1. Pruning fruit trees
2. Thinning fruit trees
3. Effective fruit tree watering and feeding
4. Pest and disease control
1. Pruning fruit trees

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

Why 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
1. Pruning fruit trees

Why pruning?

Pruning increases light and air circulation between the branches of the tree to reduce diseases and help fruit to form and ripen.

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.
1. Pruning fruit trees

When to prune?

- In winter when trees are dormant, to prevent damage from frost (from end July to end August).
- In summer only to remove damaged/diseased branches, water sprouts and suckers. 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.
1. Pruning fruit trees

How to prune?

- **Cut angled away from bud, not straight across**
- **Correct distance from the bud**

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**.
1. Pruning fruit trees

a. Steps in pruning fruit trees

1. Remove all the **dead and diseased** branches.

   ![Diagram of a tree with branches being pruned.]

2. 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.

   ![Diagram of a person pruning a grafted tree.]

   1. Remove any **unnecessary limbs**, including branches that cross over one another, are too close together or rub against each other. Make the cut **just above the collar**.
1. Pruning fruit trees
a. Steps in pruning fruit trees

Fruit trees are generally pruned to either have **open centres** or to have **central leaders** (vase shape).

Branches **good for fruiting** are at angles of 45-65 degrees off the main branches. Branches with **smaller angles** tend to break in high wind.

Keep one main vertical branch on a tree and **promote angled branches** to stimulate production of fruit rather than growth!
1. Pruning fruit trees

b. Pruning stone fruit trees

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

At planting

Prune the tree’s roots. Also, prune the tree itself to about knee height (60cm), to force the tree to branch out rather than grow straight up.

In the first winter

Leave 2-3 laterals on each branch. The first lateral should be about 40cm from the main branch and the second further along.
1. Pruning fruit trees
b. Pruning stone fruit trees

From the second winter onwards

- **Trim the tops** of the main branches.

  Do not cut them further back than the previous year’s growth or **it will delay fruiting**.

- **Shorten the laterals**. Cut them:
  - 1cm above a flowering bud OR
  - back to the join between old and new wood.

- **Shorten** the side branches coming off the laterals. **Leave 2-3 side branches** on each lateral.

  Continue with these maintenance pruning practices **every winter during the life of the fruit tree**.
1. Pruning fruit trees

c. Pruning pome fruit trees

First fruiting: **around fifth season** in the ground. Pick fruits when **green**; they ripen off the tree.

1. **At planting:**
   Cut the planted tree back to **knee height**.

2. **In the first winter:**
   Trim the main branches, leaving **one central branch**. Leave **2-3 laterals** on each main branch.

3. **From the second winter onwards:**
   Trim the main branches and laterals and leave **2-3 branches** coming off each lateral.
2. Thinning fruit trees

Why thinning?
- Too many fruits one year can lead to few/no fruits the next year.
- Branches can break if they bear too many fruits.

Thinning ensures fewer but larger fruits rather than many small fruits.

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

Stone fruits: peaches, plum, apricots
Pome fruits: apples and pears
Citrus: oranges, lemons, naartjies

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 trees watering and care

- **Deep rooted** trees/plants: water **deeply** and **less frequently**.
- **Shallow rooted** trees/plants: water **less deeply** and **more often**.

- Build a **watering basin** to cover the root area and **direct water towards the roots**.
- Use **drip irrigation**.

- Use a mulch to conserve moisture:
  - **organic material**: compost, sawdust, bark, wood chips, straw
  - **inorganic material**: black plastic, stones

⚠️ **Organic mulch should not be in contact with tree trunks as constant moisture against the trunk promotes diseases.**
3. Effective fruit trees watering and care

- **Fertilise well** using manure, compost, or chemical fertilisers.

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

- If the compost is of **poor quality**, add 4 cups of **NPK fertiliser** per mature tree and 2 cups per young trees.

**Mulch:**
- Cools soil in hot weather
- Prevents freezing in cold seasons
- Prevents weeds and soil compaction
- Improves soil texture when it decomposes
4. Pest and disease control

Control tips for common fruit tree diseases and pests

### Peaches

<table>
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<tr>
<th>TIME</th>
<th>MOST COMMON PESTS AND DISEASES</th>
<th>CONTROL</th>
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<td>Peach leaf curl, mildew</td>
<td>Milk spray for mildew</td>
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<tr>
<td>After flowering</td>
<td>Bollworm, aphids</td>
<td>Pepper/garlic spray</td>
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<tr>
<td>Mid December</td>
<td>Rust, mildew</td>
<td>Milk spray</td>
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<tr>
<td>Before ripening</td>
<td>Fruit fly</td>
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<tr>
<td>Autumn (leaf fall)</td>
<td>Mildew, leaf curl</td>
<td>Organic milk spray</td>
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<td>Dormant season</td>
<td>Scale</td>
<td>Vegetable oil spray</td>
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### Apples

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<thead>
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<th>TIME</th>
<th>MOST COMMON PESTS AND DISEASES</th>
<th>CONTROL</th>
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<tbody>
<tr>
<td>At flowering</td>
<td>Mildew</td>
<td>Milk spray or lime sulphur</td>
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<tr>
<td>Late November</td>
<td>Codling moth</td>
<td>Pepper/ garlic spray</td>
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<tr>
<td>Mid December</td>
<td>Codling moth, aphids bollworm</td>
<td>Pepper/ garlic spray</td>
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<tr>
<td>End January</td>
<td>Codling moth, fruit fly</td>
<td>Pepper/ garlic spray for soft bodied insects</td>
</tr>
<tr>
<td>Mid January</td>
<td>Fruit fly, codling moth</td>
<td>Pepper/ garlic spray for soft bodied insects</td>
</tr>
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<td>Dormant season</td>
<td>Scale</td>
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