

1.1 Assembly Instructions

These instructions are going to be based on the numbers and names that are located on the different sections of piping and materials. Directions will be given on a coordinate system of North, East, South, and West. For example West refers to the right of a given point.

Step 1. Gather pipe sections 1,2,3,4. Lay the pipe sections out with pipe section 1 south, pipe section 2 north, pipe section 3 east, and pipe section 4 west, see Figure 26.



Figure 26: Initial base layout of Hydroponic system.

Step 2. Join each male end to the corresponding female end. For example male end 1A to female end B1, see Figure 27.



Figure 27: Joining base.



Figure 28: Joined Base.

Step 3. Gather short pipe sections labeled 5,6,7 and put male ends into labeled female ends. Pipe section goes in the middle, 6 in the hole west of 5, and 7 goes in the hole east of 5, see Figure 29.



Figure 29: Pipe sections 5,6,7 in place.

Step 4. Put tier labeled “Tier 1” onto three posts, see Figure 12.



Figure 30: Tier 1 in place.

Step 5. Gather short pipe sections 8 and 9. Put pipe section 8 on back hole of the tier on the west side and 9 on the east side, see Figure 31.



Figure 31: Pipes 8 and 9 in place.

Step 6. Gather longer pipes 10 and 11. Insert pipe 10 on the west side of the project connecting it to Tier 1. Repeat with pipe 11, but on the east side of the project. Use pipe sections 8 and 9 to join these sections to Tier 1, see Figure 32.



Figure 32: Pipe sections 10 and 11 assembled.

Step 7. Put Tier 2 on top of pipe sections 10 and 11. Make sure that the side of the tier with openings facing towards the back of the project, as seen in Figure 33.

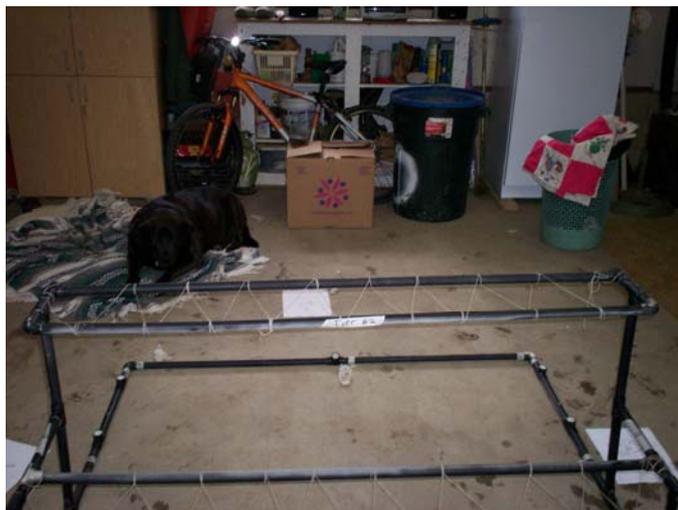


Figure 33, Tier 2 assembled

Step 8. Gather pipe sections 12 and 13. Place pipe sections 12 on the backside of the west side of Tier 2. Place pipe section 13 in the same manner, but on the back east side of Tier #2, see Figure 34.



Figure 34: Pipe sections 12 and 13 assembled

Step 9. Gather pipe sections 14 and 15. Insert pipe 14, following directional arrows on pipe, onto the west side of the project. Pipe 15 should be inserted in same manner, but on the east side of the project, see Figure 35.



Figure 35: Pipe sections 12,13,14, and 15 assembled (Note Directional Arrows)

Step 10. Place Tier 3 on top of pole sections 14 and 15, once again having the side of the tire with the openings face the back of the project, see Figure 36.



Figure 36: Tier 3 assembled

Step 11. Gather pipe sections 16 and 17. Once again place 16 on the back west side of Tier #3 and pipe sections 17 on the back east side of Tier#3, see Figure 37.



Figure 37: pipe sections 16 and 17 assembled.

Step 12. Gather pipe sections 18 and 19. Insert pipe 18, following directional arrows on pipe, onto the west side of the project. Pipe 19 should be inserted in same manner, but on the east side of the project. Once Pipe sections 18 and 19 are assembled place Tier 4 on tope, see Figure 38.



Figure 38: Pipe section 18 on left and 19 on right. Tier #4 placed on top.

Step #13. Gather Long Pipe section 20. Place in the remaining holes on the back side of the project, see Figure 39.



Figure 39: Pipe section 20 is supporting Tier 4.

Step 14. Place corresponding troughs with corresponding Tiers. For Example trough 1 goes with Tier 1. In addition place the corresponding labeled hose sections with Troughs. Once again Hose #1 corresponds with Trough # 1, see Figure 40.



Figure 40: Troughs and hoses in place.

Step 15. Place 16 supplied plant containers snugly in the holes in the four troughs. Make sure the baskets fit snug in order for no light to reach the roots. Fasten each Halo ring around the plant using supplied metal U's, see Figure 41.



Figure 41: Halo ring surrounded around lettuce.



Figure 42: Plant basket containing perlite firmly secured in the trough



Figure 43: All four troughs fully set up.

Step 16. Connect ends of 4 delivery hoses to nutrient barrel, release valve and watch nutrients be delivered, see Figure 43.



Appendix figure 24, Barrel-supplying plants with Nutrients.