

## **PROPAGATION OF *DRACAENA MARGINATA* BY HEADS**

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*Dracaena marginata* is easy to propagate from large stems taken from established trees by placing them in double washed river sand in a 3 gal tub under shade and watering once a day for a period of 10 to 12 weeks. However, not only does this method ruin your tree but if done in the winter, between April and September, will kill it. Also there is very little of this mature stock around.

My method is to peel off 8 to 12 leaves from the centre of the head, leaving 10 to 12 leaves below the bared stem section. This leaves a nice, bushy head with mature wide leaves. This is left alone for several weeks until the bark has hardened like the mature wood on the bottom.

The heads are then cut off with a small saw and 5 or 6 are placed in a bucket with a small layer of sphagnum moss for 24 hours until the sap has dried out. The leaves are watered a couple of times to stop dehydration.

The heads are then planted in double washed river sand in a 1 or 2-gal bucket. After 5 to 6 weeks in a bush-house or in shade they will have struck roots. I came to the conclusion that the softness of the outer bark and the sap had killed my previous heads.

A few weeks after cutting the heads from the parent tree I had 2 or 3 nice new heads sprouting for next year, whereas by taking the whole branch near the base I was cutting off my stock for next year. This way I end up with a nice shaped stock plant which, if it is in the ground, can be dug and potted after 7 or 8 years, sold for a good profit and replaced with a smaller tree.

## **SUMMER GRAFTING OF GOLDEN ROBINIA**

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*Robinia pseudoacacia* 'Frisia' (golden robinia) is a small to medium, fast-growing, deciduous tree of the Leguminosae family. It has golden-yellow leaves from spring to autumn and white wisteria-like flowers in spring.

Golden robinia is grafted onto seedlings of *Robinia pseudoacacia* (black robinia). As most deciduous tree grafting is done during winter I, at first, did mine at this time. However, I noticed my understock was large enough to graft by mid-summer (December). I knew this was a good time for budding so why not grafting? I tried grafting some trees as an experiment and was amazed by the good results.

I do my grafting in pots which are 85 mm in diameter and 150 mm deep. This gives good soil volume and allows a large number of pots per square metre. Handling is kept to a minimum by using pallets that are 1.24 m by 1.33 m and hold 263 pots.

**Preparation of Understock.** From 3 to 8 seeds are sown directly in each pot and placed in a polyhouse in early August (late winter). They germinate in 10 to 15 days and the excess seedlings are cut off at ground level with scissors. More seed will germinate in the next 15 days and another thinning is necessary. After two weeks, when the seedlings are about 75 mm tall, the pallets are taken from the polyhouse into the shadehouse. They are left to grow until mid-December (early summer) when the average height is 600 to 800 mm. The plants are then taken into a shed and bench grafted. Plants that are not large enough to graft at this time can be returned to the growing area to be grafted in winter.

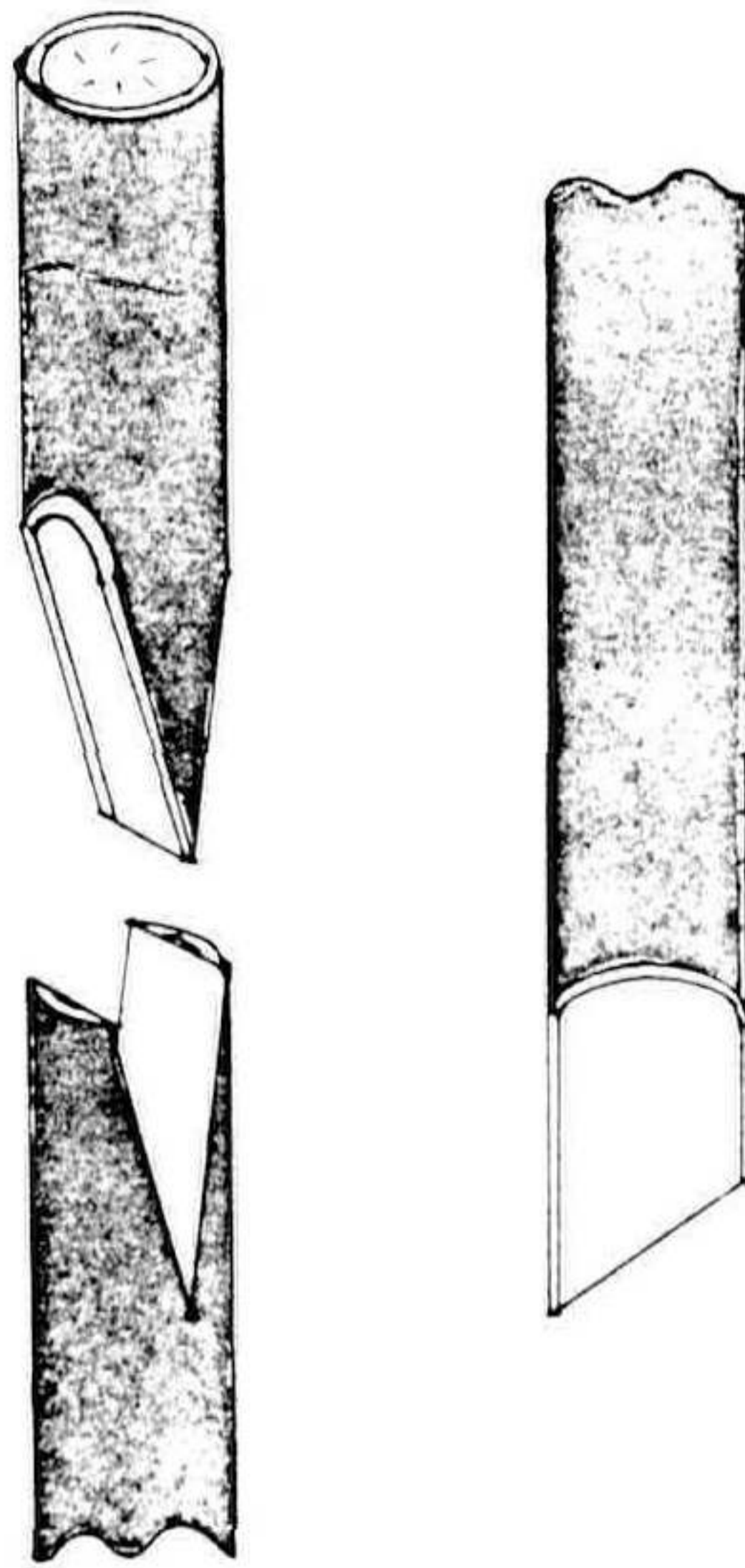
**Preparation of Scion Wood.** As it is summertime, the scion wood is in leaf. Healthy, 4-month-old branches about 30 cm in length are preferable. I remove the leaves while the wood is on the tree. This reduces the chances of the wood drying. The terminal 4 or 5 buds, which are too soft, are removed while deleafing. Enough wood to last one day at a time is collected in the early morning and wrapped in wet newspaper.

**Grafting.** I use the top cleft or wedge graft method (Figure 1-left) as I consider it is the easiest graft to do. The understock varies in diameter from 4 to 15 mm (8 to 10 mm is ideal); however the success rate drops with understock less than 6 mm in diameter.

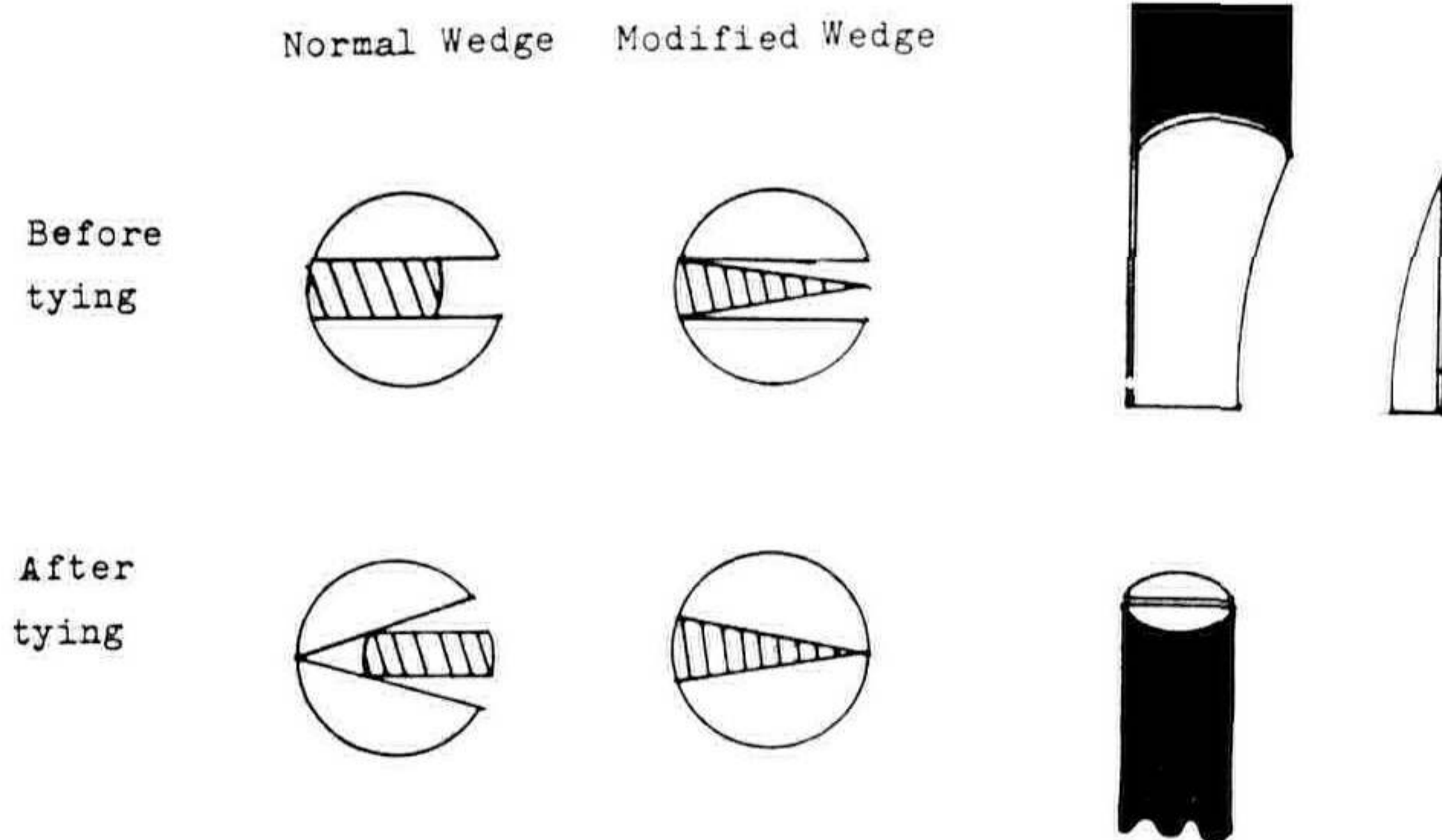
Scionwood is best if it is the same diameter as the understock but this is not always possible. If the scion is thinner than the understock, the wedge can be tapered on one side (Figure 1-right). Thus when it is inserted in the graft, it makes a tight connection on the cambium layer (Figure 2-left). If a parallel wedge is made, there may not be cambium connection after tying (Figure 2-left).

If the scion is larger than the understock the wedge can be cut down to size (Figure 2-right).





**Figure 1.** (Left). Cleft or wedge graft. (Right). Modified wedge graft for a scion that is thinner than the stock.



**Figure 2.** (Left and Center). Effect of the modified wedge graft in ensuring cambial contact after tying. (Right). Modified wedge graft for scion that is larger than the stock.

Note the position of the bud in Figures 1 and 2-right. I generally use only one bud for the scion, as scionwood is usually scarce and has to be used economically. This year I did a trial using 2-bud scions. A marginally better success was noted but more labour was required at a later date to reduce it to a single shoot and so produce a single-stemmed tree.

The plants are placed in the glasshouse after grafting. Within 10 days most buds are swollen ready to shoot and within 20 days all buds that will shoot have done so. It is necessary to go through and cut off any suckers at 30 days. At 50 days the plants are moved into the shadehouse where they are potted into 250 mm buckets; any suckers are cut off at 60 days. The plants should be 300 to 450 mm high before dormancy and will grow very quickly when spring comes.

## CONCLUSION

I find that by doing my grafting in summer the plants are ready for sale in early spring, which is the best time for selling plants. This means that the plants are ready for sale after 14 months and will sell very well at this stage. When they are grafted in winter, the understock are 12 months old when grafted and are ready for sale 4 months later. This is now 16 months and January (mid-summer) which is a quiet time for sales. Therefore, the plants won't sell quickly until the following spring — another 8 months. This gives an effective growing time of 24 months — almost twice that of summer grafting.

## A SIMPLE METHOD FOR IN-GROUND PRODUCTION OF SEEDLINGS

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The method discussed here has been used successfully for growing vegetable and flower seedlings for many years. It could be used to grow a wide range of shrub, tree, and creeper plants. This method may be of particular interest to people who wish to grow large quantities of material.

The soil should be a light loam in texture, rich in the essential nutrients, and worked to a fine state by rotary hoeing. It should be sterilized with methyl bromide or some other method, be raked as evenly as possible and should be in a moist state.

The wooden drill-making implement (Figure 1) is pressed into the loose soil surface firmly and when removed will leave seven (7) drills approximately 10mm deep. The bed is now ready to plant.