen nearly simultaneously.

24a. <u>Pequot Lakes</u> – Floricane production in the Fargo area, with harvest before MacBlack. Medium to large, firm deep black berries. Very good sweet flavor. Medium yield. Very good floricane cold-hardiness (zone 3). (Indiana Berry)

24b. <u>MacBlack</u> – Floricane production in the Fargo area, with harvest in late July. Medium-sized, very firm, black berries. Good to very good flavor. Medium yield. Good floricane cold-hardiness in Fargo area. (Planted 2021, NDSU trial)

24c. <u>Jewel</u> – Floricane production in the Fargo area, with harvest before MacBlack. Large, firm, black berries. Very good flavor. Medium yield. Cold-hardy to zone 4. (Indiana Berry)

<u>25. Purple raspberries</u> – Purple raspberries generally start fruiting a bit later than floricane-fruiting red raspberries. They are hybrids between red and black raspberries.

25a. <u>Royalty</u> – Floricane production in the Fargo area, usually starting in mid-July. Large to very large, moderately firm, purple berries. Good flavor. Suckers profusely. Very good floricane cold-hardiness in Fargo area. (NDSU trial)

25b. <u>Brandywine</u> – Floricane production expected in the Fargo area, likely in early July. Large, soft, reddish-purple berries. Good, tart flavor. Said to not sucker. Cold-hardy to zone 4. (Indiana Berry)

25c. <u>Amethyst</u> – Floricane production in the Fargo area, starting in early July. Large, moderately firm, purple berries, becoming black when over-ripe. Very good flavor. High yield. Does not sucker. Very good floricane cold-hardiness in Fargo area. (Northern Tree Specialties)

<u>26. Blackberries</u> – Most blackberry cultivars are not sufficiently hardy in ND to produce a substantial crop. Floricanes typically die and primocane production is too late to beat fall frosts. Some old selections that are not suitable for commercial production, but can produce fruit on floricanes in ND, were selected for demonstration.

26a. <u>Doyle's</u> – Medium-sized, numerous firm black berries. Good, tart flavor. Trailing, thornless canes. Apparently non-suckering. Cold-hardy in Fargo, but has not fruited in Grand Forks area. More evaluation is needed to determine if most production will be on floricanes or primocanes in ND. (Fruitsandberries)

26b. <u>Nelson</u> – Medium-sized, numerous juicy black berries. Used for fresh-eating and jam. Late summer production over about two weeks. Very sharp thorns. Moderately suckering plant. This is a very cold-hardy blackberry native in northern Maine. Floricanes are surviving winter and producing fruit in the Grand Forks, ND area. (Fedco Seeds)

26c. <u>Arapaho</u> – Large, firm black berries with very small seeds. Excellent sweet flavor. Used for fresheating, jam, pie, freezing. High yields. Erect plants 3-6' tall. Thornless. Slightly suckering plant. Coldhardy to zone 4, but died back the first two years in the garden. (Pense Nursery)

27. Dwarf sour cherries – A series of 7 currently released cultivars of cherry hybrids from the University of Saskatchewan. Although they contain high sugar levels when fully ripe, they also contain high acid levels, so are sour. There is a wide range of ripening times among the cultivars. The cherries take a few weeks after they turn red until they are fully ripe. Some are suckering. All are highly susceptible to spotted wing drosophila. The earliest ripening cultivars will require little or no SWD management if the cherries are harvested when they first turn red. Self-fertile. All are cold-hardy to zone 2.

27a. <u>Valentine</u> – Medium-sized (4.5 g) red fruit. Use for pie, juice. Highest yields. Some suckering. (Sheyenne Gardens)

27b. <u>Cupid</u> – Large (6.5 g) dark red fruit. Good flavor for fresh-eating. Mid-summer ripening, 1 week later than others. Use for fresh-eating, pie, juice. Tree is 6.5' tall. Low suckering. (Sheyenne Gardens)

<u>28 – Blueberries</u> – Blueberries don't grow here unless special measures are taken. They require acid soil, and without it, they will decline and die within a couple years of planting. With development of half-high cultivars, which are of manageable size and very cold-hardy, the stage was set to grow blueberries in beds or containers in a potting mix with a low pH (pH 4.5-5.5). They are self-fruitful, but cross-pollination will result in higher fruit set. East bed – raised; West bed – sunken.

28a. <u>Northblue</u> – Large, juicy dark blue berries. Excellent "wild" berry flavor. High yields. Mid-season ripening. Shrub gets 2-3' tall with upright, open form. (Burnt Ridge Nursery)

28b. <u>Northland</u> – Medium-sized, medium firm blue berries. Sweet "Wild" berry flavor. High yields. Early season ripening. Shrub gets 4' tall with compact form. (Indiana Berry, Jung)

28c. <u>Polaris</u> – Medium-sized light powder blue berries. Very good, sweet flavor. High yields. Early season ripening. Shrub gets 3-4' tall with upright, compact form. (Indiana Berry)

28d. <u>Chippewa</u> – Medium-sized, firm light blue berries. Good, sweet "wild" flavor. Mid-season ripening. Very high yields. Shrub gets 3-4' tall with upright, compact form. (Berries Unlimited)

29. Meader persimmon – An American persimmon developed in New Hampshire. Produces 2-3" diameter orange sweet fruit that becomes edible as it softens after a frost. The fruit is similar in flavor and texture to Asian persimmons, but smaller. Used for fresh-eating, cookies, cakes, jam, pie, ice cream, and drying. Self-fruitful and seedless. Tree can reach 25-30' tall, and can be pruned to keep at 10-12' tall. Cold-hardy to zone 4. It is likely to survive and fruit in the Fargo area, but some twig dieback is expected. (Planted 2021, Perfect Circle Farm)

30. Hybrid chestnuts - Chestnut trees are very rare in North Dakota, primarily because our cold winter temperatures and high pH soils are not favorable for them. That doesn't mean they won't grow and produce here. Two hybrid chestnut cultivars were identified that are likely to at least survive, if not thrive, in ND. Seedlings may grow and produce better than grafted trees, but they may not be as well adapted, and they would take many more years to fruit, so grafted trees were planted.

30a1. <u>Luvall's Monster</u> –Luvall's Monster is reported to be a complex American-Japanese (and Chinese?) hybrid that has survived -30 F, and has the Asian background that tolerates higher pH soils. It produces large nuts on an upright tree. (Planted 2021, Buy Fresh Chestnuts)

30a2. <u>Szego</u> – Szego is reported to be a complex Japanese-Chinese-European hybrid that is cold hardy to at least -25 F, and should also have the capacity to tolerate higher pH soils. It produces very large, sweet nuts with a great flavor and texture on an erect tree. (Perfect Circle Farm)

31. Dwarf sour cherries – (see 27, above)

31a. <u>Carmine Jewel</u> – Medium-sized (3.5-4 g) dark purple fruit with small pit. Intense, tart flavor. Use primarily for pie, juice, wine, drying. Earliest-ripening, averaging early July in the Fargo area. High yielding. Tree is 6.5-12' tall. High suckering. (Sheyenne Gardens)

31b. <u>Juliet</u> – Medium to large (5 g) dark red fruit. Good for fresh-eating and pie, juice, drying. Tree is 7-12' tall. Low suckering. (Sheyenne Gardens)

<u>32. Various caneberries</u> – A mixture of caneberries (fruits produced on canes) will be planted in this bed.

32a. <u>Lawton blackberry</u> – Medium-sized black berries. Very sweet flavor. Moderately thorny. Originated in New York in 1834, and was the first widely cultivated blackberry variety in the USA. Coldhardy to zone 3, but had major dieback in the garden in 2021 and has yet to fruit. (Berries Unlimited)

32b. <u>Prime-Ark Freedom blackberry</u> – Very large, attractive, sweet berries. Thornless. Released as a Cold Hardiness Zone 6 cultivar that fruits on both primocane (1st year) and floricane (2nd year) stems, this cultivar will die back below the snow cover each year in zones 4 and 5. However, the roots are relatively cold-hardy and will resprout primocanes each year, which bear fruit in late summer in our area. (Planted spring 2022, Jung Seed)

33. Cornelian cherries – Cornelian cherry (*Cornus mas*) is in the dogwood family. It can be grown as a shrub or small tree. The fruit of most cultivars is red, but there are some yellow types. It is generally ½ to 1" long and half as wide. The berries are relatively tart and astringent when fully ripe. This is a very popular fruit in Eurasia, where it is eaten fresh and processed for juice, baking, and fermenting. The yellow flowers open very early, but can withstand freezing temperatures. The plants are generally not

cold-hardy in our area, but some have been productive in 4a, and we are trying some of the most cold hardy selections. (Planted in spring 2022, working with NDSU)

34. Espaliered Norkent apple – A **Norkent apple** tree pruned to espalier form. Norkent apple is a Canadian cultivar selected in Edmonton, Alberta. The fruit is medium-sized, very early-ripening (averages mid-August in Fargo), crisp, juicy, non-acidic, and sweet. The ripe color is scarlet vertical stripes over a yellow background. The fruit is taller than wide. Fruit is excellent as a dessert apple and good for processing. Fresh-eating flavor does not hold well in cold-storage. The tree is a natural semi-dwarf, and is hardy to zone 2b. **Espalier form** results in a two-dimensional tree, often growing flat just out from a wall or fence. The tree is purchased as regular nursery stock and then gradually pruned over a few years to develop the two-dimensional form. (Planted spring 2022, Sheyenne Gardens)

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...Promoting Community through Gardening Since 1998... The Mission of the Northern Plains Botanic Garden Society is to establish a botanic garden, conservatory, and arboretum in the Fargo-Moorhead area.