



# **HEAVY-DUTY STEEL PEAKED DECORATIVE FRUIT CAGE**

## **ASSEMBLY AND INSTALLATION INSTRUCTIONS**

PRODUCT CODE: GFC-128/129

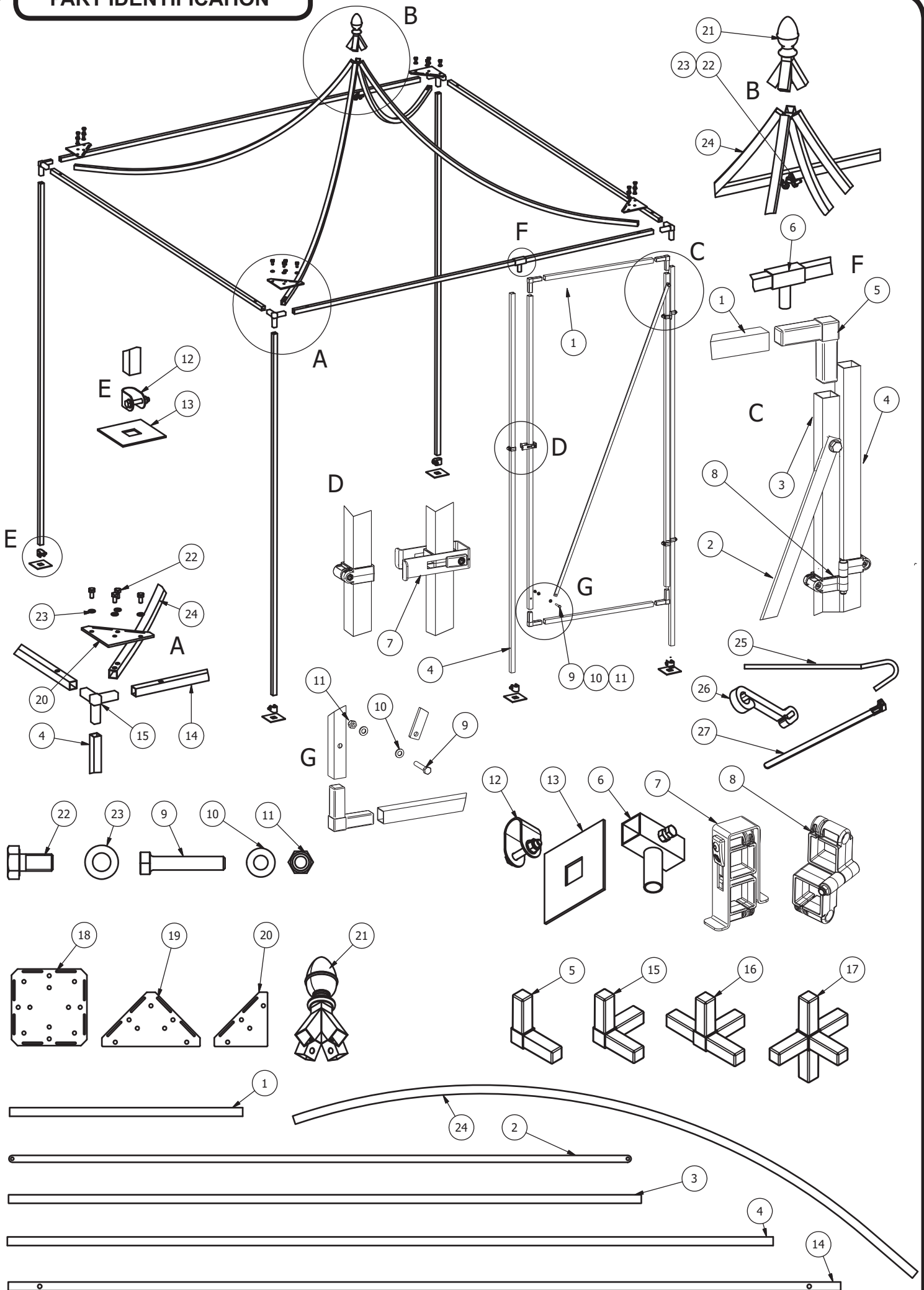
Revision 5

**If you wish to concrete your cage in place please see page 8.**

For more information on our cages please follow the below link:-



# PART IDENTIFICATION



# DECORATIVE FRUIT CAGE ASSEMBLY INSTRUCTIONS

## Introduction

Thank you very much for purchasing this Harrod Horticultural Decorative Fruit Cage. These instructions show the step by step assembly of a three unit cage which will help demonstrate how to install your fruit cage, regardless of whether you have bought a single, or a multiple unit cage.

## Safety

To install your cage safely we recommend that you enlist the help of three or more people. Take extra care when working on step ladders on soft ground.

## Tools Required:

1 x soft mallet, 1 x 8mm spanner, 2 x 13mm spanners, 1 x 17mm spanner, 1 x tape measure, 1 x scissors, 1 x ball of string, 1 x spirit level, 1 x hole former (ARC-021) (*Optional*).

## Parts Identification

Before constructing the fruit cage remove all protective packaging and check that all parts listed in the pack contents list (CHK-809) are present. Use the part identification diagram on the opposite page to help you recognise the parts. You will have varying quantities of fruit cage parts depending on the number of units combined to make up your specific arrangement. Each door kit, of which you will have at least one, comprises of the parts listed in the table below left.

HEAVY-DUTY STEEL DOOR KIT PARTS IDENTIFICATION (GDN105)		
Ref No.	Part Description	Part No.
1.	2 x 0.7m Horizontal Supports	PGG117
2.	1 x Diagonal Support	PGG007
3.	2 x 1.9m Vertical Supports	PGG006
4.	1 x 2.3m Door Support Upright	PGG112

STEEL DOOR ASSEMBLY PACK PARTS IDENTIFICATION (GDN116)		
Ref No.	Part Description	Part No.
5.	4 x Two-Way Connector	GDN-676
6.	1 x T-Joint	PGG005
7.	1 x Catch and Fixings	GDN-809
8.	2 x Hinge and Fixings	GDN-808
9.	2 x Hex Bolts M8 x 45mm	GPP510
10.	4 x Plastic Washers M8	GPP710
11.	2 x Nylock Nuts M8	GPP500
12.	1 x Foot Plate Clamp	GDN-108
13.	1 x Foot Plate	GDN-108

DECORATIVE FRUIT CAGE PARTS IDENTIFICATION (GFC - 128/129)		
Ref No.	Part Description	Part No.
14.	2.5m Horizontal Support	PGG035
15.	Three-Way Connector	GDN-675
16.	Four-Way Connector	GDN-679
17.	Five-Way Connector	GDN-678
18.	Square Connector Plate	PGG016
19.	Long Connector Plate	PGG021
20.	Corner Connector Plate	PGG019
21.	Connection Node	PGG008
22.	Hex Bolt M10 x 20mm	BOL342
23.	M10 Washer	BOL712
24.	Curved Roof Support	PGG011
25.	Ground Peg	GPP001
26.	Net Clip	GPP005
27.	Net Tie	GAR914
4.	2.3m Support Upright	PGG112
NA	2m Wide Standard Side Netting	GAR070
NA	Fitted Roof Net	GDN-072
NA	Whipping Twine	TWN-294
NA	Whipping Needle	TWN-295

**Note:** A 3mm allen key is provided with GDN-809 for assembly of GDN-809 and GDN-808



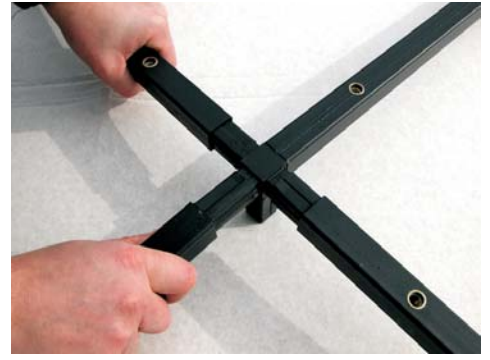
# DECORATIVE FRUIT CAGE ASSEMBLY INSTRUCTIONS



1. After reading the introduction, lay out on the ground in the desired arrangement of the final cage all 2.5m horizontal support bars (ref. 14), all connector plates (ref. 18,19, & 20) and all three, four & five way connectors (ref. 15,16, & 17).



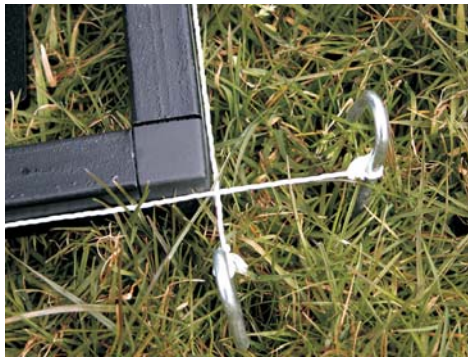
2. Decide where the door(s) should go (see step 9) and slide a T-joint (ref. 6) onto the appropriate horizontal bar(s) (ref.14). Ensure that the orientation of the parts is as shown, with the threaded holes facing upwards and the locking bolt on the T-joint facing into the cage.



3. Using the correct connector (ref. 15,16 & 17) for the joint in question, connect the 2.5m horizontal bars (ref. 14) together to form a framework of bars which represents the roof of your cage (in plan form) on the ground. The soft mallet may be needed to help slide the bars home.



4. Check that you are happy with the positioning of the framework within your plot. Then using a corner connector plate (ref. 20) make **absolutely sure** that the joints are **perfectly square** as the ultimate success of the assembly relies upon this! Diagonals can also be measured. When both are equal the frame is square.



5. Using string tied to ground pegs (ref. 25), mark out the plan of the cage on the ground as shown above. Where ever the strings cross, this accurately marks the intended position of an upright (ref. 4).



6. Ensure that the marking string is pulled tight and accurately follows the framework of horizontal bars which act as a template. Check once more that all is square as described in step 4.



7. When more than two horizontal bars come together, it is essential to mark which side of the string the uprights will be located. Ground pegs (ref. 25) can be used for this.



8. Once all of the marking out with string is complete, carefully dismantle the horizontal bar framework leaving connected only bars that can exist as a complete square unit (see step 13 for reference). Note that the threaded holes in the horizontal bars always face upwards.



9. Your site should be marked out in the manner shown above. If your site slopes, level the strings with the aid of a spirit level. Position the door on the lowest side of the cage if possible to ensure that all of the uprights (ref. 4) can enter the ground at least the required distance of 32.5cm.



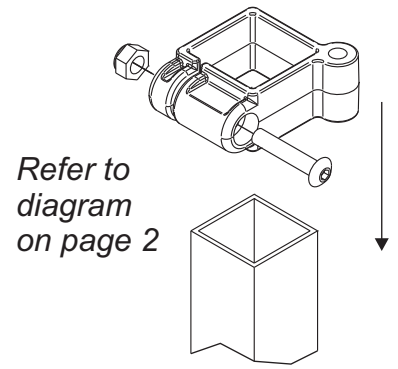
# DECORATIVE FRUIT CAGE ASSEMBLY INSTRUCTIONS



10. With the aid of a mallet and a stake, carefully create appropriately sized holes in the ground about 32.5cm deep to receive the uprights (ref. 4). The uprights can be concreted if required but do not set until the steel framework is fully assembled and levelled. (You may find a hole former (ARC-021) useful for making the holes.)



11. Place the uprights (ref.4) into the holes and at the same time slide on the foot plates (ref.13) as shown. The uprights should be pushed into the ground approximately 30cm at this point.



Refer to diagram on page 2

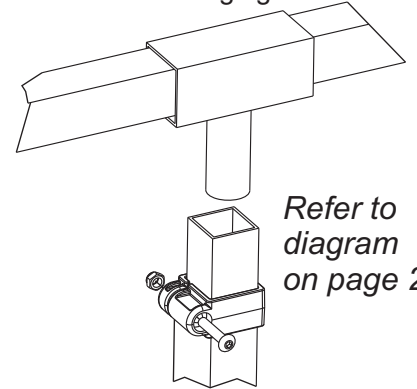
12. Before attaching the roof unit to the uprights ensure that two hinge blocks (Ref.8) are slid onto the hinging upright. Attach the fixings but at this stage do not fully tighten. Ensure the pivot axis is towards the outside of the cage for a door that opens outward. This can be reversed for an inward swinging door.



13. Your site should now look something like the above - albeit with your own particular cage's arrangement. Check the uprights are vertical with the aid of a spirit level.



14. Locate the door support upright(s) (ref. 4) such that the gap between it and the upright that the door will hinge from is 770mm (between inside faces).



Refer to diagram on page 2

15. Slide the flat latch block (Ref.7) onto the door support upright and tighten loosely. Position the T-joint along the horizontal bar to line up with the door support upright.

Pick up the first square horizontal bar unit as in the photo (note the position of the T-joint).



16. Locate the square unit into the tops of the uprights and the door support upright as shown above.



17. Locate any other complete square horizontal bar units as in step 15 as applicable. Then add all other horizontal bars one at a time until all horizontals are in place. Make sure that all threaded holes on the horizontals are facing upwards.



18. At all horizontal bar joins, bolt (ref. 22 & 23) the appropriate connector plate (ref. 18,19 & 20) as in the example above using a 17mm spanner.

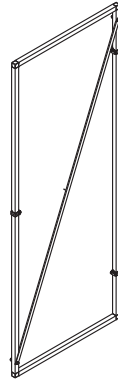


# DECORATIVE FRUIT CAGE ASSEMBLY INSTRUCTIONS



19. Your cage should now in essence resemble the above example, with all horizontal bars and connector plates in place.

Refer to diagram on page 2



20. The door frame(s) can be assembled using the diagram on page 2 to assist you. Before inserting the connectors ensure the hinge/latch blocks are inserted on as shown. The hinge blocks must be in the same orientation as that on the door hinging upright and the flat of the catch blocks must face each other.



21. On side(s) of the cage that door(s) are located, measure from the ground to the top face of the horizontal bar. With a soft mallet, tap the uprights into the ground until this measurement is 2 meters. Check that the horizontal bar is level and that the previously assembled door frame will fit under the bar.



22. Check that the door support upright (ref. 4) is vertical and then tighten the bolt with a 13mm spanner.



23. Using two 13mm spanners lock the foot plates (ref. 13) in place on the door support upright and the hinge upright using foot plate clamps (ref. 12). This prevents uprights sinking. After this level out all horizontal bars using a spirit level and soft mallet. Lock off all remaining foot plate clamps once this is done.



24. Take the connection node (ref. 21) and insert four curved roof support bars (ref. 24) into it and bolt (ref. 22 & 23) in place with the aid of a 17mm spanner.



25. Assemble as many roof units as required for the constructed framework and place inside the cage as shown. Then place a fitted roof net over each roof unit.



26. Slide the fitted roof net down over the finial and align the seams with the curved bars. Using net ties (ref. 27) secure the net around the base of the finial and also around the curved bars as the red arrows show. Trim off the ends of the ties and also any untidy stray netting.



27. With the aid of at least three people, lift the roof unit(s) into place as shown. Have the washers and bolts to hand when you lift the roof unit(s).



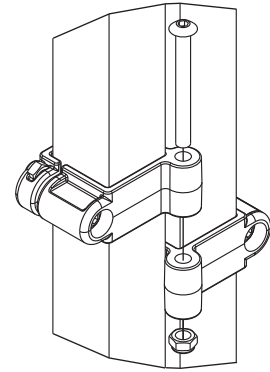
# DECORATIVE FRUIT CAGE ASSEMBLY INSTRUCTIONS



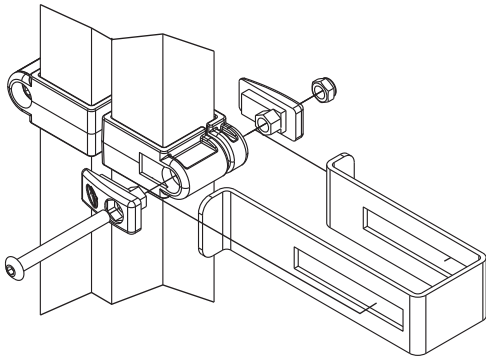
28. Bolt (ref. 22 & 23) the curved roof supports (ref. 24) onto the connector plates (ref. 18,19 & 20).



29. Tighten the bolts using a 17mm spanner.



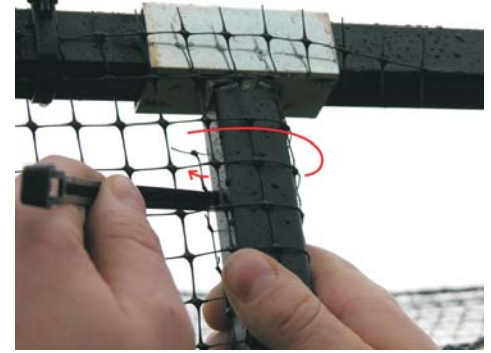
30. Place the assembled door frame in position and secure in by joining the hinge blocks (Ref.8) as shown and tightening the bolts with the 3mm allen key supplied and an 8mm spanner. Note as the hinge blocks must rotate freely, do not over tighten.



31. Secure the latch in place by sliding it over the latch block and inserting the latch inserts as shown. Tighten the bolts with the 3mm allen key supplied to hold in place. Note the latch should not be over tightened as it must slide freely. Note the latch has one longer side and this **must** be positioned on the side you wish to open the door.



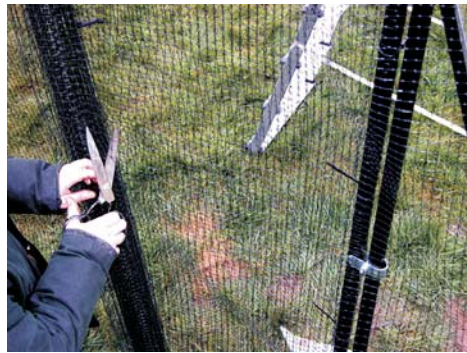
32. To fix the 2m wide side netting, start by cutting as shown to allow the net to wrap around the door support upright. This will allow the top edge of the net to run along the top edge of the horizontal support bars.



33. Wrap the cut section of the side net around the door support upright as described in step 30. Tie in place as shown using net ties (ref. 27) at the top and bottom of the upright and a couple equally spaced in between. Secure the top of the net along the horizontal bars again using net ties (approx. four per 2.5m length).



34. Continue to unroll the side netting all the way around the perimeter of your cage, keeping it as taught as possible, securing as step 31. When corners are encountered snip the bottom few cms in touch with the ground as shown to allow the net to neatly fold.



35. To finish the side net and cover the door, unroll to about 30cm past the door as shown and cut vertically.



36. Fold the side net around the catch side of the door and hold securely with several equally spaced net clips (ref.26). A small cut can be made in the net to allow the catch to protrude cleanly.



# DECORATIVE FRUIT CAGE ASSEMBLY INSTRUCTIONS



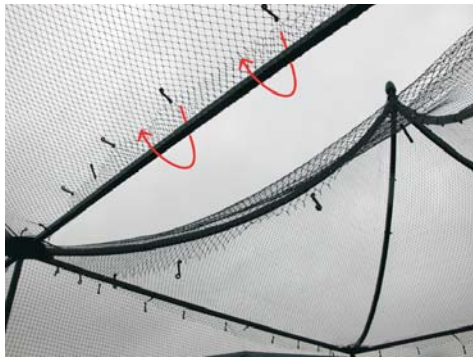
37. Trim the net level with the top of the door as shown. Any side net sticking up above the top edge of the 2.5m horizontal bars around the perimeter of the cage can also be trimmed.



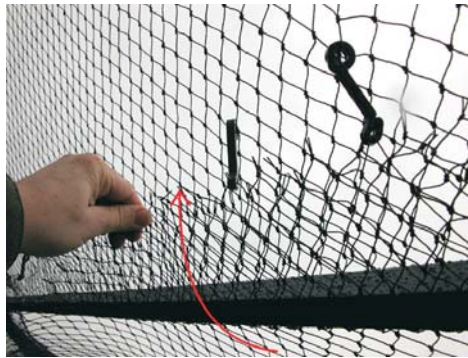
38. Secure the net to the door using ties (ref. 27) as shown.



39. Using net ties (ref. 27) passed through the slots provided in the connector plates, secure the fitted roof net(s). Then using more net ties (approximately 1 every 30cm) work your way up the curved roof support bars (ref. 24) and secure the net to the curved bars along the net's seams.



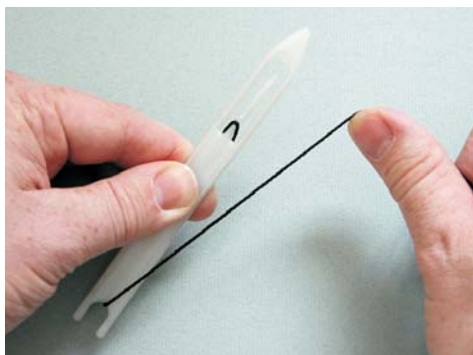
40. Where two roof nets meet, pull one of the net's edges over and under a horizontal bar and secure to itself with net clips (ref. 26) as in the above photo. Do not pull the net too tight or it will not follow the form of the curved roof bars.



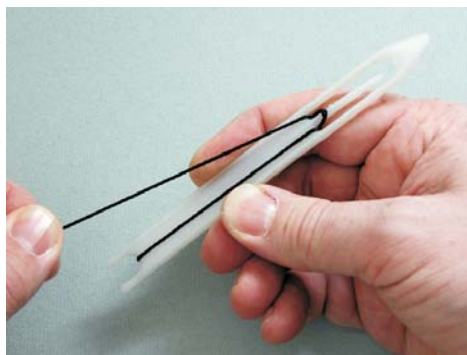
41. Next pull the adjoining net's edge under the horizontal bar and secure to the underside of the other net panel. Again do not pull the net too tight or it will not follow the form of the curved roof bars.



42. Load the whipping needle with the whipping twine supplied by first tying one end to the needle.



43. Pull the twine to the blunt end of the needle and turn the needle over as shown.



44. Wrap the twine around the central spine and back under the blunt end of the needle as shown.



45. Continue to wind the twine onto the needle stopping just before the needle becomes too large to fit through the mesh on the fruit cage.



# DECORATIVE FRUIT CAGE ASSEMBLY INSTRUCTIONS



46. With the whipping needle loaded with twine, tie one end of the twine through the slot in the appropriate connector plate. Then feed the needle around the horizontal bar to neatly tie in the nets as shown. Finally tie off the twine through a slot in the opposing connector plate. When you are completely happy with the result, remove all of the net clips (ref. 26) and trim off any untidy net edges with scissors.

47. Walk around the perimeter of your cage and insert ground pegs (ref. 25) (as shown above) approximately three per meter to secure the bottom on the side net. Check that the top edge of the side net lines up with the top edge of the horizontal bars, trimming where necessary.

46. Tie in the sides of the roof net(s) to the horizontal bars and side net by using the twine and whipping needle as shown above again trimming where necessary. Net clips (ref. 26) can be used to aid in this process.



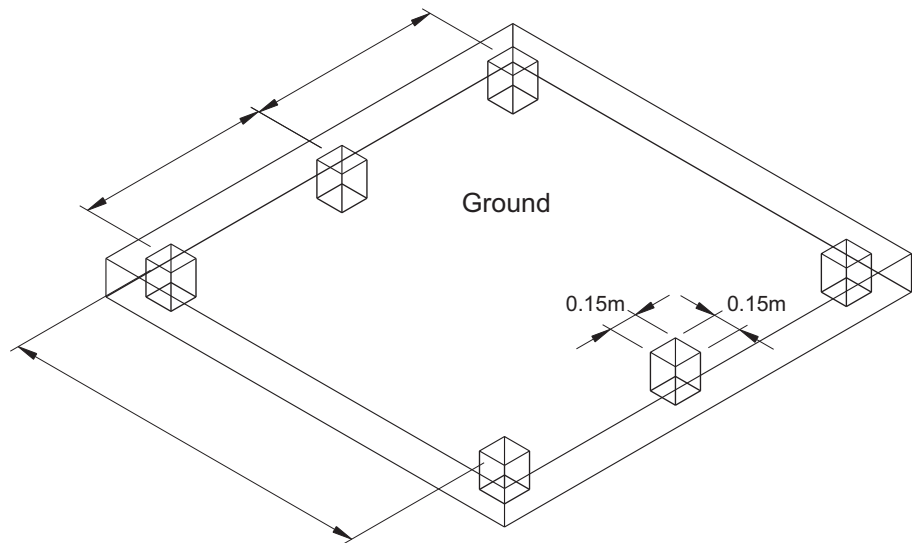
47. Finally, if you are happy with the fit of the nets, with scissors or side cutters trim off the ends of the net ties. You may wish to also whip in the roof nets to the curved bars. Your cage is now finished - happy growing!

# DECORATIVE FRUIT CAGE ASSEMBLY INSTRUCTIONS

## Concreting your Cage

In most cases uprights will not require concreting in place. However if you require extra rigidity you may prefer to secure the uprights with concrete.

0.15m x 0.15m holes can be dug to the 32.5cm required depth at the marked upright locations.



Once the frame is assembled holes can be backfilled with dry mix post-crete. When concreting your uprights in place leave some space at the top where soil can be placed over the set concrete.

Set the uprights level in the dry mix post-crete by bracing with 45 degree wooden stakes. G-clamps can be used to secure the braces to the uprights. When satisfied that the uprights are vertical, soak the post-crete with water as instructed.

Ready made post-crete is available from DIY stores.