



What is Budding ?



Fruit trees which have grown from seed may not give good fruit. There are various other ways to make sure that trees fruit well. Depending on the variety and season there are different methods to improve fruit trees. One way is by taking a local, wild fruit tree and transferring a bud from a tasty, good and heavy-fruited tree onto it. This is called **Budding**. Budding is just one of the techniques used to improve fruit trees so that they give more production.



A one year old budded peach seedling

This chapter gives information about where, when and how to do budding, so you can do it at home to produce your own good quality fruit seedlings.



Why do Budding ?

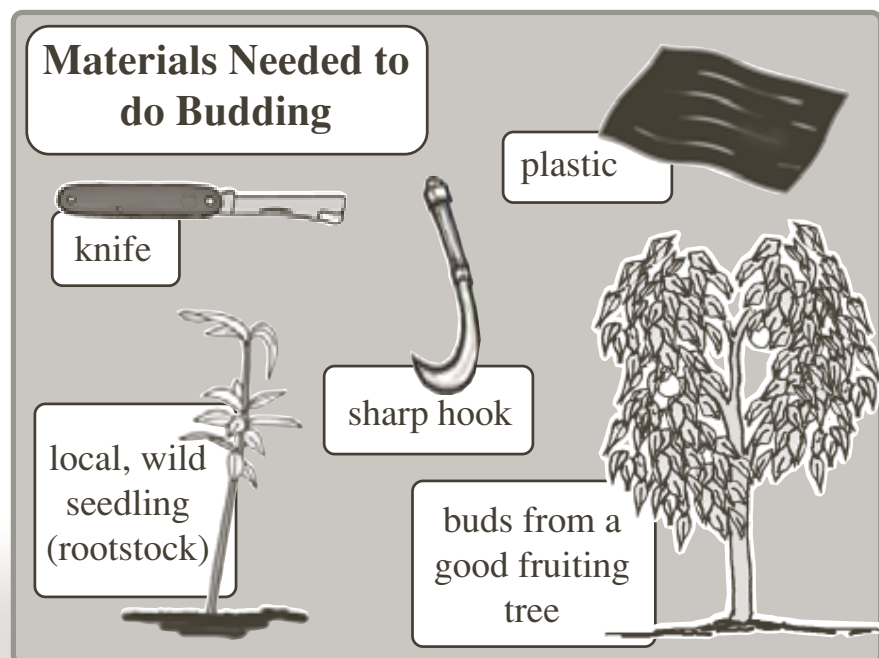


Benefits of Budding

- the tree produces good fruit
- the tree fruits sooner
- you don't need to wait for other seasons and methods
- to be able to produce good trees in your own time
- to use time efficiently
- to save having to buy fruit seedlings
- to increase farm production;
- to develop new skills
- to increase production from less land

When to do Budding ?

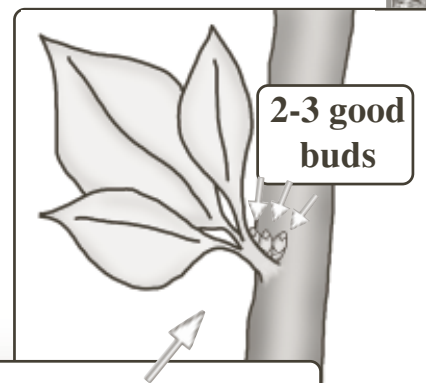
Budding should be done in the early Summer when new shoots are sprouting and sap is rising the most.



How to do Budding ?

1. Selecting bud wood for budding

The first thing to do in budding is to select good buds from the tree you want to propagate. If this is far away then the whole branch containing the bud should be cut and brought. Don't bring a branch which doesn't have good buds on it. Good buds can come from the current year's growth, or from last year's wood.



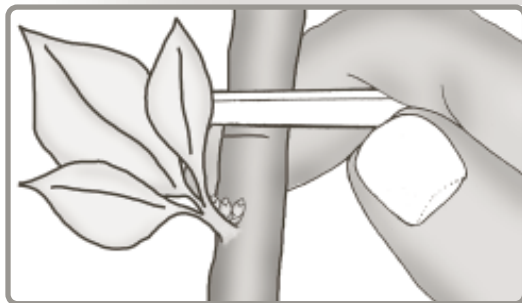
The more sprouting buds on a single leaf axil, the better.



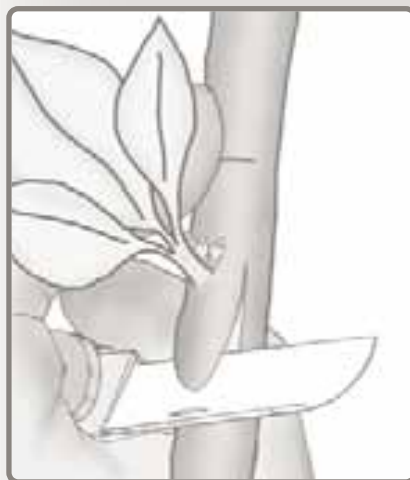
Selecting buds from a good fruiting tree

2. Cutting the selected bud

Make a cut through the bark to the wood about half an inch above the selected bud. Taking care not to damage the bud, cut from half an inch below the bud, upwards to the first cut as shown in the picture.

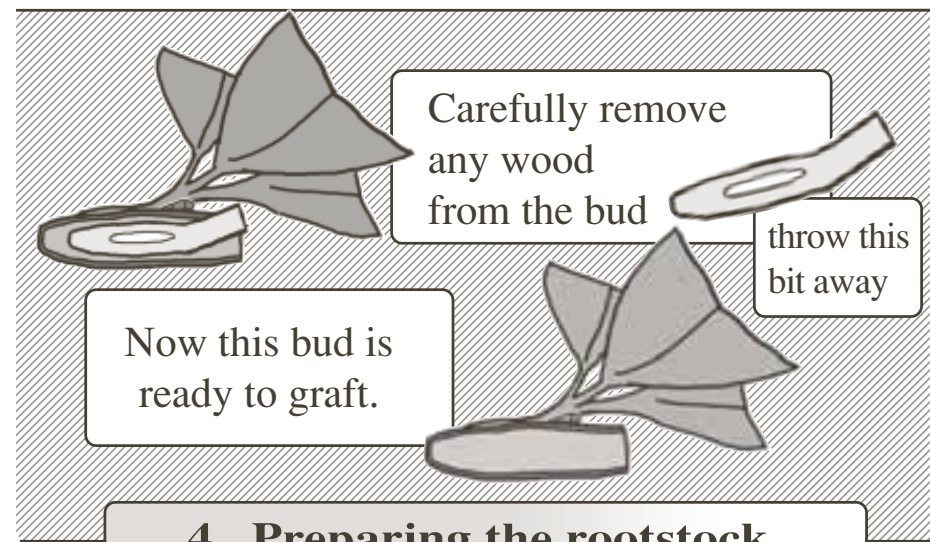
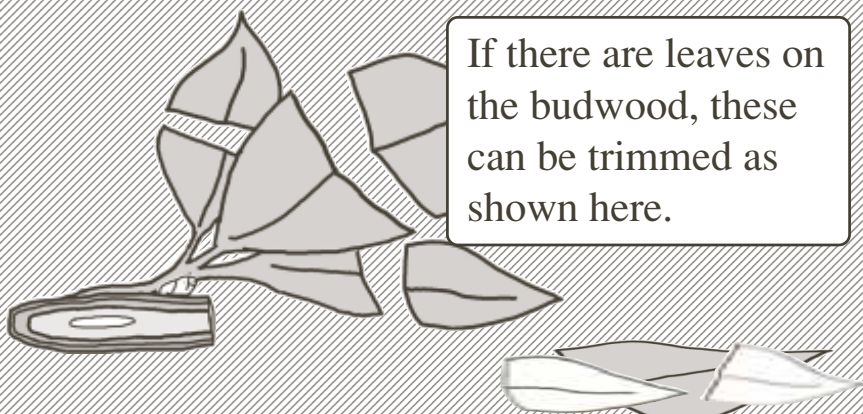


Carefully separate any wood that has been cut from the bark and bud (see the picture at the top of the next page). Now the bud is ready. Put the bud in a bowl of water, so it can be carried without drying out.



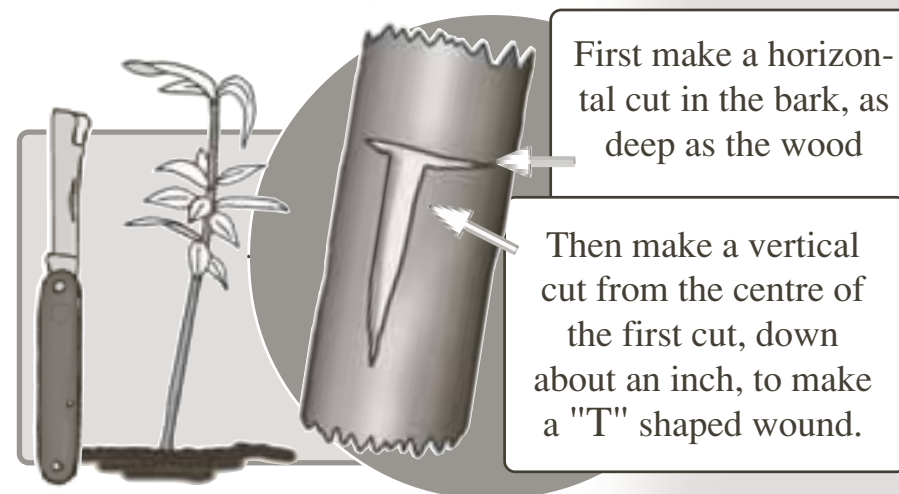
3. Preparing the bud

If there are leaves on the budwood, these can be trimmed as shown here.



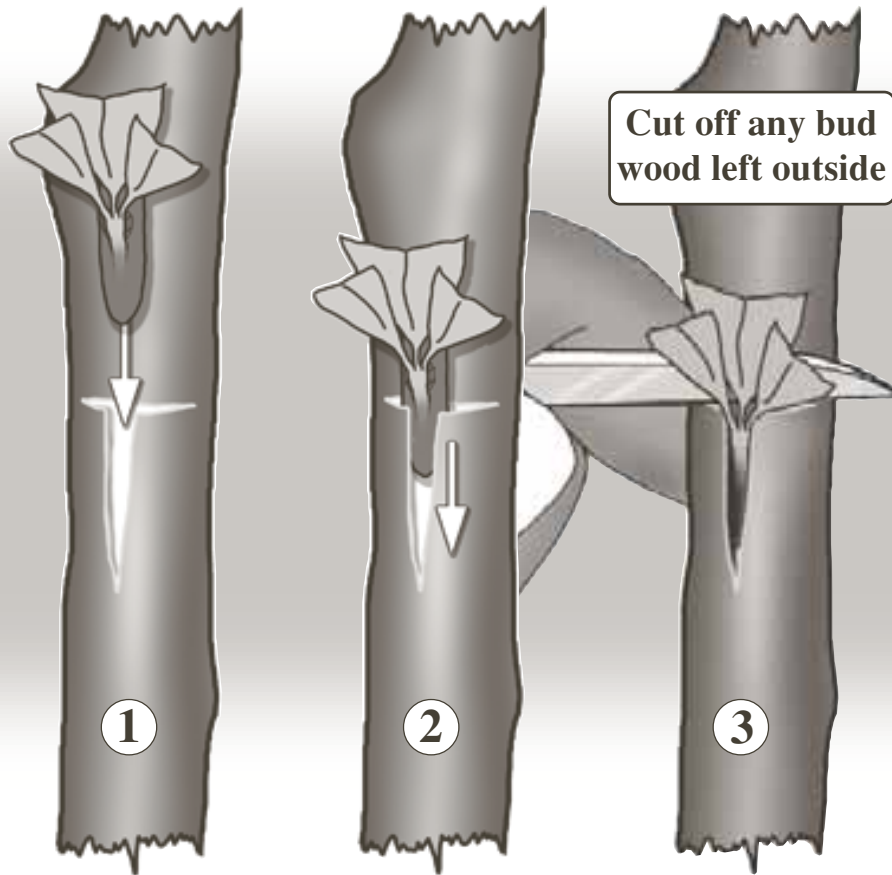
4. Preparing the rootstock

A compatible local, wild variety of seedling is called a **rootstock**. The rootstock shouldn't have any disease or wounds. The rootstock should be prepared before the bud is cut, to save time. How to prepare rootstock is described in the *Fruit Nursery* chapter. The rootstock seedling should be well watered and mulched the day before it is to be budded.



5. Joining the bud to the rootstock

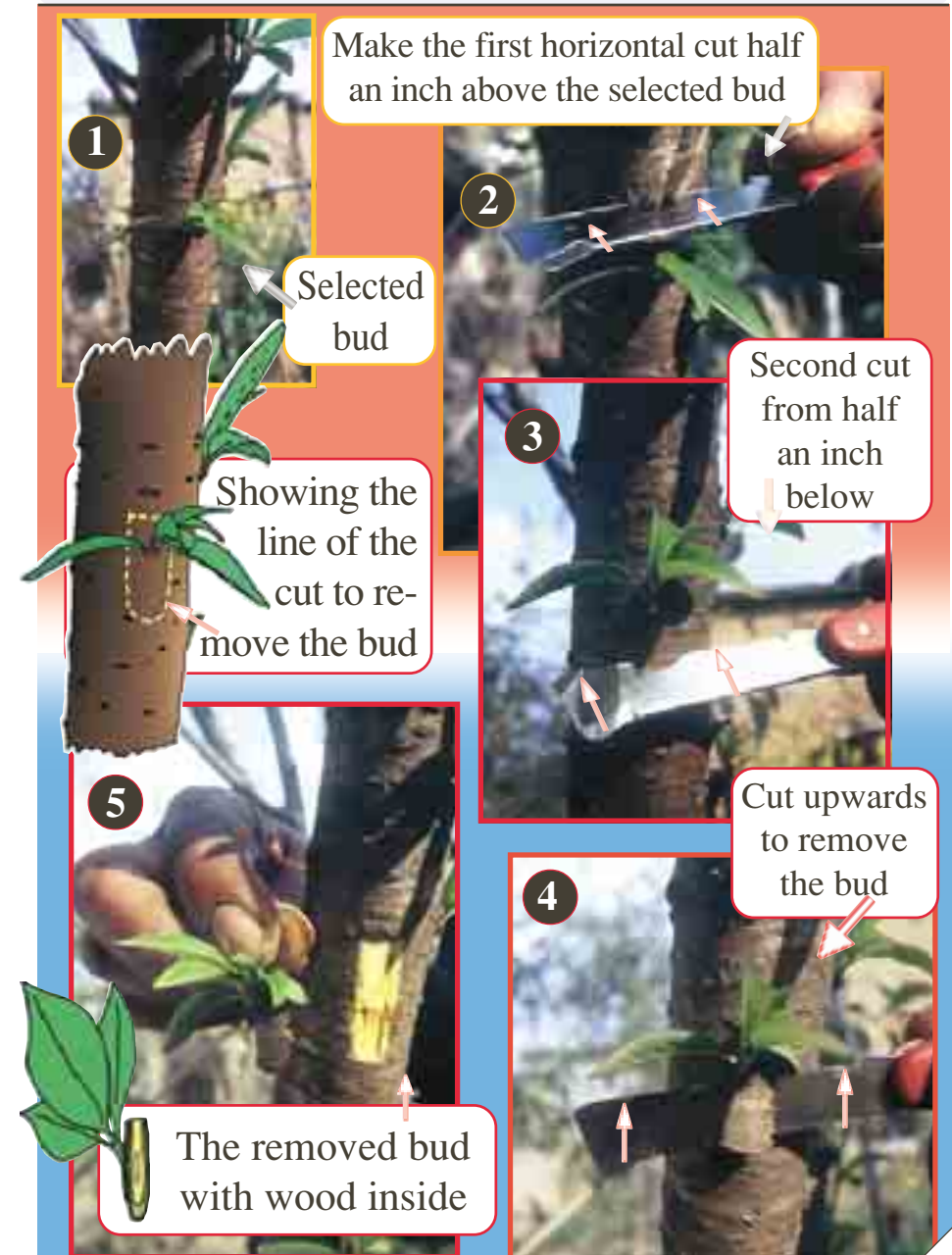
To graft the bud from the improved tree, use your knife to prise open the T-shaped wound, and slowly insert the budwood downwards into the opening. The budwood should fit exactly into the inside of the T. If there is a small piece of the budwood left sticking out above the horizontal cut in the rootstock, this should be cut off.

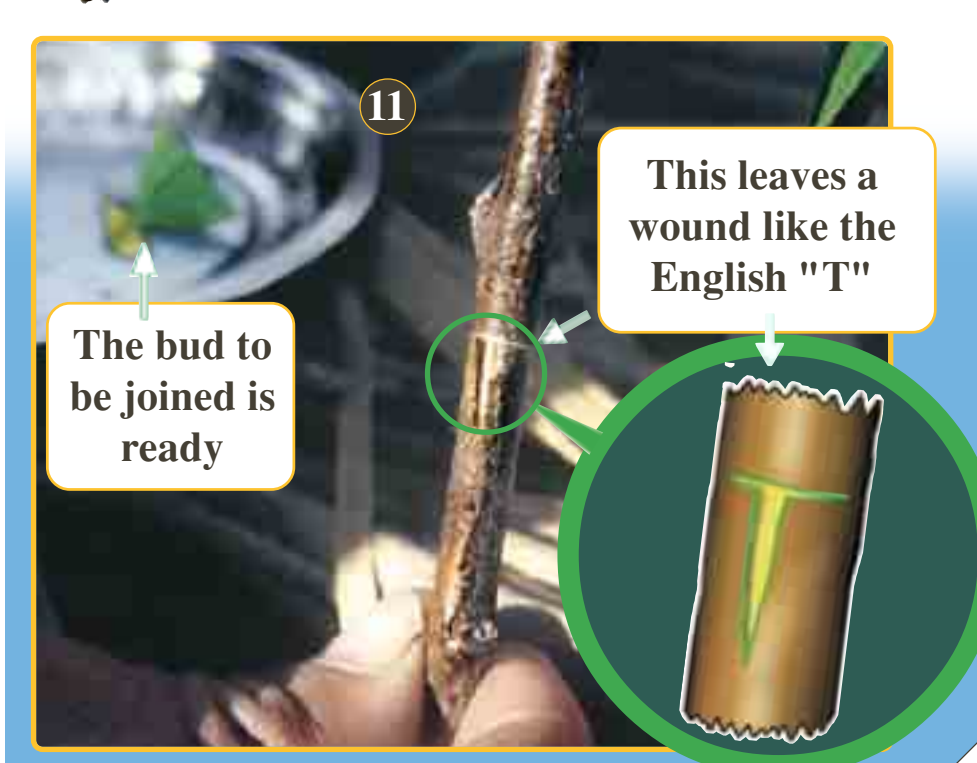
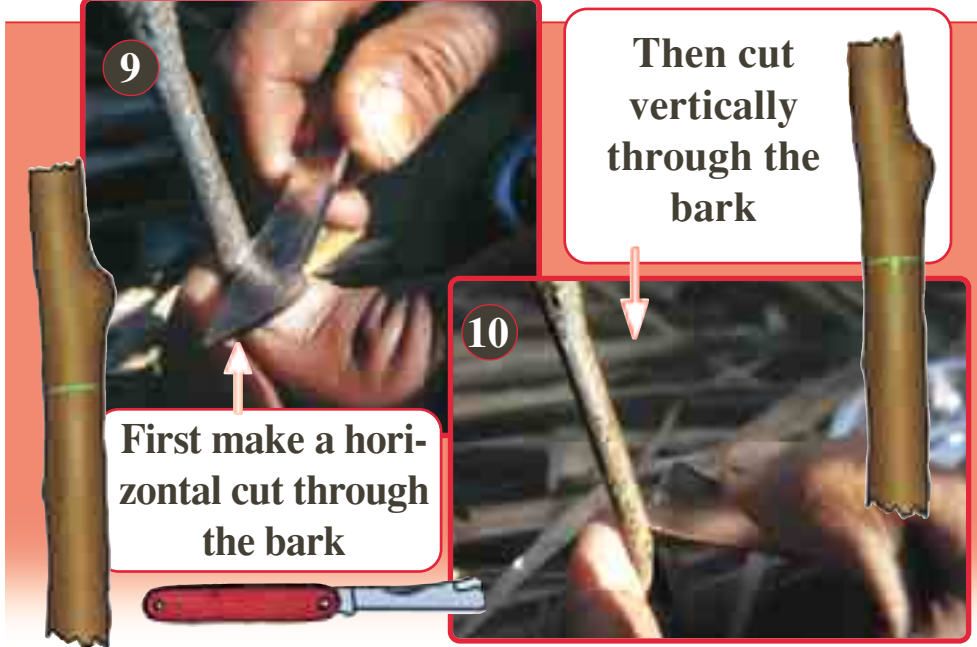
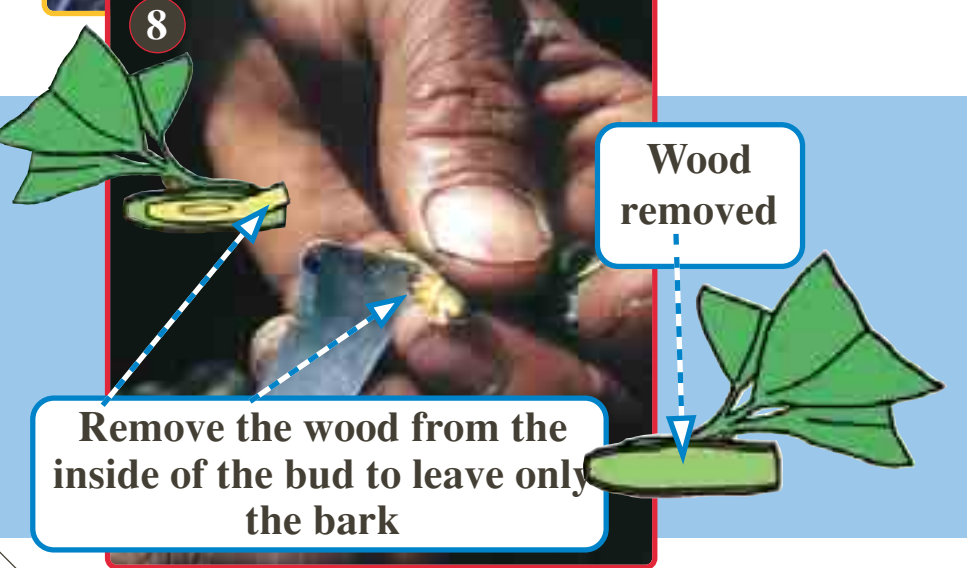


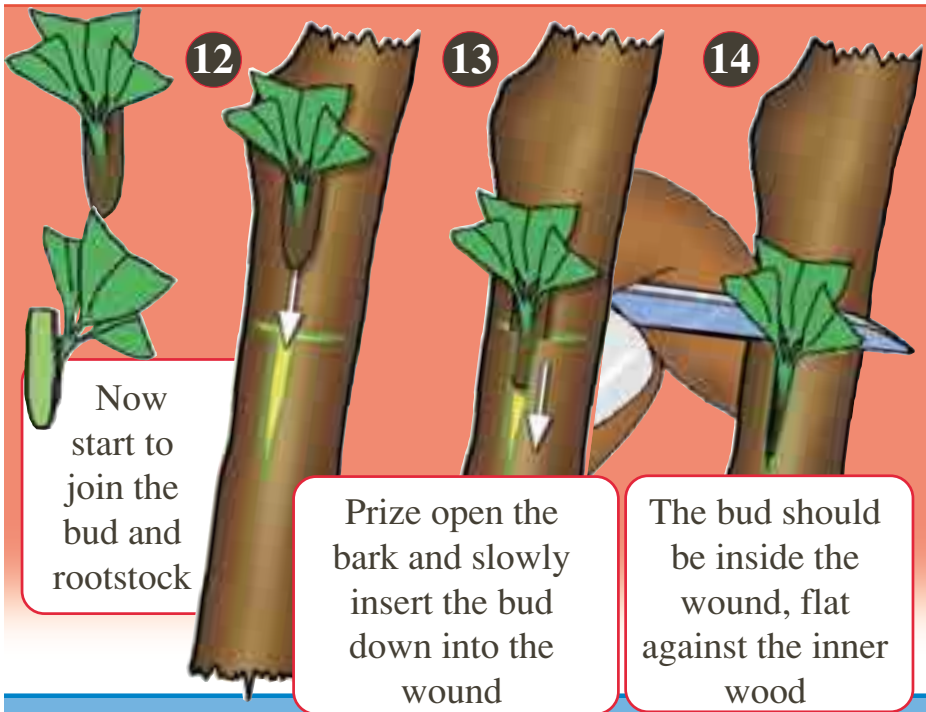
Part 6, binding the bud with plastic, is continued after the colour pictures

Let's See

how to do Budding





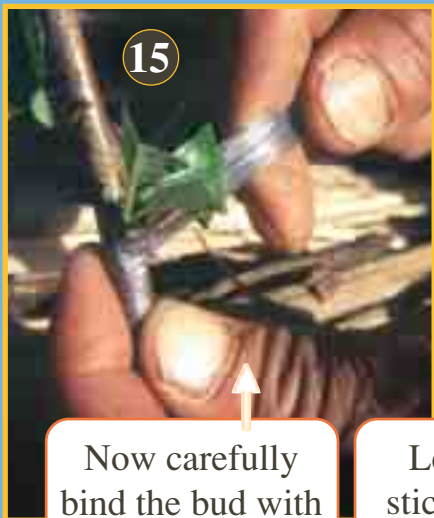


Now start to join the bud and rootstock

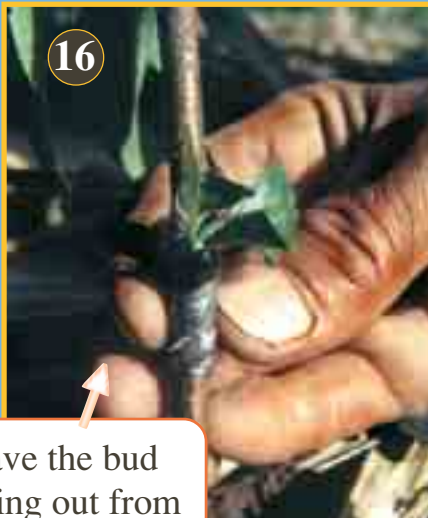
Prize open the bark and slowly insert the bud down into the wound

The bud should be inside the wound, flat against the inner wood

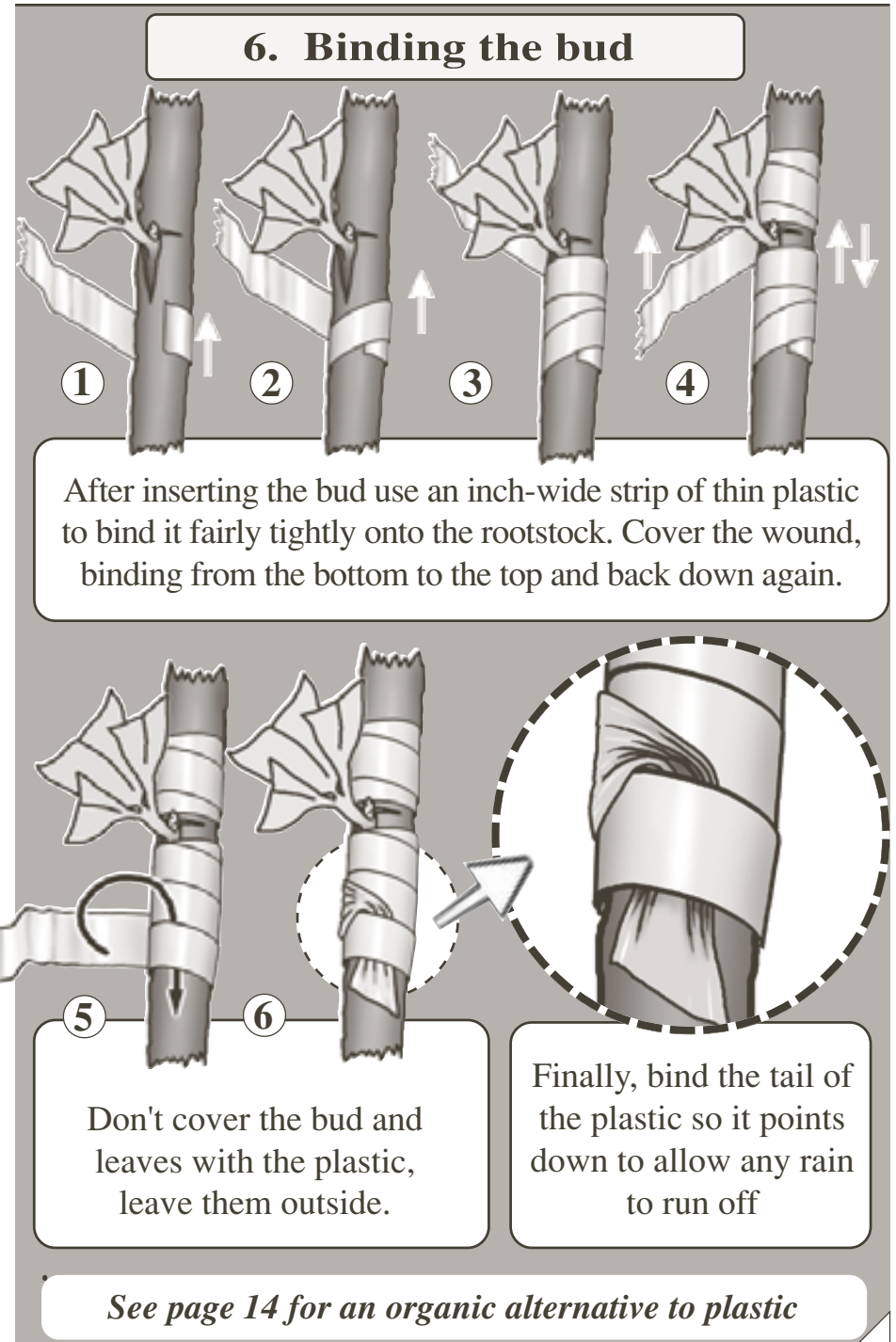
See page 14 for an organic alternative to plastic



Now carefully bind the bud with this plastic



Leave the bud sticking out from the plastic



6. Binding the bud

1

2

3

4

After inserting the bud use an inch-wide strip of thin plastic to bind it fairly tightly onto the rootstock. Cover the wound, binding from the bottom to the top and back down again.

5

6

Don't cover the bud and leaves with the plastic, leave them outside.

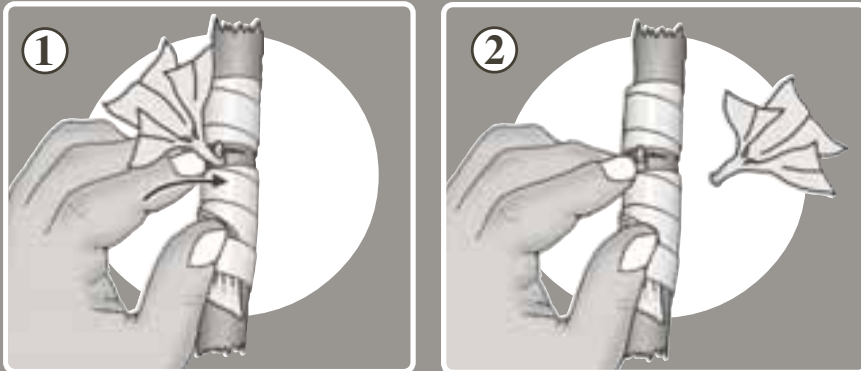
Finally, bind the tail of the plastic so it points down to allow any rain to run off

See page 14 for an organic alternative to plastic

Maintenance

How to maintain a budded seedling

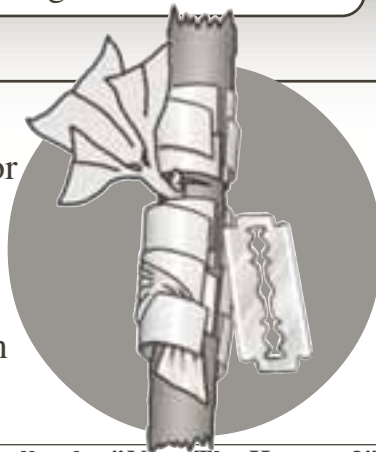
How to tell if the budding is successful



Two weeks after the budding is done, gently pull at the leaf stems on the bud. If the leaf comes away easily from the base, even by just touching it, the budding has been successful. If the leaf does not come away even with a stronger tug, and slowly dries up, then the budding has probably failed. Then you can try again by grafting in the winter.

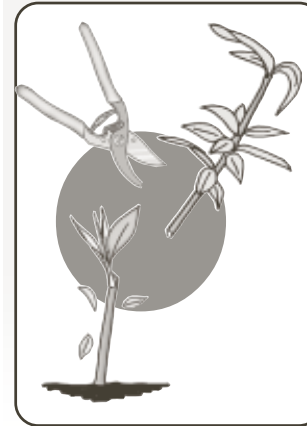
Removing the plastic

Whether the budding is successful or not, the plastic needs to be gently cut and removed after 3-4 weeks otherwise it will "strangle" the growing seedling. This can kill even a successful bud.



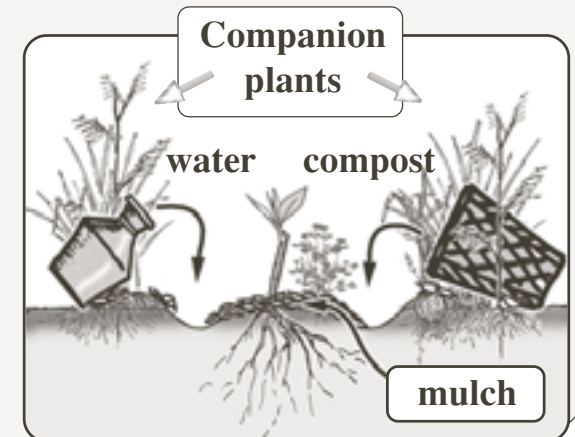
Things to do after budding is complete

Give plenty of water to the seedling immediately after budding. Keep the budded plants well mulched. Make a thatch to shade the seedlings from the hot sun. Water and weed the seedlings as necessary. Carefully remove any buds that sprout **below** the new bud. In the autumn after the budding was done, carefully cut off the top of the seedling just above the new bud.



Planting the Seedling

If the seedling is deciduous (that is it drops its leaves in winter) the budded seedling can be planted out in late winter. If the plant is evergreen it is usually planted in the summer. A good place to plant such a valuable seedling is in an old pit latrine. Otherwise, dig a pit one metre deep and one metre wide, fill it with compost and soil, and plant the seedling there. Full information about this is given in the chapter *Fruit Tree Planting*.



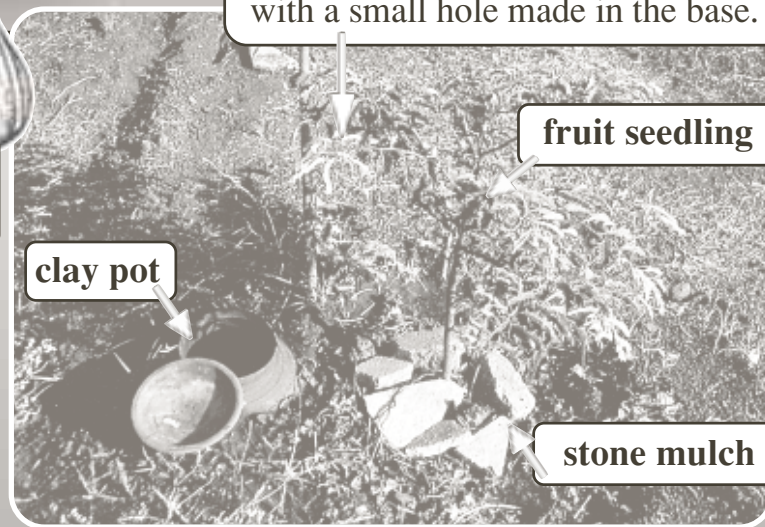
An easy way to irrigate fruit trees



Bury a porous clay pot about 50cm away from a newly planted fruit seedling. When this is filled with water, it soaks out of the pot directly to the root zone of the seedling. Instead of a pot, the hardened shell of a bottle gourd can be used, with a small hole made in the base.



Bottle gourd



clay pot

fruit seedling

stone mulch

Instead of Plastic

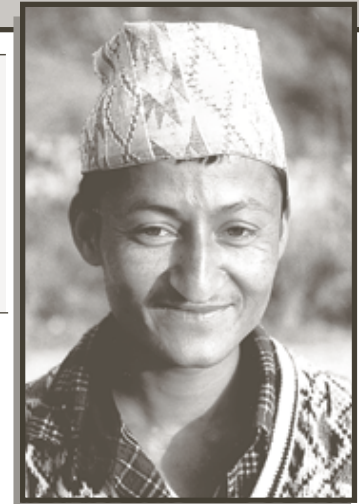


You can also use the skin of the sisal leaf (*Agave*) to bind the bud. As shown here, carefully peel the skin from the leaf. See chapter no: 10, *Introducing Home Fruit Production* for more details

Farmers' Experience

Mr Lal Bahadur Budhathoki

From Nepal, Jajarkot district, Khalanga - 5, Pokhara village, Mr Lal Bahadur Budhathoki has done plenty of budding. Now let's hear about his experience.



Lal B. Budhathoki

“ I first learned about budding from the Homestead Programme (JPP) and came home and started budding improved peach onto our local, wild peaches. Budding is done in late June, and when other local farmers saw, they were amazed that you could transfer just a bud from one tree to another. I budded peach onto wild peach, and pear onto our local wild pear, but this wasn't as good as the peach. Now the local Farmers' Group has started to do it. Everyone thinks it's great, and it's cheap too. The budding is done in late June, and then the top is cut off in the Autumn to allow the bud to grow on up. If it fails, it doesn't affect the tree and you can graft again in the Winter. Also, if grafting is unsuccessful in the Winter you can do budding on the same plant in the Summer. Either way the seedling isn't wasted. We don't use fancy grafting knives - just a razor blade and *ashi* (local cutting hook) are enough. The plastic is to keep out air and water, but needs removing quickly, within the month. ”



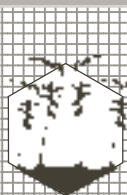


Read On !



Fruit Nursery chapter

How to grow root stock from local wild fruit seed at home for grafting and budding on your own land.



Fruit Tree Planting chapter

After raising good seedlings in the fruit nursery, if they're not planted well all the work can go to waste. Information is given in this chapter.



Integrated Fruit Orchard chapter

Information on how to plant fruit trees with various other multi-purpose trees to give more and quicker benefits for less work is given in this chapter



Agroforestry chapter

Planting trees on farmland can bring farmers many benefits. But you can't plant any type of tree, nor anywhere. This chapter gives information on how to plant trees without affecting farm yield



Grafting, Top Grafting, Stone Grafting & Air Layering chapters

Here is more information about various simple methods of growing improved fruit varieties at home for planting on the farm.

