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Fruit tree Chilling Requirements Fact Sheet

If you are thinking of planting deciduous fruit trees it is worth considering one very important factor and that is their chilling requirements.

Now plants from cold parts of the world use a kind of inbuilt recorder of how much cold weather they have had to work out when winter is about to end and when they should flower. As a consequence, many fruit trees need a certain amount of cold weather to flower properly.

Most growers in Australia use the measure of the number of hours below 7degrees C. For example, some varieties of apple need up to 1200 hours below 7 degrees to fruit well while others apple varieties are ok if they get only 300 hours.

In some areas like Stanthorpe chilling requirements are fairly easily met. In other parts of Queensland gardeners would get nowhere near that amount. So if you were to put in a variety that has a high chill requirement it really will not perform at all well.

To find out more it is worth looking at the labels on fruit trees to see if they do mention if they have a high or low chilling requirement and probably even more importantly talk to someone in your local nursery who actually knows about which varieties are suitable for where you are and which will be unlikely to do well.

I came across the following set of tables that I think explain it all quite well from the Bega Seed Savers website <http://seedsavers.scpa.org.au/index.php?id=47>



Low & Medium Chill Fruit & Nuts

| Common Name | Genus & Species | Chill hours |
|-------------------|---------------------|-------------|
| Feijoa | Feijoa sellowiana | >75 |
| Lychee | Litchi chinensis | 100-200 |
| Pomegranate | Punica granatum | 100-200 |
| Persimmon | Diospyros kaki | 100-200 |
| Quince | Cydonia oblonga | 100-400 |
| Figs | Ficus carica | 100-500 |
| Grapes ? European | Vitis vinifera | 100-500 |
| Strawberry | Fragaria x Ananassa | 200-400 |
| Olives | Olea europaea | 200-600 |
| Almond | Prunus dulcis | 300-500 |
| Kumquat | Fortunella | 300-500 |
| Mulberry | Morus spp | 400 |



High Chill Fruit & Nuts

Breeding efforts have created low chill varieties of fruits and nuts that are normally considered high chill. These low chill varieties have been listed where known. A lot of breeding work has occurred in Florida, USA and in QLD, Australia. Releases of new varieties from these areas are generally low chill varieties.

| Common Name | Genus & Species | Chill hours |
|------------------------------|----------------------------|--------------------|
| Blackberry | Rubus spp | 200-800 |
| Blueberry | Vaccinium spp | 350-1100 |
| | Rabbit-eye | 350-800 |
| | Southern Highbush | 400 |
| | Highbush | 800-1100 |
| Apricot | Prunus armeniaca | 400-1000 |
| Chestnut | Castanea spp | 450-650 |
| Pecan | Carya illinoensis | 500 (300-1000) |
| Muscadine | Vitis rotundifolia | 500-1000 |
| Plums | Prunus spp | 500-1200 |
| | Japanese plums | 500-800 |
| | Greengages | 600-800 |
| | European plums | > 1000 |
| Peach & Nectarine | Prunus persica | 600-1000 |
| Pears | Pyrus spp | 600-1000 |
| | Asian Pears (Nashi) | 600 |
| | European Pears | 600-1000 |
| Pistachio | Pistacia vera | 600-1500 |
| Kiwifruit | Actinidia deliciosa | 600-880 |
| Walnut | Juglans spp | 700-1500 |
| Gooseberry | Ribes spp | 800-1500 |
| Currants | Ribes spp | 800-1600 |
| Raspberry | Rubus spp | 800-1600 |
| Hazelnut | Corylus avellana | 800-1600 |
| Cranberry | Vaccinium spp | About 800? |

| | | |
|--------------------------|----------------|-----------|
| Grapes - American | Vitis labrusca | 1000-1400 |
| Apples | Malus spp | 1000-1600 |

Specific Low Chill Varieties

Specific lower chill varieties that might be more suitable for our region in the short to medium term. Chill hours listed are a guide only. Trees propagated from existing trees that are acclimatised to our climate are likely to do better than those imported from other regions.

| Apples | Chill Hours |
|-------------------------------|--------------------|
| Fuji | 100-400 |
| American Dorset Golden | 250 |
| Anna | 300 |
| Golden Delicious | 400-600 |
| Jonathon | 400-600 |
| Sundowner | 500-700 |
| Gravestein | 500-700 |
| Pink Lady | 500-700 |
| Akane | 500-700 |
| Granny Smith | 600-700 |
| Gala | 600 |
| Red Delicious | 600 |

| <i>Apricots</i> | <i>Chill Hours</i> |
|------------------------|---------------------------|
| Newcastle | <300 |
| Glengarry | <300 |
| Trevatt | 250-400 |
| Glengarry | 250-400 |
| Moorpark | 500-700 |
| Bentley | 500-700 |

| <i>Peach</i> | <i>Chill Hours</i> |
|----------------|--------------------|
| China Flat | <300 |
| Florida Prince | <300 |
| Tropic Beauty | <300 |
| Tropic Snow | <300 |
| Tasty Zee | 250-400 |
| Florida Gem | 250-400 |
| Aztec Gold | 250-400 |
| Florida Gold | 250-400 |
| Golden Queen | 500-700 |
| Flavourcrest | 500-700 |

