

	A	B	C	D	E	F	G	H	I	J	K
1	Name:	Parents	Use:	Flesh /Flavor notes:	Additional notes:	Size:	Color:	Picking Dates:	Ripening Dates:	Bloom:	Disease
2	Akane	Worcester Pearmain x Jonathan	Dessert, Pie, Sauce	flesh is white, crisp, coarse-textured and somewhat chewy. Sweet-tart and juicy. Very aromatic	Moderately vigorous, starts to produce as a three-year-old tree and sets heavily on an annual basis. Does well as an espalier	small-medium	green base colour over which is a bright red blush	August	At its best eaten as soon as it is picked, but will keep up to a month in cold storage	D: late mid (13-15) Day 14	resistant scab, mildew
3	Arkansas Black	winesap seedling	Eating, Cooking, Cider	flesh is yellowish, fine-grained, very firm, crisp, moderately juicy and fragrant with spicy aromas	Vigorous. Produces light crops on a biennial basis.	medium	dark purple-red to black	late October through November	December thru March	D: late mid (13-15) Day 12; Triploid	
4	Ashmead's Kernel		Eating, Cider	yellowish flesh, firm, aromatic, juicy, sweet-sharp	Moderate vigour, irregular but good cropper. Connoisseur apple.	small-medium	greenish yellow, russet patches	early, mid October	October, keeps up to 4 months, best after at least one month	D: late mid (13-15) Day 14; Triploid	resistant scab, mildew
5	August Best		Eating	flesh light cream, juicy, tangy	Vigorous, heavy cropper	medium-large	red wash and green stripes over green/yellow	July thru August	July thru August	D: late mid (13-15) Day 14	resistant scab
6	Belle de Boskoop	Bud sport of Reinette de Monfort	Eating, Cooking	flesh is yellowish, firm, aromatic, juicy, sharp, high in Vitamin C	High vigour, heavy cropper, slow to bear. Tends to be biennial. Good for Lower Mainland.	medium-large	gold, flushed orange, red stripes, russet	early October	October through April, keeps up to 5 months, flavour mellows in storage	B: early mid (5-8) Day 7; Triploid	very resistant scab
7	Blushing Susan	Kidd's D8 x Sunrise	Eating, Cooking	flesh is white, fine grained, crisp and crunchy. Juicy, sweet and sprightly.	bred by Jim Rahe	medium	golden yellow blushed orange red	mid-October	September through early October	D: late mid (13-15) Day 14	resistant scab
8	Bramley's Seedling		Cooking, Cider, Juice	pale cream flesh, puree texture, strong flavour when cooked	Good for Lower Mainland. Vigorous, heavy cropper, slow to bear, often biennial.	large-very large	greenish yellow, brownish orange flush, red stripes	early October	November through March, keeps 5 months or more, best after a month	D: late mid (13-15) Day 15; Triploid	resistant mildew
9	Brownlee's Russet		Eating, Cooking	cream flesh tinged green, sweet-sharp, juicy	Moderate vigour, upright, very hardy, good cropper, tends to be biennial.	medium	green, slight brown-red flush	mid-October	December through March, keeps 3 months or more	C: mid (9-12) Day 9; self-fertile	resistant scab
10	Caville Blanc d'Hiver		Eating, Cooking	creamy white flesh, juicy, aromatic /sweet intense, excellent for eating after storing, very high in vitamin C	Vigorous, bears young, irregular but good cropper. Prefers hot summers.	large	pale green, slight orange flush, russet	mid-through late October	November through December, store for a month for maximum flavour, keeps for 4 months	D: late mid (13-15) Day 15	resistant scab
11	Chestnut crabapple	Malinda x Siberian crab	Eating, Cooking	flesh pale yellowish, juicy, crisp /sweet, nutty, good	High vigour, good cropper	small	reddish bronze, russet	September	September through early October	BCD	
12	Cortland Red	McIntosh x Ben Davis	Eating, Cooking, Cider	white fleshed, slow to brown, soft, melting, crisp, juicy, sweet, vinous	Moderate vigour, good cropper, bears young.	medium-large	striped dark red	early October	October through January, keeps up to 4 months.	C: mid (9-12) Day 9; partially self-fertile	
13	Cox 's Orange Pippin	Ribston Pippin	Eating, Cider, Juice	cream-coloured flesh, aromatic, slightly acidic, juicy, sweet, nutty, honey, spicy, high Vitamin C	moderately vigorous. Bears young. Good cropper. Likes alkaline soil, potash.	medium	greenish yellow, flushed orange-red, striped red	late September through early October	mid September through December, stores well for up to 3 months	C: mid (9-12) Day 11; partially self-fertile	
14	Discovery	Worcester Pearmain x Beauty of Bath	Eating	creamy white flesh but if picked later stained red, juicy, crisp, sweet tart, hint of strawberry	Moderate vigour, good cropper	medium	greenish yellow, flushed bright red	mid-through late August	mid. late August through September	D: late mid (13-15) Day 15	resistant scab, mildew
15	Dolgo (crabapple)	Siberian Crab (Malus baccata)	Eating, Cider, Canning	flesh yellow, crisp, quite sharp, juicy, good when fully ripe	Good pollinator for early blooming trees. Tendency to be biennial. Good for jelly, pickles. Very hardy.	very small	brilliant crimson	late August	September through October, fruit will stay on tree for 3 months or longer	A thru B; self-fertile	resistant scab, mildew
16	Egremont Russet		Eating, cider	cream-coloured flesh, juicy, aromatic, firm, nutty, sweet	Moderate vigour, bears young, good cropper. Good in container. Tolerates spring frosts.	small-medium	gold, slight orange flush, russet	late September through early October	October through December, keeps one month, best flavour emerges a couple weeks after harvest	C: mid (9-12) Day 09; partially self-fertile	resistant scab, mildew
17	Esopus Spitzenburg		Eating, cooking, cider	flesh yellowish to cream, somewhat coarse-grained, dense and firm. Juicy and sweet-tart, aromatic	Moderate vigour, heavy cropper, biennial.	medium	yellow with a bright red flush and faint stripes	early through mid-October	Keeps up to six months and matures to best flavours after about a month	C: mid (9-12) Day 12; partially self-fertile	
18	Florina	Jonathan x Golden Delicious	Eating	cream-coloured flesh, juicy, firm, quite sweet, fragrant, resistant to bruising	Moderate vigour, bears young, good cropper.	small-medium	yellow, flushed purplish-red	October	November through February, resists dropping, keeps up to 2 months	C: mid (9-12) Day 11	very resistant scab
19	Fuji Tak (Yataka)	Stark Delicious x Ralls' Genet	Eating	creamy white flesh, crisp, juicy, sweet, honeyed	Moderate vigour, slow to bear, needs thinning to prevent biennial bearing, good cropper. Prefers hot summers.	medium-large	golden brown with orange-red flush	early October	late October through January, keeps for up to 6 months	C: mid (9-12) Day 12; partially self-fertile	resistant scab
20	Golden Russet		Eating, Cooking, Cider, Drying	flesh is yellowish, crisp, aromatic, nutty, honeyed	Moderate vigour, heavy cropper, biennial.	small	yellow with gold russeting	early through mid-October	December through February, keeps up to 5 months	C: mid (9-12) Day 10	resistant scab, mildew
21	Gravenstein Red		Eating, Cooking, Cider, Juice	yellowish flesh, crisp, flavour best when allowed to ripen fully	High vigour, good cropper, tends to bear biennially. Prefers moist, warm climate	large	greenish yellow, striped red with pink-orange flush	early September	September through October, keeps less than 3 months	A: early (1-4) Day 3; Triploid	

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1	Name:	Parents	Use:	Flesh /Flavor notes:	Additional notes:	Size:	Color:	Picking Dates:	Ripening Dates:	Bloom:	Disease
22	Grimes Golden		Eating, Cider	pale cream, juicy, crisp, sweet, honeyed, slow to brown	Moderate vigour, bears young, good cropper, tends to be biennial.	medium	greenish yellow	mid-October	November through February, keeps up to 4 months.	C: mid (9-12) Day 11; self-fertile	
23	Haralson	Malinda x Wealthy	Eating, Cooking, Cider	white flesh, juicy, crisp, aromatic	Very hardy, precocious, good cropper. Biennial.	medium-large	yellow, striped red	mid-October	November through January, keeps well up to 5 months, best when allowed to fully tree ripen	D: late mid (13-15) Day 15	resistant scab, very resistant mildew
24	Hidden Rose (syn. Airlie Red Flesh)		Eating, Cooking, Cider	deep rose red, sweet-tart, juicy, crisp, slow to brown	Vigorous, ripens late, biennial tendency	small-medium	yellow, pale whitish dots	late October	Late October through December, keeps about a month	D: late mid (13-15) Day 15	
25	Honeycrisp	Keepsake x Golden Delicious	Eating, Cooking	cream-coloured flesh, juicy, very crisp, slightly aromatic, sweet-sharp, resists browning	Moderate vigour, reliable, heavy cropper. Fruit hangs well when ripe.	medium-large	lemon yellow, mottled red-scarlet	late September through early October	October through December, best eaten fresh	C: mid (9-12) Day 9	resistant scab
26	Hudson's Golden Gem	Golden Delicious?	Eating, Cooking, Cider	yellow flesh, crisp, juicy, sweet-sharp, nutty	High vigour, good cropper. Tolerates late frosts.	large	dull yellow russet	late October	November through January, keeps up to 3 months, best after a month	D: late mid (13-15) Day 14; partially self-fertile	very resistant scab
27	Jefferies (Jefferis)		Eating	flesh is yellowish, juicy, slightly aromatic, sweet	Moderate vigour, bears young, heavy cropper. Tends to be biennial.	small	yellow, flushed and striped dark red	mid-September	September through December, keeps up to 4 months	C: mid (9-12) Day 9	very resistant scab, mildew
28	John Downie (crabapple)		Eating, Cooking (jelly, sauce), Cider	flesh is yellowish, juicy, slightly aromatic, sweet	Moderate vigour, good cropper, biennial. Long blooming period.	small	yellow-orange, flushed scarlet	September through October	September through October, keeps about a month	C thru E; self fertile	
29	Jonagold	Jonathan x Golden Delicious	Eating, Cider	Sweet, crisp, juicy with very good flavour.	Moderate vigour, heavy cropper, biennial	medium to large	half red-orange over yellow skin	mid-October	mid-October, keeps till December	D: late mid (13-15) Day 13; Triploid	
30	Karmijn de Sonnaville	Cox's Orange Pippin x Jonathan	Eating, Cooking, Cider	flesh is yellowish, coarse grained, firm & juicy, rich and aromatic with intense nutty and honeyed flavours	Moderate vigour	medium to large	Green to yellow base colour covered more than half with flushes of orange red and scattered red stripes. Often extensively russeted.	early October	mid to late October, keeps up to 5 months	D: late mid (13-15) Day 12; Triploid	
31	Kerr (crabapple)	Dolgo x Harrison	Eating, Cooking, Cider	yellowish with red stains. Firm and crisp, Very juicy, sweet-sharp	Moderate vigour, biennial	small	green washed with deep red	September through October	September through December, keeps up to 4 months	D: late mid (13-15) Day 14; partially self-fertile	
32	Kidd's Orange Red	Cox's Orange Pippin x Delicious	Eating, Cider	flesh is light cream colour, very juicy, crisp, crunchy, aromatic, sweet-sharp, flavour & texture of Cox's Orange Pippin	Moderate vigour, good cropper. Needs sun. Not ideal for wet growing areas.	medium	yellow, flushed scarlet, dark stripes, russetting	mid-October	November through January, keeps for 4 months. Leave it on the tree until fully ripe for best flavours.	C: mid (9-12) Day 12; partially self-fertile	resistant scab, mildew
33	King of Tompkin's County		Eating, Cooking, Cider, Drying	deep cream colored flesh, juicy, crisp, slightly aromatic, sweet-sharp	High vigour, hardy, slow to bear, good cropper. Tendency to be biennial.	large-very large	yellow, flushed and striped carmine red	mid-October	October through March, keeps well up to 4 months	C: mid (9-12) Day 10; Triploid	very resistant scab
34	Lady (Api)		Eating, Cider, Ornamental	white flesh, crisp, juicy, sweet, aromatic	Low vigour, good cropper, slow to bear, often biennial.	small	yellow, flushed bright red	late November	January thru April	C: mid (9-12) Day 11	
35	Liberty	Macoun x PRI 54-12	Eating	yellowish flesh, juicy, crisp, sweet-sharp	High vigour, good cropper, bears young.	medium	yellow, bright red flush	October	October through December, keeps up to 2 months	B: early mid (5-8) Day 7	very resistant scab
36	Lodi	Yellow transparent x Montgomery	Eating, Juice	sweet, balanced by definite sharpness, and juicy	Moderate vigour, often biennial, good cropper.	small to medium	pale yellowing green	August	doesn't keep	B: early mid (5-8) Day 6; self-fertile	
37	Lord Lambourne	James Grieve x Worcester Pearmain	Eating, Juice	creamy white flesh, very juicy, crisp, sweet-sharp	Moderate vigour, bears young, good cropper.	medium	greenish yellow, red stripes and flush	mid-September	late September through November, keeps about a month	B: early mid (5-8) Day 8; partially self-fertile	resistant scab
38	Newtown Pippin		Eating, Cooking, Cider	pale cream flesh, juicy, crisp, aromatic, high in Vitamin C	Moderate vigour, slow to bear, often biennial, good cropper. Prefers hot summers.	medium	greenish yellow, flushed light orange-brown	mid-through late October	December through January, keeps up to 2 months, improves with storage	C: mid (9-12) Day 10; partially self-fertile	
39	Northern Spy	Wagener	Eating, Cooking	cream coloured flesh, juicy, crisp, sweet-sharp, rich, intense, fruity	Moderate vigour, hardy, slow to bear, often biennial, good cropper.	medium-large	green, turning yellow, flushed dark red, striped red	mid-through late October	November through March, keeps up to 6 months	E: late (16-20) Day 17; partially self-fertile	

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1	Name:	Parents	Use:	Flesh /Flavor notes:	Additional notes:	Size:	Color:	Picking Dates:	Ripening Dates:	Bloom:	Disease
40	Oaken Pin		Cooking	flesh is yellowish, stained red next to the skin, tender, Juicy and very sweet, very aromatic and flavourful	Moderate vigour, good cropper	large	yellow washed with a dark mahogany red wash	late September	October, November	C: mid (9-12) Day 12	resistant scab
41	Orin	Golden Delicious x Indo	Eating	pale yellow flesh, sweet, juicy, firm, aromatic, very honeyed	Moderate vigour.	medium-large	lime green with slight flush	late October	November through January, keeps up to 4 months	B: early mid (5-8) Day 5, Triploid	
42	Pewaukee	Duchess of Oldenburg x Northern Spy	Eating	flesh is white, firm and coarse-grained, sweet	Moderate vigour, bears young	medium-large	yellow, striped red, mottled orange-red	early October	November through January	C: mid (9-12) Day 9	
43	Pinova (Pinata, Sonata)	Clivia x Golden Delicious	Eating, Cooking, Juice	Flesh is cream coloured, firm and fine-grained. Juicy, sweet tart, spicy flavour	weak to moderate vigour, crops heavily, thin after petal drop, stores well	small-medium	yellow, pink-orange flush	late September	September through December	D: late mid (13-15) Day 14	resistant to scab
44	Red Bletigheimer		Cooking	Firm, juicy white flesh is and sweet-sharp and crisp.	Moderately vigorous	large	pale yellow to green, overlaid with red	August thru September	August thru September	C: mid (9-12) Day 11	some scab resistance
45	Redfree	Raritan x	Eating	flesh is light cream coloured, medium grained, firm, crisp and juicy. Mild flavour and acidity.	vigorous	medium-large	greenish yellow, flushed bright red	September (fruit does not ripen all at once)	September through early October	B: early mid; 5-8; Day 6	very resistant scab
46	RubINETTE	Golden Delicious x Cox's Orange Pippin	Eating	juicy, crisp, aromatic, sweet-sharp, rich, intense, flavour similar Cox's Orange Pippin	Moderate vigour, heavy cropper. Good for espalier.	small-medium	yellow, red flush and stripes	late September	October through November, keeps for about a month	C: mid (9-12) Day 11	resistant scab, mildew
47	Spartan	McIntosh x unknown*	Eating, Cooking, Cider	white flesh, juicy, crisp, aromatic, strawberry, sweet-sharp	Moderate vigour, hardy, bears young, heavy cropper. Tolerates late frosts.	medium	greenish yellow, flushed deep maroon	early October	November through January, keeps up to 5 months	C: mid (9-12) Day 12; self-fertile	resistant scab, very resistant mildew
48	Wickson (crabapple)		Eating, Cooking (jelly, sauce), Cider, Juice	white flesh, juicy, sweet, acidic tang, honeyed.	Vigorous, blossoms early, prolific, very good cropper	small (large for a crabapple)	red	late September	October	B: early mid; 5-8; Day 6	
49	Wynoochee Early		Eating, Cooking, Cider	flesh is cream-coloured, firm and crisp. Sweet and refreshingly tart. Good keeper for an early apple.	Vigorous, spreading. Well adapted to cool and damp coastal climates. Needs to be thinned after fruit set.	medium to large	cream yellow, marked with red stripes. Very thin skinned	mid August	mid, late August through November	B: early mid (5-8) Day 8	very resistant to scab

WHAT YOU NEED TO KNOW ABOUT CHOOSING AN APPLE TREE

To the best of our knowledge all apple trees we offer for sale are healthy. They should produce apples in a few years if given the proper conditions and care. We regret we are unable to replace any tree that does not survive. Please water and plant the trees as soon as possible. See detailed planting instructions which include container growing.

POLLINATION - Apples, except for a few that are self-fertile, need other apple trees nearby for pollination. Insects, rather than the wind, do the pollination. Choose 2 different cultivars with a similar flowering (bloom) time. Bloom time should be within 3 days of each other. Unless they are Triploids they should pollinate each other. For example, if one cultivar has a bloom date of Day 12, then any other cultivar (except a triploid) with flowering dates of Day 9 to Day 15 will pollinate it and be pollinated by it, providing the weather is good. If it is raining or cold the bees will not fly and pollination will not occur.

TRIPLOID APPLE TREES will not produce viable pollen. A triploid requires another tree blooming at the same time to pollinate it as well as another tree to pollinate the pollinator. It takes three trees to ensure they all produce fruit. (Only one of the three trees can be a triploid). Our triploid trees this year are: Ashmead's Kernel, Belle de Boskoop, Bramley's Seedling, Easter Orange, Gravenstein Red, Jonagold, King of Tompkin's County, Karmijn de Sonnaville,

ROOTSTOCKS - Our trees have been grafted on dwarfing rootstocks which make the trees smaller. M9 rootstock is a 'very dwarfing' rootstock producing a tree 6-8 feet high, about 25% of normal size. It is a good choice for a small garden with fairly good soil. B9 rootstock will produce a tree 6-8 feet high, 25-30% of normal size. B9 is hardy to zone 3 and so is useful for growing the trees in containers. Both M9 and B9 trees require permanent staking and routine watering and feeding. M26 is 'dwarfing', producing a tree 8-14 feet high, about 30--50% of normal.

CRAB APPLE TREES are used to enhance pollination in orchards because they bloom over a long period. Crab apples are smaller, under 2 inches (5cm) diameter. Our crab apples are Dolgo, John Downie, Kerr

SCAB RESISTANCE - Scab is caused by a fungus. It makes unsightly dark spots on apples but is edible and does not affect the flavour of the fruit. It can be a problem in damp climates like the Lower Mainland and Fraser Valley so scab resistant trees are recommended for this area.

ESPALIER refers to the training of a tree to grow in a special form. Trees growing on any rootstock can be espaliered.

SELF FERTILE There are a few trees which are self-fertile and some are partly self-fertile. SF means they are able to produce apples without being pollinated by another tree. These could be used on balconies where bees are not likely to fly in to pollinate them. However, they will produce more fruit with cross pollination.

Our Self Fertile trees this year are: Brownlee's Russet, Dolgo Crab, Grimes Golden, John Downie crab, Lodi, Spartan.

Our Partially Self Fertile trees are Cortland Red, Cox's Orange, Egremont Russet, Epicure, Esophus Spitzenburg, Fuji, Hudson's Golden Gem, Kerr Crab, Kidd's Orange, Lord Lambourne, Newton Pippin, Northern Spy

UBC Apple Festival Apple Tree Planting Instructions

(for trees purchased at the festival)

UBC Botanical Garden Friends of the Garden (FOG)

Updated by Richard Hallman 2015

Apple trees are among the easiest of all fruit trees to grow. They tolerate a wide range of conditions, but need lots of sunlight (6 to 8 hours minimum) and good soil drainage. Getting good tree growth to develop structural branches during the first 2-3 years after planting is important. After that, the goal shifts from growing branches to the production of fruit buds. Healthy productive apple trees have a balance between branch growth and fruit production. Healthy trees require adequate soil moisture throughout the growing season, good nutrition (too much fertilizer can be worse than not enough) and control of competing vegetation, diseases and insect pests. Keep in mind that old apple trees nearby are usually a source of disease that will infect your new trees. Remove old infected trees if possible.

When to Plant

If you purchased a tree at the UBC Apple Festival in mid-October, it is best to plant your new tree as soon as possible. This gives the tree a chance to grow a few new roots before cold weather, in preparation for growing the following spring. If you cannot plant your new tree in its final location in the fall, consider one of the following. All of these are intended to slow the rate of temperature change that the tree is exposed to. Rapid changes in temperature rather than low temperatures themselves cause most winter damage to trees in pots, particularly to the roots as they are less able to stand temperature changes than the above ground parts of the trees.

1. plant the tree – pot and all – in the soil in a temporary location and move it to its final location in February (the soil around the pot will protect the roots the winter), or
2. transplant the tree into a larger pot (a 5 - 10 gallon pot) or wrap the small pot in insulation and place it in a protected location out of the worst winter weather, making sure it does not dry out. A protected location could be under a deck or at the back of a home between the home and a fence or in an unheated garage. The trees will be dormant from the time you purchase them till the next spring so they do not need any sun. Water is very important as it buffers the rate of temperature change and keeps the roots from drying out. In February transplant it in its final location.

Until you plant it, protect your tree from injury, drying out, freezing, or overheating. Black pots exposed to the winter sun will heat up quicker than light colored pots, even on cold days, leading to a dramatic drop in temperature at sundown.

If you will be growing the tree in a container on a deck, patio or balcony, use a large container, soil with good drainage and follow the same procedure for planting in the ground. Half barrels are often recommended for long term planting of fruit trees. The problem with half barrels (20 - 25 gallon size) is that they are very heavy and awkward to move. Fruit trees can be grown permanently in containers as small as 10 gallons if you fertilize them annually and keep them irrigated in the summer. All trees that are grown permanently in containers will need to be repotted every few years (every 3 years for small containers, longer for larger containers).

Digging the Planting Hole

Before planting, remove all the weeds and grass from a 2-4 foot circle of soil around the location where you are going to plant. Dig the hole approximately the depth of the pot and 2-3 times as wide. The planting hole should be wider at the top than at the bottom, as most of the feeder roots will be within a foot of the soil surface. All apple trees are grafted. The graft union is usually obvious as a slightly swollen area or a slight dog leg in the tree trunk just above the soil. After planting, the graft union should end up 2-3" (5-8 cm) above the final level of the soil, so the depth of the hole depends on where the graft union is on the tree you have purchased. Planting the graft union at or below soil level is the most common mistake made when planting new dwarf fruit trees. If the graft union touches the soil, the scion (the part of the tree above the graft union) will grow roots, eliminating the dwarfing effect of the rootstock. If you accidentally dig the hole too deep or the root is smaller than expected once you take it out of the pot, backfill and tamp the soil down at the

bottom of the hole prior to planting. Loose soil below the tree will result in the tree settling and the graft union getting closer to the soil.

Tree Support

Most trees sold at the UBC Apple Festival have been grafted onto the full dwarfing M9 or B9 rootstocks (check the tree tag for the type of rootstock). These dwarf rootstocks will need support throughout their lifetime. If it is grafted on a larger rootstock, a temporary stake is a good practice to ensure it gets a start growing vertically. Support can be a single post for each tree (a post with 2' in the ground will support a full grown dwarf tree), a fence, or a trellis of posts and wire. Place single stakes on the windward side of the tree and about 4-6" away from the future location of the tree trunk. The tree can then be secured to the support using vinyl tying cord or similar material tied in a figure 8 so the tree will not bang against the stake when it is windy.

Planting

Always handle a young grafted tree BELOW the graft union or by holding onto the pot. This is important because the graft union is held together by only a single year's growth ring at this stage and it can break if handled roughly. Holding the rootstock portion of the tree, invert the pot and remove the tree, shake off loose soil and/or potting mix. Form a small mound of soil in the bottom of the hole. Place the tree on top of the mound so the roots radiate evenly around the mound and all point downwards. Cut back any broken roots and any that wrap around the trunk or will not radiate properly.

Backfill the hole with the soil you removed from the hole. Organic and drainage soil amendments should not be added to the planting hole or the backfill soil. Research has shown that soil amendments added to the backfill do not aid in tree establishment and growth. Soil amendments are also likely to create an abrupt change in soil texture that can have a negative effect on moisture flow and root growth. In particular, do not add bone meal or phosphorus fertilizers to the planting hole; these products reduce the natural establishment of mycorrhizal colonization of the tree roots that help the tree absorb phosphorus from the soil. If your soil has problems that require amendments, apply them to the entire garden area before planting your tree. If you have a drainage problem, do not try to solve it by adding drainage material to the hole. Either install drainage in the entire garden area before planting, or plant the tree in a raised mound to provide a few extra inches of well-drained soil for the roots of your new tree.

When backfilling, work the soil around the root ball and add water to minimize air pockets that will dry out the roots. Firm the soil around the bottom of the root ball so the tree is vertical and adequately supported. If you are going to use a supporting stake, this is the time to add it. Slightly tamp down the remainder of the backfill as the hole is filled, as the new roots will grow through this soil. Water thoroughly and slowly after backfilling.

Post-planting Tree Care

New apple trees should be watered well during the spring of first two years until their root systems develop. All trees growing in the Vancouver/Fraser Valley area, should be watered as needed from May through to September to ensure good tree and fruit growth. Maintain a weed-free area a minimum 2' in diameter around the tree. A 1-2" layer of mulch such as bark mulch, or possibly well-rotted manure, will help suppress weeds, maintain soil moisture, and provide nutrients.

Fertilize new trees in late February or early March with 1 tablespoon of 6-8-6 (or the equivalent in organic fertilizer) spread evenly over a one foot diameter radius from the trunk. Repeat at six-week intervals until early August. If additional fertility is needed, supplemental irrigations with liquid fish fertilizer (following label instructions) can be applied. Manure is not recommended after the tree begins to bear fruit, because the slow release of nitrogen results in soft, poorly colored fruit. Dolomite lime can also be added every other year or so. Spread 10 lbs (5kg) in a circular area 2-3 yards out from the trunk. The best time to apply lime is in late fall or early winter, with a couple of months between liming and fertilizer application.

Between February and mid-March, when the terminal bud begins to swell, prune back your new tree to about a 30-32" for bush or pyramid tree forms.