

A special thanks to:
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 Foundation, Ministry of Agriculture and Food Security, Ministry of Forestry and Land Rehabilitation, National University of Lesotho, Bethabara Church, Rural Self Help Development Association (RSDA), Send a Cow Lesotho, UNICEF, World Food Programme, World Vision Lesotho, Special Thanks to Catholic Relief Services (CRS) for its guidance in the preparation of Keyhole Gardening contents and UNICEF for its contribution in Nutrition.
 (FACD), Growing Nations, Lesotho Agricultural College of Education, Lesotho Council of NGOs (LCN), Lesotho Red Cross Society, Marchebene Academic Faith Mission, CAPF Lesotho, Caritas, Catholic Relief Services (CRS), Food and Agriculture Organization (FAO), Lesotho Red Cross Society, Marchebene Foundation, Ministry of Agriculture and Food Security, Ministry of Forestry and Land Rehabilitation, National University of Lesotho, Bethabara Church, Rural Self Help Development Association (RSDA), Send a Cow Lesotho, UNICEF, World Food Programme, World Vision Lesotho, Special Thanks to Catholic Relief Services (CRS) for its guidance in the preparation of Keyhole Gardening contents and UNICEF for its contribution in Nutrition.



1. PRUNING FRUIT TREES

Pruning is the selective removal of parts of plants to promote patterns of growth.

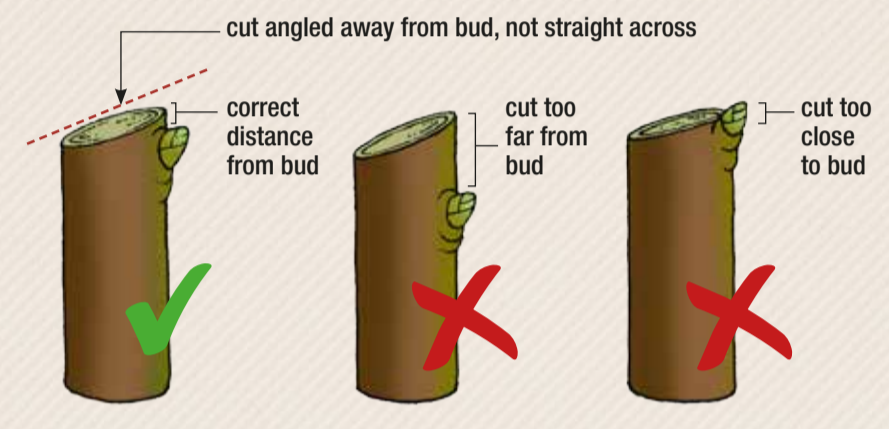
Reasons for pruning

- To control the shape and size of the tree
- To improve light reaching all parts of the tree
- To encourage and maintain abundant growth
- To maintain health of tree by removing dead and diseased branches
- To improve fruit growth
- The pruning of branches on fruit trees creates a strong structure that can:
 - With-stand wind without breaking
 - Carry heavy crops of fruit
 - Be harvested easily, as the tree is not too large.
- Pruning also increases light and air circulation between the branches of the tree to reduce diseases and help fruit to form and ripen.

When to prune

- Prune in winter when trees are dormant, to prevent damage from frost (from end July to end August).
- Prune lightly in summer only to remove damaged, diseased branches, water sprouts (young, tender branches growing on the inside of the tree) and suckers (branches growing from lower part of tree next to soil surface).
- The desired height should be kept to enable easy management of the tree such as spraying and harvesting.
- Always prune on dry days, to reduce the chance of getting diseases on the open wounds.

How to prune



When making cuts, don't leave a stub: cut close to the trunk or branch.
 Make pruning cuts just above an outward facing bud. In the spring, this bud will grow away from the centre of the tree, opening it up.

Always use sharp tools for clean cuts. Dip tools in diluted household bleach in between each cut.
 Please see the leaflet for more information about pruning fruit trees.

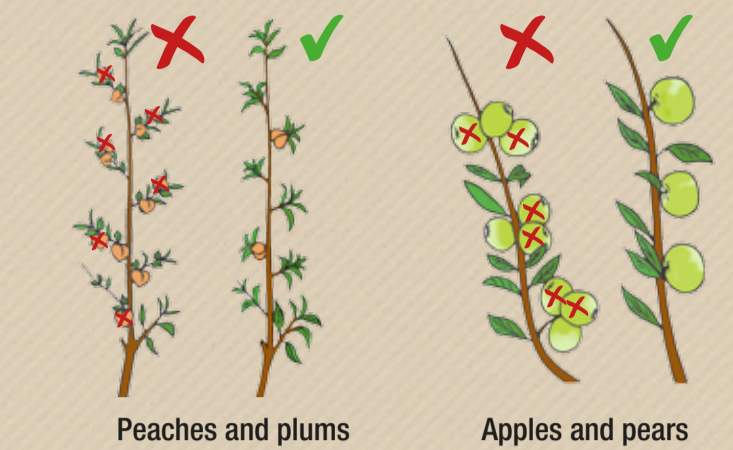
Steps in pruning fruit trees

- Remove all the dead and diseased branches.
- Remove any unnecessary limbs. This includes branches that cross over one another, are too close together or rub against each other. Make the cut just above the collar.
- Always cut away any branches growing below the union of grafted trees. This is the root stock growing through and it will compete with the fruit growing part of the tree.

- Fruit trees are generally pruned to either have open centres or to have central leaders (vase shape).
- Generally branches that are good for fruiting are at angles of 45-65 degrees off the main branches. Branches with smaller angles tend to break in high wind. Only keeping one main vertical branch on a tree, together with promoting angled branches, stimulates production of fruit rather than more growth; the tree spends more energy producing fruit than trying to grow taller.

2. THINNING FRUIT TREES

In stone fruits (peaches, plum, apricots), pome fruits (apples and pears) and citrus (oranges, lemons, naartjies), a very heavy crop of fruit in one year can be followed by very few or none the next year. Branches can also become too heavy and break if they bear too many fruits. It is thus a good idea to thin fruit on an overcrowded tree. This also ensures fewer, but larger fruits, rather than many small fruits.

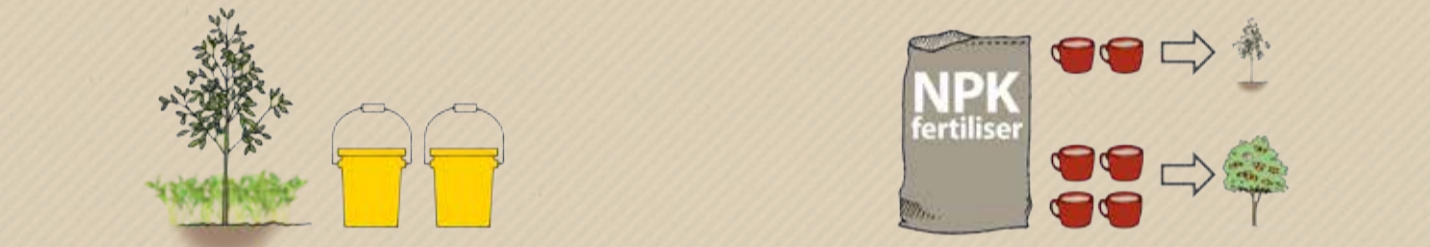


Start thinning fruits 6-8 weeks after flowering when the fruits are the size of marbles, or small pebbles.

When thinning fruit trees, you should leave about 7-8 fruits per metre of branch, or about 4 fruits per arm's length.

3. EFFECTIVE FRUIT TREE WATERING AND FEEDING

- Water deeply and less frequently for deep rooted trees and plants.
- Water less deeply and more frequently for shallow rooted trees and plants.
- Build a watering basin to cover the root area and direct water towards the roots.
- Use drip irrigation.
- Use a mulch to conserve moisture.
 - You can use a layer of organic material such as compost, sawdust, bark, wood chips, straw OR it can be inorganic such as black plastic or stone.
 - Organic mulch should not be in contact with tree trunks as constant moisture against the trunk promotes diseases.
 - Mulch cools the soil in hot weather and prevents freezing in cold seasons.
 - Mulch prevents weeds and soil compaction.
 - It improves soil texture when it decomposes.
- Fertilise well using manure or compost, or with chemical fertilisers.



10 to 20 litres of well decomposed manure or compost should be added for young trees.

Additional fertilisation with chemical fertiliser can be done if the compost was of poor quality: 4 cups NPK fertiliser per mature tree and 2 cups per young trees.

My name is _____ and I am committed to increasing the variety of crops in my homestead garden!
 'Moho, re ka hola tlatla'

3

DIVERSIFY CROPS

INCREASING THE VARIETY YOU GET FROM YOUR HOMESTEAD GARDEN

Planting different varieties of vegetables in the right periods of the year and taking due care of fruit trees will allow us to diversify the food our family consumes.

Pruning stone fruit trees

To prune, it is also important to know how a tree fruits:

- At planting:** Prune the tree's roots and also prune the tree itself to about knee height (60 centimetres). This will force the tree to branch out rather than grow straight up.
- In the first winter:** Some laterals will have grown on the main branches. Leave 2-3 laterals on each branch; the first lateral should be about 40cm from the main branch and the second further along.
- From the second winter onwards:**
 - Trim the tops of the main branches. If you cut them further back than the previous year's growth, it will delay fruiting.
 - Shorten the laterals. Cut them 1cm above a flowering bud or cut them back to the joint between the old and new wood.
 - Shorten the side branches coming off the laterals. Again leave 2-3 side branches on each lateral.
 - Continue with these maintenance pruning practices every winter during the life of the fruit tree.

Pruning pome fruit trees

These trees start fruiting around their fifth season in the ground. Fruit is picked green and ripens off the tree.

Generally a leader system of pruning has been preferred. Fruit grows on small side branches coming off the laterals and these side branches will bear fruit for many years.

- At planting:** Cut the planted tree back to knee height.
- In the first winter:** Trim the main branches, leaving one central branch. Leave 2-3 laterals on each main branch.
- From the second winter onwards:** Trim the main branches and laterals and leave 2-3 branches coming off each lateral.

4. PEST AND DISEASE CONTROL

The organic remedies for vegetables can also be effectively used for control of pests and diseases in fruit trees. A good balance of intercropped plants will assist in pest control creating a balance between existing insects and predators.

Control tips for common fruit tree diseases and pests

PEACHES		
TIME	MOST COMMON PESTS AND DISEASE	CONTROL
Bud swell	Peach leaf curl, mildew	Milk spray for mildew, or lime sulphur, cupravit
After flowering	Bollworm, aphids	Pepper/garlic spray or Ripcord, Metasystox
Mid December	Rust, mildew	Milk spray or Dithane
Before ripening	Fruit fly	Pepper/garlic spray or Lebaycid
Autumn (leaf fall)	Mildew, leaf curl	Organic milk spray or Lime sulphur
Dormant season	Scale	Vegetable oil spray or lime sulphur
APPLES		
TIME	MOST COMMON PESTS AND DISEASE	CONTROL
At flowering	Mildew	Milk spray or Lime sulphur
Late November	Codling moth	Pepper/ garlic spray or Gusathion
Mid December	Codling moth, aphids bollworm	Pepper/ garlic spray Gasathion
End January	Codling moth, fruit fly	Pepper/ garlic spray or any organic spray for soft bodied insects or Lebaycid
Mid January	Fruit fly, codling moth	Pepper/ garlic spray or any organic spray for soft bodied insects or Lebaycid
Dormant season	Scale	Vegetable oil spray or lime sulphur

Instructions on how to prepare organic remedies against pests and diseases in vegetable and fruit trees are available on the reverse of Poster 2.