Cold-Hardy Edible Fruits: Combined Inventory with Verification Data

This document merges two AI-generated inventories of cold-hardy edible fruit plants (**PDF-A**: 'Verified Master Inventory'; **PDF-B**: 'Global Survey of Cold-Hardy Edible Fruits') with data found while spot-checking them against web sources. Where the two PDFs agree, text is given once; where only one says something it is prefixed **A:** or **B:**.

Hardiness classes. Zone 3 or colder: -40 °C or lower. Zone 4 (not 3): -34.4 to -39.9 °C. Zone 5a (not 4): -26.1 to -28.8 °C. **Evidence grades** (from the PDFs): E1 strong (cultivar trials, freezing experiments, documented fruiting at the relevant minima); E2 good (established horticultural ratings); E3 ecological inference from natural range, no measured survival threshold; E4 uncertain. Grades refer to winter hardiness, not fruit quality or flower-bud hardiness.

Row shading. Red = a claim or placement the review found doubtful or wrong. Green = data added from sources checked in this review. Yellow = reviewer note from general knowledge that was not verified against a source. White = not individually checked (the PDFs' content is reproduced as given).

Main corrections found. (1) Maqui (*Aristotelia chilensis*) is a zone 7-8 plant, not 5a. (2) *Berchemia racemosa* '-20 °C' does not match zone 5a. (3) *Hippophae tibetana* is a 5-80 cm shrub with small (8-11 mm) fruit, not 'larger fruit'. (4) *Actinidia giraldii* is a variety of *A. arguta*, so the 'no spring frost vulnerability' claim is unsupported. (5) *Ribes dikuscha* tastes mild and bilberry-like rather than 'tart, aromatic'. (6) *R. mandshuricum* fruit were very small and slightly bitter when under-ripe at Kew; 'good processed quality' is unsourced. (7) 'Illinois Everbearing' mulberry is an *M. alba* x *rubra* hybrid. (8) *Rubus ellipticus* should not be in a 5a table. (9) The hardier Saskatchewan dwarf cherries (zone 2-3) and several close relatives are missing; see the relatives table.

Sources used for added data (web, 5 Nov 2026): Plants For A Future / temperate.theferns.info (including RHS and Flora of USSR/China excerpts); WorldFloraDB; AgroAtlas; ISHS abstracts (Far Eastern Ribes breeding; Saskatchewan dwarf cherries); Ohio State and Cornell fact sheets (hardy kiwi); University of Saskatchewan, Prairie Gardens, NDSU and MSU (cherries); nursery listings (mulberry, maqui); Mustila Arboretum (Amur grape); DRDO and Rufford reports (Himalayan sea buckthorn); Siberian Ecological Journal (Nitraria); Krasnoyarsk blackcurrant breeding study.

Caveats. Only the entries marked 'Data added' or 'Revise' were checked, and only against the sources above; most others are reproduced unverified. Reference-book hardiness figures (for example PFAF/RHS 'about -20 °C') are often conservative floors rather than measured limits. Zone ratings describe wood and root survival, not flower-bud frost tolerance, snow cover, season length or summer heat.

Table 1. USDA zone 3 or colder (-40 °C or lower)

Species	Cultivars / populations	Hardiness and evidence	Fruit: taste and uses	Review notes and added data	Status
Actinidia kolomikta	'Sentyabrskaya', 'Dr Szymanowski' (B), 'Vitakola'	E2, zone 3; reports to -40 °C. A: wood survives -40 °C but spring shoots highly freeze-vulnerable, threatening annual crop.	Small sweet aromatic kiwiberries, eaten fresh; about 130 frost-free days. Superior vitamin C (A).	OSU Extension: bears smaller fruit than A. arguta.	Data added
Amelanchier alnifolia	'Thiessen', 'Smoky', 'Martin', 'Regent' (B)	E1-E2, zone 2-3. Fruiting documented in Canadian prairie climates.	Sweet berries; fresh, dried, pies, preserves. A: high yields of sweet, almond-flavoured dessert fruit.		Not checked
Amelanchier bartramiana	Northern wild populations	E3, boreal North America.	Edible small berries, fresh and preserves; quality poorly documented. A: extremely hardy boreal shrub; berries small and seedy compared with A. alnifolia.		Not checked
Amelanchier sanguinea	Northern wild populations	E3, northern North America.	Edible serviceberries, generally small. A: roundleaf serviceberry; low yield, thin flesh, mainly wildlife value.		Not checked
Arctostaphylos alpina	Arctic and alpine populations	E3, Arctic and alpine distribution.	Dark berries, mildly sweet and mealy; fresh, jam, traditional preserves. A: mealy texture limits commercial appeal.		Not checked
Arctostaphylos uva-ursi	Northern and alpine forms	E2-E3, zone 2-3.	Red mealy berries, dry and relatively bland; fresh, flour, preserves. A: historically harvested for flour/blends; low raw flavour.		Not checked
Aronia melanocarpa	'Viking', 'Nero', 'Hugin'	E2, zone 3. A: extreme hardiness.	Very astringent raw berries; juice, wine, drying, jam. A: high tannins; raw fruit inedible to most, excellent for processing.		Not checked
Cornus canadensis	Northern wild populations	E3, boreal and Arctic North America.	Red berries, bland to mildly sweet; fresh, preserves. A: low flesh-to-seed ratio; ornamental rather than crop.		Not checked
Cornus suecica	Northern European populations	E3, Arctic and subarctic Europe.	Red berries, edible but not flavoursome. A: Eurasian dwarf cornel; minimal culinary appeal.		Not checked
Empetrum nigrum	Subsp. nigrum, subsp. hermaphroditum	E2-E3, zone 1-2.	Black crowberries; mild, slightly sweet, improved by frost; juice, jam, drying, desserts. A: sweeten markedly after freezing; rich in antioxidants.	B also lists E. hermaphroditum separately (E3, Arctic/alpine Europe, dark berries).	Not checked
Fragaria orientalis	Wild Siberian and Mongolian populations	E3, continental northern Asia.	Red edible strawberries, fresh; Mongolian ethnobotanical evidence. A: good breeding parent; severe winter drought/cold adaptation.	B ranks it #5 of 'highest-priority new discoveries'.	Not checked
Fragaria vesca	Northern and alpine forms	E2, zone 2-3.	Excellent aromatic berries; fresh, desserts, preserves. A: unmatched aroma and flavour intensity; continuous fruiting in selected strains.		Not checked
Fragaria virginiana	Northern North American forms	E2-E3, zone 2-3.	Sweet aromatic wild strawberries; fresh and preserves. A: key ancestor of garden strawberry.		Not checked
Gaultheria procumbens	Northern wild populations	E2-E3, zone 3.	Wintergreen-flavoured berries; flavouring, preserves, desserts. A: methyl salicylate flavour; acid-loving evergreen groundcover.		Not checked
Hippophae rhamnoides	Altai, Siberian, N. European populations; 'Asem'; selected Altai clones	E1-E2, zones 2-3.	Very acidic to mildly sweet depending on selection; juice, oil, drying, preserves. A: top commercial cold crop; extreme vitamin C; use thornless Altai clones.		Not checked
Hippophae tibetana	Tibetan Plateau wild populations	E3, extreme high-altitude habitat; exact winter minimum unknown. A: true low-temperature hardiness unverified.	Sweet-acidic aromatic berries eaten fresh; September ripening. A: 'high-altitude dwarf shrub with larger fruit'.	REVISE. Flora of China (via WorldFlora): shrub 5-80 cm; fruit only 8-11 x 6-9 mm, so 'larger fruit' is not supported. Range 2,800-5,200 m (Nepal 3,800-4,200 m). Reference books (PFAF/RHS) give only about -10 °C when dormant: probably an underestimate for the habitat but no measured threshold exists. Ladakh habitation zones (>3,000 m) reach about -30 °C (DRDO).	Revise
Lonicera caerulea	'Aurora', 'Borealis', 'Tundra', 'Cinderella', 'Berry Blue'	E1-E2, zone 2. A: flowers survive -7 °C bloom freeze.	Early, frost-tolerant flowering and reliable northern fruiting; fresh, frozen, preserves. A: sweet blueberry-like fruit; premier cold-climate fruit.	Reviewer (unverified): close relatives L. edulis and L. kamtschatica are haskap taxa.	Unverified note
Malus baccata	Siberian and Mongolian populations	E2-E3, zone 2-3. A: ultimate cold-hardy rootstock (-45 °C).	Small, acidic crabapples; preserves, jelly, cooking; Mongolian fresh-fruit use documented. A: ultra-high pectin.		Not checked

Species	Cultivars / populations	Hardiness and evidence	Fruit: taste and uses	Review notes and added data	Status
Nitraria sibirica	Siberian and Mongolian populations	E3, continental Siberian and Mongolian habitat. A: highly unique saline/cold tolerance; ethnobotanical staple, rare in cultivation.	Edible fleshy fruits used by Mongolian communities; sweet-sour to salty depending on population.	Little flavour data found: PFAF lists fruit as eaten raw. WorldFlora gives a generic USDA 5-10, which is not reliable for steppe populations. Grows on soils up to about 3% salinity (Siberian botanical garden study). Two fruit-colour forms (anthocyanin-based) on the Qinghai-Tibet Plateau. B ranks it #2 of 'highest-priority new discoveries'.	Data added
Prunus americana	Northern wild populations	E2-E3, zone 3.	Sweet-tart plums; fresh in good selections, cooking, preserves. A: skin can be astringent, flesh sweet.		Not checked
Prunus besseyi	'Hansen', 'Pawnee Buttes', 'Sioux' (B)	E2, zone 3.	Small dark plums, fresh or processed; quality varies. A: flavour from cherry-sweet to astringent.		Not checked
Prunus padus	Northern European and Siberian populations	E2-E3, zone 2-3.	Small bitter/astringent fruits; drying, flour, traditional processing. A: raw fruit strongly astringent.		Not checked
Prunus tomentosa	'Orient', 'Pink Candles'	E2, zone 3.	Sweet-tart cherries, fresh and preserves. A: delicious small bush cherry; early spring flowers risk frost damage.		Not checked
Pyrus ussuriensis	'McDermand', 'MorDak' (B), wild northern forms	E2-E3, zone 2-3. A: wood withstands -45 °C.	Often hard and astringent raw; cooking, preserves, storage. A: gritty/astringent; needs bletting or processing.		Not checked
Ribes aciculare	Siberian, Altai, Mongolian, N. Chinese populations	E2-E3, zone 3 horticultural rating; Central Asian distribution evidence. A: high winter survival.	Red, relatively large berries described as sweet and tasty; promising fresh. A: excellent dessert potential; high priority for trials.		Not checked
Ribes aureum	'Crandall', 'Golden Gem'	E2, zone 3. A: high drought and cold resistance.	Yellow to dark berries, sweet but aromatic; fresh and preserves.	Reviewer (unverified): 'Crandall' is also listed under R. odoratum; the two names overlap in the trade, so one entry is probably redundant.	Unverified note
Ribes dikuscha	Wild eastern Siberian populations	E3, severe continental habitat. A: parent of cold-hardy Russian black currant breeding lines.	A: blue-black berries, tart, aromatic. B: mildly aromatic and tart; fresh and processed.	REVISE flavour. AgroAtlas/PFAF: berries lack the strong distinctive flavour of other Ribes and taste more like bilberry; blue-black with wax bloom, to 13 mm. Far Eastern breeders (ISHS abstract) recommend it as a source of cold hardiness, large fruit, self-fertility and blister-rust/reversion resistance. Range: Arctic Anadyr, Lena-Kolyma, Dauria, Zeya-Bureya, Ussuri.	Revise
Ribes fragrans	Siberian, Mongolian, NE Chinese populations	E3, continental distribution. B: research interest 'very high'.	Aromatic currant relative; quality needs better documentation. A: entire plant and fruit carry intense lemon-balm scent; sweet pleasant berries raw/cooked.	Hedrick/PFAF: a gooseberry-like fruit with sweet, pleasant flavour; fruit about 8 mm; shrub 50-70 cm; stony mountain slopes of E. Siberia, Far East, Mongolia. Dormant hardiness about -20 °C is a reference-book floor, not a measured limit. Lemon-balm scent not confirmed in sources found. RHS: closely related to R. hudsonianum and R. procumbens.	Data added
Ribes hudsonianum	Boreal North American forms	E2-E3, boreal distribution.	Black currant-like, aromatic but sometimes resinous; preserves, traditional use. A: strong resinous pine-like edge raw; functional for jellies.		Not checked
Ribes nigrum	'Öjebyn', 'Ben Hope', 'Titania'	E1-E2, zone 3 or colder. A: proven in Nordic climates (-40 °C).	Strong flavour, high acidity; fresh in sweeter cultivars, juice, preserves. A: rich in vitamin C.	Krasnoyarsk breeding study (2025): of 1,935 seedlings, mediocre/poor taste predominated; only 0.7% excellent, so flavour is a limiting trait even in hardy material.	Data added
Ribes odoratum	'Crandall', 'Fairy's Breath', northern forms	E2-E3, zone 3.	Sweet, clove-scented berries; fresh and preserves. A: intensely fragrant flowers; large sweet black berries.	See note under R. aureum (shared 'Crandall').	Unverified note
Ribes rubrum	'Rovada', 'Jonkheer van Tets' (B), white-fruited forms	E1-E2, zone 3 or colder.	Red and white currants; fresh, juice, preserves. A: white cultivars lower acidity, superb fresh dessert quality.		Not checked
Ribes triste	Northern wild populations	E2-E3, zone 2-3. A: creeping boreal shrub; extremely cold-tolerant.	Red berries, tart; jelly and traditional food. A: highly acidic.		Not checked
Ribes uva-crispa	'Hinnonmäki Yellow', 'Invicta', 'Captivator' (B)	E1-E2, zone 3.	Sweet dessert gooseberries when fully ripe; excellent fresh. A: Finnish-bred cultivars have top-tier mildew resistance.		Not checked
Rubus arcticus	'Pima', 'Mespi', wild forms	E1-E2, zone 2-3. A: sub-zero dwarf creeping habit.	Exceptionally aromatic berries; gourmet use, fresh, jam, juice, desserts. A: unmatched aromatic sweet-tart flavour.		Not checked
Rubus chamaemorus	Northern bog populations	E1-E2, zone 1-2.	Aromatic, sweet-acidic cloudberries; jam, juice, liqueur. A: requires acidic bogs; unique tart creaminess.		Not checked
Rubus saxatilis	N. European and Asian forms	E2-E3, zone 2-3.	Red, mildly tart stone bramble fruits; fresh and preserves. A: seedy raw, functional for preserves.		Not checked

Species	Cultivars / populations	Hardiness and evidence	Fruit: taste and uses	Review notes and added data	Status
Shepherdia argentea	'Sakakawea', 'Goldeye'	E2, zone 2.	Sour berries, sometimes sweeter after frost; jelly, juice, preserves. A: nitrogen fixer; high pectin and lycopene.		Not checked
Shepherdia canadensis	Northern wild populations	E2-E3, zone 2.	Soapberries, bitter and unpleasant raw; traditionally whipped with sweetener. A: contains saponins.		Not checked
Vaccinium caespitosum	Alpine and northern forms	E3, zone 2-3.	Small sweet blue berries; fresh and preserves. A: low-growing alpine carpet.		Not checked
Vaccinium microcarpum	Northern bog forms	E2-E3, zone 2-3.	Small acidic cranberries; juice, sauce, preserves. A: adapted to northern sphagnum bogs.		Not checked
Vaccinium myrtillus	Northern and alpine forms	E1-E2, zone 2-3.	Excellent sweet-tart bilberries; fresh, baking, drying, preserves. A: deep red flesh; wild harvest across Nordic forests.		Not checked
Vaccinium oxycoccos	Northern bog forms	E1-E2, zone 2-3.	Acidic wild cranberries; sauce, juice, preserves. A: indispensable tart berry for storage and processing.		Not checked
Vaccinium uliginosum	Greater/Lesser Khingan, Siberian, Arctic, alpine populations (B)	E1-E2, zone 2-3; some populations reported to withstand about -50 °C.	Sweet-sour blue berries; fresh, frozen, dried, preserves. A: white flesh; flavour mild to sweet.		Not checked
Vaccinium vitis-idaea	'Koralle', 'Sanna', 'Sussi' (B), 'Red Pearl'	E1-E2, zone 2. A: evergreen subshrub (-40 °C).	Lingonberries; tart, premier preserve berry; juice, sauces, meats.		Not checked
Viburnum edule	Northern wild populations	E2-E3, zone 2-3.	Tart red squashberries, eaten after processing; jelly, preserves. A: high pectin; best after autumn freeze.		Not checked
Viburnum lentago	Northern populations	E2, zone 2.	Sweet, raisin-like berries when fully ripe; fresh and preserves. A: soften in late autumn into date/raisin-like pulp.		Not checked
Viburnum trilobum (V. opulus var. americanum)	'Wentworth', 'Hahs'	E2, zone 2-3.	Tart berries; jelly, sauces, juice. A: reliable cold native substitute for true cranberries.	Reviewer (unverified): European V. opulus is a close relative of similar hardiness.	Unverified note
Rosa acicularis	Northern Siberian, Canadian, Alaskan populations	E2-E3, zone 2. A: extremely cold-hardy (-45 °C).	Rose hips, vitamin-rich; pulp, jam, tea, drying. A: large hips for winter teas.		Not checked
Rosa majalis	N. European and Siberian populations	E2-E3, zone 3 or colder.	Cinnamon rose hips; tea, pulp, jam, drying. A: used extensively in northern European traditions.		Not checked
Rosa laxa	Siberian and Central Asian populations	E3, continental distribution.	Edible hips; traditional processing, tea, preserves. A: arid steppe/mountain rose; extreme drought and freeze tolerance.		Not checked

Table 2. USDA zone 4, not zone 3 (-34.4 to -39.9 °C)

Species	Cultivars / populations	Hardiness and evidence	Fruit: taste and uses	Review notes and added data	Status
Actinidia arguta	'Geneva', 'Ananasnaya', 'Bingo' (B)	E2, zone 4.	Sweet, juicy kiwiberries; fresh. Needs a long season (about 150 frost-free days, A). A: vigorous vine, hairless fruit.	OSU Extension: reported to survive about -32 °C (-25 F); flowers quite susceptible to spring freezes; trunk hardiness rises with age but trunks should be protected. Cultivar ratings conflict: 'Issai' is called least hardy by one source, zone 3 by a prairie nursery. Cornell fact sheet: aromatic, with kiwi, banana, strawberry and pear notes; fruit ripen unevenly within clusters. Wikipedia: 18-25% sugar when vine-ripened.	Data added
Actinidia polygama	Japanese and Korean forms	E3, zone 4 horticultural estimates.	Peppery and sometimes astringent; less attractive fresh than A. arguta. A: silver vine; ornamental/medicinal interest.		Not checked
Cornus mas	'Jolico', 'Kasanlak', 'Elegant' (B), 'Red Star' (B)	E2, zone 4.	Tart to sweet-tart cherry-like fruit; fresh when fully ripe, juice, preserves. A: astringent until dark plum-red and drop-ripe; extremely early yellow flowers.		Not checked
Elaeagnus umbellata	Northern and highland provenances	E2-E3, zone 4.	Sweet-tart aromatic berries; fresh, jam, drying. A: nitrogen fixer, heavy yields, lycopene-rich; invasive warning in some regions.	Reviewer (unverified): often rated zone 3-4, so may belong in Table 1. Related E. commutata (silverberry) is zone 2.	Unverified note
Morus alba (incl. 'Illinois Everbearing')	'Illinois Everbearing', 'Kokuso' (B), 'Collier' (B)	E2-E3, zone 4 for selected material. A: wood survives zone 4 but continuous cropping needs summer heat units.	Sweet mulberries; excellent fresh and for preserves. Fruiting depends on summer warmth.	REVISE name: 'Illinois Everbearing' is a hybrid, M. alba x M. rubra (chance seedling, Illinois, 1947). Ratings: zone 4b (Canadian nursery), 4-8 (several), 3-8 (Burnt Ridge); UW Madison lists 4-9, 'extremely variable by cultivar'. Fruit: large, sweet-tart, nearly seedless, ripening July-September (nursery descriptions).	Revise
Morus alba var. tatarica	Russian and Central Asian forms	E3, zone 4 estimate.	Sweet mulberries, fresh and dried. A: windbreak origin; smaller fruit but high cold and wind tolerance. B: taxonomic identity of some named material needs verification.	Reviewer (unverified): 'tatarica' is generally treated as a form of M. alba. A grower reports it works as a hardy rootstock for grafting M. alba x rubra cultivars.	Unverified note
Prunus armeniaca	'Wescot' (B) / 'Westcot' (A), 'Brookcot', 'Mandan', 'Moongold', 'Sungold' (B)	E2, zone 4 for selected cultivars. A: wood survives -35 °C.	Sweet apricots, fresh and dried. Flower-bud survival much less certain than wood survival; early spring warm spells risk fatal bud freeze.	Reviewer (unverified): spelling is 'Westcot' in A, 'Wescot' in B; confirm before ordering. Relative P. sibirica is far hardier (see relatives table).	Unverified note
Prunus cerasifera	'Newport' and northern selections	E2, zone 4.	Small plums; fresh in good selections, cooking, preserves. A: small tart-sweet plums, excellent for jams.		Not checked
Prunus cerasus	'North Star', 'Meteor', 'Mesabi' (B)	E2, zone 4.	Sour cherries; baking, juice, preserves. A: naturally dwarf trees; outstanding reliability for pie cherries.	Prairie Gardens rates 'North Star' and 'Meteor' zone 3b/4a; NDSU calls 'North Star' zone 4a, so Table 2 is reasonable. The hardier Saskatchewan cherries (P. x kerrasis, zone 2-3) are missing from both PDFs; see relatives table.	Data added
Prunus domestica	'Mount Royal'	E2, zone 4.	Good dessert and cooking blue plum. A: one of the rare European blue plums reliable in zone 4.		Not checked
Ribes nigrum (less hardy cultivars)	Selected European cultivars (B)	E2, zone 4 for selected provenances.	Sweet-acidic currants; fresh and processing.		Not checked
Ribes petraeum	Alpine and Central European populations	E3, zone 4 provisional.	Red currant-like fruit, usually acidic; fresh and preserves. A: high acidity suits jellies and wine.		Not checked
Ribes saxatile	Siberian, Altai, Central Asian populations	E3, zone 4 provisional.	Small currant-like berries; taste and fruiting performance need investigation.		Not checked
Ribes altissimum	Altai, Mongolia, NE China	E3, zone 4 provisional. A: resilient northern steppe/alpine shrub.	Wild currant; edible status and taste need confirmation. B: research interest high.		Not checked
Ribes palczewskii	Russian Far East, NE Asian populations	E3, zone 4 provisional.	Fruit quality insufficiently documented.	Far Eastern breeders (ISHS abstract) list it among species recommended as cold-hardiness sources, so zone 4 'provisional' may be conservative.	Data added
Ribes mandshuricum	Manchurian and Russian Far East populations	E3, zone 4 provisional. B: research interest very high.	Potential edible currant; taste and production need evidence. A: tart red 9 mm berries; good processed quality.	REVISE flavour claim. PFAF: unarmed shrub 1-3 m; at Kew (1994) yields were high but fruits very small and not-fully-ripe fruit slightly bitter; dormant hardiness about -20 °C (reference-book figure). No source found for 'good processed quality'. Listed by Far Eastern breeders as a cold-hardiness source and for multi-flowered strigs.	Revise
Ribes komarovii	Russian Far East, NE China	E3, zone 4 provisional.	Wild currant, little horticultural evaluation.		Not checked
Ribes maximowiczianum	Russian Far East, Japan, China	E3, zone 4 provisional.	Edible-fruit potential; flavour and yield data scarce.		Not checked

Species	Cultivars / populations	Hardiness and evidence	Fruit: taste and uses	Review notes and added data	Status
Ribes latifolium	Far Eastern and Japanese populations	E3, zone 4 provisional.	Wild currant; fruit quality poorly known.		Not checked
Ribes horridum	Far Eastern, Japanese, NE Chinese populations	E3, zone 4 provisional.	Spiny wild currant; edible status and palatability need confirmation.		Not checked
Ribes diacantha	Altai, Mongolia, NE China	E3, zone 4 provisional.	Small fruits; culinary value uncertain.		Not checked
Ribes atropurpureum	Siberian and Mongolian populations	E3, zone 4 provisional.	Fruit quality poorly documented.		Not checked
Ribes graveolens	Altai and Mongolian populations	E3, zone 4 provisional.	Wild currant relative; needs investigation.		Not checked
Ribes meyeri	Altai and Central Asian mountain populations	E3, zone 4 provisional. A: high-altitude Central Asian mountain currant.	Potential edible wild currant; limited flavour information.		Not checked
Ribes sachalinense	Sakhalin and Hokkaido	E3, zone 4 provisional.	Edibility and flavour need confirmation.		Not checked
Ribes fontaneum	Russian Far East	E3, zone 4 provisional.	Very limited food-use information.	Far Eastern breeders recommend it for cold hardiness, blister-rust resistance and multi-flowered strigs (ISHS abstract). Likely hardier than zone 4.	Data added
Ribes giraldii	W and N Chinese populations	E3, zone 4 provisional.	Fruit quality and winter survival require verification.		Not checked
Ribes himalense	Himalayan and Tibetan populations	E3, zone 4 provisional.	Wild fruit candidate; local climate and actual winter minima need checking.		Not checked

Table 3. USDA zone 5a, not zone 4 (-26.1 to -28.8 °C) and special research groups

Species	Cultivars / populations	Hardiness and evidence	Fruit: taste and uses	Review notes and added data	Status
Asimina triloba	'PA-Golden', 'KSU-Benson', 'Shenandoah', 'Sunflower'	E2, zone 5.	Excellent custard-like fruit, banana-mango flavour; fresh, desserts. Needs a long warm summer.		Not checked
Berberis microphylla	Patagonian wild populations	E3, estimated zone 5a-5b.	Calafate: sweet-tart dark berries; fresh, jam, liqueur, juice, regional gin. A: rich in antioxidants.		Not checked
Berberis darwinii	Southern Andean populations	E3, estimated zone 5a-5b.	Tart berries; jam, juice, preserves.	Reviewer (unverified): this evergreen is probably tenderer than 5a (about zone 7).	Unverified note
Berberis empetrifolia	Patagonian mountain populations	E3, estimated zone 5.	Small berries used in traditional foods. Sturtevant (1919): berry edible.		Not checked
Berberis serratodentata	Patagonian mountain populations	E3, estimated zone 5.	Edible fruit reported; flavour and hardiness need more research.		Not checked
Ephedra ochreata	Patagonian populations	E3, hardiness uncertain around zone 5.	Traditional edible fleshy seed coverings (arils), not a true berry; sweet fleshy red arils (A).		Not checked
Fragaria nubicola	Himalayan and Tibetan populations	E3, estimated zone 5.	Small, sweet wild strawberries; fruiting in September in the Rongjia study.		Not checked
Fragaria chiloensis	S. Chilean and Patagonian populations	E2-E3, zone 5 estimates for some accessions.	Aromatic strawberries; fresh, desserts, preserves. A: parent of the garden strawberry; large aromatic white/pink fruit with pineapple notes.		Not checked
Gaultheria mucronata	Chilean and Patagonian forms	E3, estimated zone 5.	Small berries; fresh, preserves, liqueurs. A: spongy, mildly sweet purple/white berries.	Reviewer (unverified): probably tenderer than zone 5 (about zone 6-7).	Unverified note
Gaultheria poeppigii	Andean and Patagonian populations	E3, estimated zone 5.	Local food use; liqueurs and other preparations.		Not checked
Aristotelia chilensis	Maqui populations	E3, likely zone 5-7 depending on provenance. A: hardiness variable; vulnerable to severe deep freezes.	Dark purple berries; fresh, juice, jam, dried products. A: ultra-high anthocyanin content.	REVISE hardiness. Sources: tolerates about -10 °C (PFAF/RHS); minimum about -12 °C (WorldFloraDB); nursery ratings zone 7-10 and 8a-10b; a Pacific Northwest selection is 'hardy to at least 10 F'. Not a zone 5 plant. Taste: somewhat like blackberry or elderberry (nursery description).	Revise
Ribes magellanicum	Patagonian wild populations	E3, estimated zone 5.	Wild currants; fresh, jams, traditional beverages.		Not checked
Ribes cucullatum	Patagonian mountain populations	E3, estimated zone 5.	Traditional edible currant; interesting for preserves.		Not checked
Ribes uva-crispa (less hardy cultivars)	Less hardy European cultivars (B)	E1-E2, zone 5 for selected cultivars.	Excellent fresh dessert berries.		Not checked
Rosa sericea var. glandulosa	Himalayan populations	E3, estimated zone 5.	Direct fresh consumption in Tibet; July fruiting in the Rongjia study. A: large hips peeled and eaten raw.	Reviewer (unverified): Himalayan Rosa sericea complex is probably nearer zone 6. B ranks it #7 of priority discoveries.	Unverified note
Rosa macrophylla var. glandulifera	Himalayan populations	E3, estimated zone 5.	Eaten after peeling and removing prickles; large hips.		Not checked
Pyrus xerophila	N and W Chinese mountain populations	E3, estimated zone 5.	Wild pears; fresh or processed depending on ripeness. A: small, firm; palatable after bletting or processing.		Not checked
Pyrus pashia	Himalayan populations	E3, estimated zone 5.	Local consumption; eaten fresh, sometimes after softening.	Reviewer (unverified): subtropical Himalayan pear, likely well below zone 5 hardiness (about zone 7-8).	Unverified note
Prunus mira	Tibetan and Himalayan populations	E3, estimated zone 5.	Fresh consumption; wild peach-like fruit. A: valuable breeding stock.		Not checked
Prunus holosericea	Tibetan populations	E3, estimated zone 5.	Local ethnobotanical evidence for fresh consumption (A: Tibetan wild cherry).		Not checked
Berchemia sinica	Chinese mountain populations	E3, estimated zone 5.	Fresh fruit consumption documented in Shangri-La. A: small, sweet, olive-shaped drupes on a deciduous climber. B ranks it #6 of priority discoveries.		Not checked
Berchemia hirtella	SW Chinese mountain populations	E3, estimated zone 5.	Fresh fruit consumption documented in Shangri-La.		Not checked
Chaenomeles thibetica	Tibetan populations	E3, estimated zone 5.	Raw fruit eaten, likely more useful processed. A: aromatic, dense acidic fruit for jellies and syrups.		Not checked

Species	Cultivars / populations	Hardiness and evidence	Fruit: taste and uses	Review notes and added data	Status
Griffitharia vestita	Himalayan populations	E3, estimated zone 5.	Fresh fruit consumed in Tibet; uncommon. A: edible pomes of a whitebeam relative.		Not checked
Rubus austrotibetanus	Tibetan populations	E3, estimated zone 5.	Fresh consumption; fruit documented in Gyirong Valley.		Not checked
Rubus aurantiacus	Himalayan populations	E3, estimated zone 5.	Fresh consumption; fruit documented in Tibet.		Not checked
Rubus ellipticus	Himalayan populations	E3, hardiness uncertain; B: probably not suitable for severe continental winters.	Popular golden raspberry-like fruit.	REVISE placement: B itself says it is probably unsuitable; it should not sit in a 5a candidate table.	Revise
Rubus foliolosus	Himalayan populations	E3, estimated zone 5-6.	Local consumption; fresh fruit.		Not checked
Rubus niveus	Himalayan populations	E3, estimated zone 5-6.	Sweet-tart berries.		Not checked
Pyracantha crenulata	Himalayan populations	E3, estimated zone 5.	Ripe fruits eaten locally. A: small orange pomes; flesh thin and mealy.	Reviewer (unverified): evergreen Himalayan firethorn, likely zone 6-7 at best.	Unverified note

Table 4. Additional Asian and Patagonian species needing hardiness verification (from PDF-B)

Species	Region	Unknown / what needs checking	Why interesting	Review notes	Status
Ribes glaciale	Himalayas, SW China	Unknown: actual minimum winter temperature	Wild currant from high-altitude habitats; fruit quality unknown.		Not checked
Ribes moupinense	Sichuan, SW China	Unknown	Wild currant documented in Tibetan ethnobotanical literature; edibility and hardiness unknown.		Not checked
Ribes xizangense	Tibet	Unknown	Regional endemic currant; fruit quality and winter survival unknown.		Not checked
Ribes vilmorinii	W China	Unknown	Unusual wild currant; edibility and cold tolerance unknown.		Not checked
Ribes kialanum	China	Unknown	Mountain currant; fruit characteristics and winter tolerance unknown.		Not checked
Ribes pseudofasciculatum	China	Unknown	Little-known wild currant; fruit quality and hardiness unknown.		Not checked
Ribes janczewskii	Central Asian mountains	Unknown	Potentially interesting currant relative; edible use and hardiness unknown.		Not checked
Lonicera iliensis	Ili Valley, Kazakhstan	Unknown	Wild honeysuckle from continental Central Asia; palatability unknown; honeysuckles may be poisonous.	Both PDFs: do not assume edible without species-specific confirmation.	Not checked
Crataegus dsungarica	Dzungarian Alatau	Winter minima unknown	Wild hawthorn with edible-fruit potential.		Not checked
Crataegus almaatensis	Kazakhstan	Unknown	Mountain hawthorn; fruit quality and hardiness unknown.		Not checked
Berberis amoena	SW China	Winter survival in severe continental climates unknown	Tibetan communities eat young stems, leaves and fruits.	Reviewer (unverified): B. amurensis and B. sibirica (Far East/Siberia) are better-placed relatives; Sturtevant (1919) records B. sibirica berry as edible.	Unverified note
Berberis jamesiana	SW China	Winter survival unknown	Fruit and other plant parts eaten fresh.		Not checked
Berberis pruinosa	SW China	Winter survival unknown	Documented fresh-fruit consumption.		Not checked
Berberis eisiensis	SW China	Winter survival unknown	Documented fresh-fruit consumption.		Not checked
Ephedra triandra	Patagonia	Minimum temperature and cultivation potential unknown	Fleshy seed coverings used in drinks.		Not checked
Ephedra patagonica	Patagonia	Edibility and winter survival unknown	Potentially edible seed coverings.		Not checked
Maihueniopsis darwinii	Patagonia	Cold hardiness and fruit quality unknown	Fruits cooked, roasted, processed into flour.		Not checked
Schinus patagonicus	Patagonia	Hardiness in continental zone 4-5 conditions unknown	Traditional edible fruit and condiment plant.		Not checked

Table 5. Northeast Asian Ribes diversity (from PDF-B), with review data

Species	Distribution represented in survey	Research interest	Review data	Status
Ribes dikuscha	Russian Far East	Very high	See Table 1: bilberry-like, large-fruited, strong hardiness source (Far Eastern breeders).	Data added
Ribes fragrans	Russia, China, Mongolia	Very high	See Table 1: sweet gooseberry-like, small (about 8 mm).	Data added
Ribes mandshuricum	Russia, China, Korea	Very high	See Table 2: very small, slightly bitter when under-ripe at Kew.	Data added
Ribes sachalinense	Russia, Japan	High		Not checked
Ribes altissimum	Russia, China, Mongolia	High		Not checked
Ribes diacantha	Russia, China, Mongolia, Korea	High		Not checked
Ribes komarovii	Russia, China, Korea	High		Not checked
Ribes latifolium	Russia, China, Japan, Korea	High		Not checked
Ribes maximowiczianum	Russia, China, Japan, Korea	High		Not checked
Ribes meyeri	Russia, Mongolia	High		Not checked
Ribes palczewskii	Russia, China	High	Listed by Far Eastern breeders as a hardiness source.	Data added
Ribes triste	Russia and northern Asia	High		Not checked
Ribes atropurpureum	Russia, Mongolia	Medium		Not checked
Ribes fontaneum	Russian Far East	Medium	Listed by Far Eastern breeders as a hardiness source.	Data added

Species	Distribution represented in survey	Research interest	Review data	Status
Ribes graveolens	Russia, Mongolia	Medium		Not checked
Ribes horridum	Russia, China, Japan, Korea	Medium		Not checked

Table 6. North American species easily overlooked (from PDF-B)

Species	Region	Fruit / note	Status
Arctostaphylos rubra	Arctic and subarctic	Red, mealy berries.	Not checked
Ribes glandulosum	Northern woodland and boreal	Red currant-like fruit.	Not checked
Ribes laxiflorum	NW North America	Dark berries.	Not checked
Rubus pedatus	Northern Pacific and mountain forests	Small red berries.	Not checked
Rubus pubescens	Boreal and northern forests	Small red berries.	Not checked
Rubus stellatus	Northern North America	Arctic bramble relative (see Rubus arcticus ssp. stellatus in additions table).	Not checked
Vaccinium membranaceum	Rocky Mountains, Pacific mountains	Mountain huckleberries.	Not checked
Vaccinium scoparium	High-elevation Rocky Mountains	Dwarf huckleberries.	Not checked
Vaccinium deliciosum	Cascade and Olympic Mountains	Mountain blueberries.	Not checked
Vaccinium ovalifolium	NW North America	Alaska blueberry.	Not checked
Vaccinium parvifolium	Pacific mountain forests	Red huckleberries; B: not a zone 3 candidate.	Not checked
Rubus idaeus	Alaska (Dot Lake harvest list)	Wild raspberry, gathered in Alaska (ADF&G list cited in B).	Not checked

Table 7. European mountain and northern species (from PDF-B)

Species	Region	Fruit quality and uses	Hardiness evidence	Notes	Status
Empetrum hermaphroditum	Arctic and alpine Europe	Dark berries; northern traditional use	E3		Not checked
Sorbus aucuparia	Europe, Siberia	Rowanberries; mainly processing	E1-E2	In B section 6 only; missing from both master tables.	Data added
Ribes alpinum	European mountains	Red, mildly bland fruits; mainly wildlife food	E2-E3	In B section 6 only.	Not checked
Ribes spicatum	Northern Europe	Red currants, edible, sometimes used in preserves	E2-E3	In B section 6 only.	Not checked
Ribes petraeum	European mountains	Red currant-like berries	E3	Also in Table 2.	Not checked
Ribes rubrum	Europe	Red and white currants	E1-E2	Also in Table 1.	Not checked
Arctostaphylos alpina / uva-ursi, Empetrum nigrum, Rubus arcticus / chamaemorus / saxatilis, Vaccinium myrtillus / uliginosum / vitis-idaea / oxycoccos / microcarpum, Prunus padus	Scandinavia, Alps, Arctic, northern Russia	Same species as Table 1; B gives matching evidence grades (E1-E3)	see Table 1		Not checked

Table 8. Recommended additions (from PDF-A), with review findings

Species	Related group	Stated hardiness	Stated profile	Review notes	Status
Ribes burejense	Gooseberry (R. uva-crispa)	Zone 3	Bureja gooseberry. Prickly 10 mm berries; tart raw in summer, turning sweet with rich blackcurrant flavour after late autumn frosts.	Not verified here (no source found).	Unverified note
Rubus arcticus ssp. stellatus	Nagoonberry (R. arcticus)	Zone 2-3 (-45 °C)	Alaska nagoonberry. Intensely fragrant dark red aggregate fruit, prized fresh and for liqueurs.	Not verified here.	Unverified note
Actinidia giraldii	Hardy kiwi (A. arguta)	Zone 4a (-30 to -35 °C)	Giraldi kiwiberry. Smooth-skinned sweet green berries, larger on average than A. kolomikta, without spring frost vulnerability.	REVISE. Now treated as a variety of A. arguta (A. arguta var. giraldii, reduced 1972), so it shares A. arguta's spring-freeze flower risk. Hardiness claim unverified.	Revise
Hippophae salicifolia	Sea buckthorn (H. rhamnoides)	Zone 4	Willow-leaved sea buckthorn; Himalayan dry valleys; tree-like, less thorny; high-vitamin acidic juice berries.	Rufford/Nepal project: tree 6-10 m, grows 2,000-3,600 m in Nepal. Some Suru Valley (Ladakh) plants resemble it.	Data added
Berchemia racemosa	Supplejack (B. sinica)	Zone 5a (-20 °C)	Japanese supplejack / Kumayagi. Deciduous twining climber; oval berries turn shiny black and sweeten when fully ripe in late autumn.	REVISE. -20 °C is about zone 6b, not 5a. PFAF: USDA 5-9, UK zone 6; ripe fruit eaten, about 8 mm; leaves used as tea. Related B. lineata tolerates only -5 to -10 °C.	Revise
Berchemia flavescens	Supplejack (B. hirtella)	Zone 4b/5a	Nepalese supplejack. High-altitude Himalayan origin (2,000-3,400 m); sausage-shaped 12 mm edible fruit eaten fresh locally.	Practical Plants: eaten raw when fully ripe; fruit about 12 mm long. No hardiness data found.	Data added

Table 9. Close relatives and gaps identified in this review

Rows marked 'Unverified' come from the reviewer's general knowledge and should be checked before planting.

Species / group	Relationship	Hardiness	Fruit and uses	Basis	Status
Prunus x kerrasis / P. fruticosa x P. cerasus dwarf cherries: 'Juliet', 'Valentine', 'Cupid', 'Romeo', 'Crimson Passion', 'Carmine Jewel'	Relatives of P. cerasus; P. fruticosa (steppe/Mongolian cherry) parent	Zone 2-3. 'Romeo' least hardy (zone 3); 'Juliet' and 'Valentine' likely hardiest. 2009 Saskatchewan observation: no winter damage on Cupid, Valentine, Juliet; about 25% injury on Carmine Jewel, Romeo, Crimson Passion.	Tart-sweet; several sweet enough to eat fresh; 16-21 Brix in a normal year. 'Romeo' and 'Crimson Passion' reported sweetest. Bred from Kerr's P. fruticosa x P. cerasus crosses and 'North Star'.	Verified (U of Saskatchewan, Prairie Gardens, NDSU, MSU)	Data added
Prunus sibirica (Siberian apricot)	Relative of P. armeniaca (apricot)	Reputed to tolerate about -50 °C (PFAF/RHS).	Fruit eaten raw or cooked; chiefly a hardiness source for apricot breeding. Flesh quality likely poor (unverified).	Hardiness figure is from a reference compilation	Data added
Prunus mandshurica, P. nigra, P. pensylvanica, P. virginiana, P. pumila, P. ussuriensis (plum)	Relatives of apricot, plum and cherry groups	Mostly zone 2-3 (reviewer knowledge)	Variable; mostly tart. Useful as breeding or hardy-rootstock material.	Unverified	Unverified note
Vitis amurensis (Amur grape)	Relative of cultivated grapes	About -40 °C (several sources); tender to late spring frost (Mustila Arboretum, Finland).	Conflicting: small, harsh/bitter (Corean Flora via PFAF) vs sweet when ripe (seed supplier). Hybrids such as 'Zilga' have been grown in Finland.	Verified (partly)	Data added
Ribes procumbens	Close relative of R. fragrans	Siberia, Far East, Mongolia, N China; prostrate shrub 20-40 cm.	Fruit 10-13 mm, purple-brown; harvested wild and 'highly recommended' as a fruit crop (Flora of USSR via PFAF). Hardiness source and rust/mite resistance per Far Eastern breeders.	Verified (PFAF; ISHS abstract)	Data added
Ribes ussuriense	Relative of R. nigrum / R. dikuscha group	Ussuri region (Far East); hardiness not measured	Blackcurrant-like flavour; sometimes cultivated, with named varieties; used in blackcurrant breeding.	Verified (PFAF)	Data added
Ribes pauciflorum, R. pallidiflorum	Far Eastern Ribes	Named with R. dikuscha, R. fontaneum, R. procumbens, R. mandshuricum, R. palczewskii as hardiness sources	R. pauciflorum also named for mite and Septoria resistance; fruit quality not found.	Verified (ISHS abstract only)	Data added
Ribes oxyacanthoides, R. americanum, R. alpinum, R. spicatum, R. lacustre	Relatives in Table 1 Ribes	Zone 2-3 (reviewer knowledge)	Native gooseberry / wild black currant / mild red currants; flavour varies.	Unverified	Unverified note
Vaccinium macrocarpon, V. angustifolium, V. myrtilloides, V. praestans, northern half-high blueberries	Relatives of V. oxycoccos, V. myrtillus, V. uliginosum	Zone 2-3 (reviewer knowledge)	Large-fruited cranberry; lowbush blueberries; Kamchatka bilberry (reported large, sweet).	Unverified	Unverified note
Berberis sibirica, B. amurensis, B. vulgaris, Mahonia repens	Relatives of Berberis in Table 3	Siberian/Far Eastern species likely zone 3-4 (reviewer knowledge)	Acidic edible berries; Sturtevant (1919): B. sibirica berry edible.	Partly verified	Unverified note
Rosa rugosa, R. villosa, R. dumalis, R. blanda, R. woodsii	Relatives of Rosa acicularis / majalis	Mostly zone 2-3 (reviewer knowledge)	Large vitamin-rich hips; R. rugosa hips are fleshy and widely used.	Unverified	Unverified note
Elaeagnus commutata, E. multiflora	Relatives of E. umbellata	E. commutata zone 2; E. multiflora about zone 4-5 (reviewer knowledge)	Mealy-sweet (commutata) to sweet-tart larger fruit (multiflora).	Unverified	Unverified note
Amelanchier canadensis, A. spicata, A. stolonifera, A. x grandiflora	Relatives of A. alnifolia	Zone 2-4 (reviewer knowledge)	Sweet to bland serviceberries; selections vary.	Unverified	Unverified note
Schisandra chinensis	Far Eastern vine, companion to Actinidia	About zone 3-4 (reviewer knowledge)	Acidic-aromatic berries used for juice and drinks.	Unverified	Unverified note
Nitraria roborowskii, N. schoberi, N. tangutorum	Relatives of N. sibirica	Not verified	N. roborowskii is regarded by some authors (Bobrov) as an ecological form of N. sibirica with larger fruit and leaves (Siberian Ecological Journal, 2021). N. tangutorum is grown in NW China (reviewer knowledge, unverified).	Partly verified	Data added
Hippophae rhamnoides subspecies (mongolica, sinensis, fluviatilis), H. goniocarpa	Relatives of H. rhamnoides / H. tibetana	Subspecies hardy to about zone 2-3 (reviewer knowledge)	Varies by clone from very acidic to mildly sweet.	Unverified	Unverified note
Lonicera edulis, L. kamtschatica, L. villosa	Haskap relatives (L. caerulea group)	Zone 1-3 (reviewer knowledge)	Sweet-tart blue honeyberries.	Unverified	Unverified note
Sorbus aucuparia cultivars, Viburnum opulus, Sambucus racemosa, Crataegus chrysocarpa	Additional northern fruit shrubs/trees	Zone 2-3 (reviewer knowledge)	Mostly cooked or processed fruit.	Unverified	Unverified note
Northern cultivars of apple, pear and plum	Domestic fruit not covered by either PDF	Many rated zone 2-3 (reviewer knowledge)	Probably more reliable than most E3 wild candidates for fresh dessert fruit.	Unverified	Unverified note
Berchemia lineata	Caution (relative of B. sinica)	Tolerates only about -5 to -10 °C (PFAF/RHS)	Eat only when black-ripe.	Verified: NOT suitable	Revise

Table 10. Safety, toxicity and exclusion notes (both PDFs agree)

Taxon	Reason for exclusion
Podophyllum peltatum (Mayapple)	Only fully ripe yellow fruit is edible; unripe fruit, seeds, roots and foliage contain toxic podophyllotoxin.
Streptopus amplexifolius (Twistedstalk)	Edibility reports exist, but safety and fruiting hardiness are unverified; possible confusion with toxic species.
Actaea species (Baneberry)	Attractive berries, severely poisonous.
Daphne altaica	Fruit poisonous.
Paris quadrifolia	Toxic berries.
Solanum dulcamara	Poisonous berries; not an edible-fruit candidate.
Symphoricarpos albus (Snowberry)	Berries not considered a suitable human food.
Lonicera iliensis	Needs species-specific confirmation; honeysuckle fruit cannot be assumed edible from genus membership.