

Apples are believed to be the oldest cultivated tree in the world. It originated in Kazakhstan and central Asia. The University of Saskatchewan has been breeding apples since the 1920's. In the last 25 years, we have grown 35,000 seedlings and selected the best for further use in our breeding program. In most recent years, enhanced cold hardiness, fruit quality and storage life have been used as criteria for selecting the next generation of prairie apples.

Growth Habit

- Most commercial apple varieties are grafted and the height of the tree depends on what rootstock is used. If grafted onto Ottawa #3 rootstock the mature height will be about 10-12 feet whereas if Siberian crab-apple rootstock is used the mature height will be about 20-30 feet.
- Apples tend to flower mid-late May and flower simultaneously with the leaves opening. The flowers are typically white but can be pink
- Apples can range in a variety of colours and sizes from the small crab apples to eating apples. The time of ripening is also highly variable. Apples can ripen anywhere from late August to early October. The homeowner needs to pay attention to the ripening dates as a lot of years the fall is not long enough to harvest an apple that ripens in October.



Autumn Delight is a University of Saskatchewan release with sweet and good flavour and great storability qualities



Planting

- Planting also depends on the type of rootstock. If the tree is grafted onto some sort of dwarfing rootstock (Ottawa #3 as an example) they should be planted about 5-10 feet apart. If the tree is on crab apple rootstock it should be planted 15-20 feet away from another tree.
- You should plant an apple in a hole that is big enough to incorporate the entire root mass with a little bit of extra space to compact the soil so the tree does not fall over. The graft union should be about 2 inches above the soil line.
- Water very well until the plant is well established



A good example of a bud graft

Pollination

- Apples are not self-compatible so they require another tree of a different variety to provide the pollen and get fruit. In urban areas there are usually enough ornamental apples, crab apples or other apples in neighbor's yards to be sufficient pollinators. If you can see another apple from your yard you do not need a second tree. Another alternative is to buy a tree with multiple varieties grafted onto it, that way the tree will pollinate itself.



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Pruning

- In the first year you need to make sure that the tree is developing a central leader. This means one dominant central axis branch.
- In the second year you should remove narrow angled branches (narrow angled branches mean branches that are less than 90 degree angles from the main axis). By this year you should have about 4 or 5 good placed branches which will become your scaffold branches
- Year three you should remove suckers and water sprouts as well as bad branches (branches with narrow angles, criss-crossing branches etc)
- Year 4 onward just do typical pruning to keep the tree the size you like, maintenance pruning etc.
- Fruit thinning may also be necessary. If your apple tree seems to be producing an abundance of apples one year and then none the next fruit thinning may be required. In order to fruit thin you can knock flowers off in the spring to reduce the amount of fruit that way or you can remove the fruit once it has started to develop. The general rule of thumb is one apple always a hands width away from the next apple. This is only necessary for apples, not crab apples.

Cultivars

There are a wide variety of apples available for purchase in greenhouses throughout the province. On the following page is a chart listing the varieties recommended by the fruit program.



Misty Rose is a University of Saskatchewan apple release with sweet and good flavour, and firm, crisp and juicy texture.



Kerr is a dark red crab-apple that is very sweet and juicy.

Harvesting

- Hand pick the apples when you like the flavour. "Ripeness" is botanically classified when the seeds are dark brown. Having said that if you are happy with the flavour before that pick them when your happy with it.
- Twist and pull the apple when removing it from the tree. If you just straight pull the apple off you end up breaking off the fruit spur and removing some of the buds for next year.
- Avoid dropping the apples as that will lead to bruising.

Cultivar	Apple Colour	Apple Size	Apple Type	Variety Type	Ripening Time	Taste	Texture	Other
Adanac	red and green striped	5 cm diameter	apple	other	early	tad tart but good	slightly course texture	stores up to 12 weeks
Norland	red blush	6.5 cm diameter	apple	other	early	slightly tart but good overall	slightly course texture	falls when ripe
Rescue	yellow green with a deep red blush	3.5 cm diameter	crab-apple	other	early	tart but sweet	crisp texture	stores for 3 weeks, goes mealy fast
Fall Red	dull red over yellow green base	7 cm diameter	apple	other	mid	a bit tart but good overall flavour	crisp and very firm	stores up to 10 weeks
September Ruby	bright red with green ribbing	6.5 cm diameter	apple	other	mid	a bit tart but a great eating apple	crisp	stores up to 16 weeks, slightly thick skin
Norkent	light green streaked with red	6 - 7 cm diameter	apple	other	mid	juicy, sweet and aromatic	crisp with a slightly tough skin	do not pick early, needs time to develop flavour
Goodland	creamy green washed with red	5 - 8 cm diameter	apple	other	mid	fairly sweet	fine textured and crisp	some hardness issues in some locations
Battleford	pale green striped with red	7 cm diameter	apple	other	mid	slightly tart	course and crisp	stores up to 4 weeks
Carlos Queen	green with a slight blush	7.5 cm diameter	apple	other	mid	fairly sweet	fine	bruises easily
Westland	green yellow overlaid with dull red	7 - 9 cm diameter	apple	other	mid	juicy and fairly sweet	crisp texture	excellent for cooking
Prairie Sensation	green with a red wash	7.5 cm diameter	apple	U of S	mid	sweet with a great flavour	firm, crisp and juicy	requires very little fruit thinning
Misty Rose	green with a deep red overlay	6.5 - 8 cm diameter	apple	U of S	mid	sweet and good	firm, crisp and juicy	falls quickly after ripening
Dolgo	purple red with a heavy bloom	1.5 cm diameter	crab-apple	other	mid	not good for fresh eating	course texture	excellent for making jelly
Harlson (Haral Red)	brown red colour	6 cm diameter	apple	other	late	slightly tart but good	firm and slightly tough	resistant to browning , stores well, great for cooking
Autumn Delight	dark red over green overlay	6 - 7 cm diameter	apple	U of S	late	sweet and good flavour	slightly spongy, is crisp and juicy	resistant to browning, great storability
Kerr	dark red to purple	4 cm diameter	crab-apple	other	late	very juicy and sweet	firm and crisp	can be picked after frost, increases sweetness



Carefully hand-picking fruit from the tree will prevent excessive bruising.



Apple maggot flies lay eggs inside the fruit and will emerge when hatched.



Apple scab shown on the fruit (left) and on the leaf (right)

Pests

- There are a wide array of pests and diseases that affect apples. Here is a selection of some of them.
- Apple Maggot-very similar to the cherry fruit fly. The fly lays eggs in the fruit and the fruit will have maggots in the inside when the fruit is cut open
- Deer mice and voles-these animals like to snack on apple trees. The deer love to eat the tender green new growth off of the tree. Mice and voles and other rodents can girdle the lower stem of an apple tree causing the tree to die.
- Fireblight-this is a bacterial disease that gives the tree an appearance of being scaled by fire. Once a tree has this it will inevitably die. This disease can be slowed down by removing the infected tissue. Fireblight thrives in high nitrogen conditions so be wary of your fertilizer use.
- Apple Scab-is a fungal disease that causes scabby patches on the apple fruits. This is more prevalent in wet years.
- Sunscald-can happen in the winter. The south sides of the tree are usually affected. It happens when the hot sun rays hit the frozen bark and cause it to thaw too quickly. It will cause the bark to crack which can cause structural damage to the tree. This can be prevented by painting the south sides of trees with white paint.



An apple tree is painted with white paint on the south side of the tree to prevent sunscald