HOW TO SET-UP SNAP HYDROPONICS[1]

Primitivo Jose A Santos and Eureka Teresa M Ocampo
Institute of Plant Breeding-CSC-CA, UP Los Baños

A. Establish the seedlings

Materials needed

1. sowing tray – shallow box/basin with holes for drainage at the bottom
2. growing media –aged (not the new one) coconut coir dust or charcoaled rice hull or their mixture; saw dust (possible with the old stock –not the new ones but not yet tested), fine sand (can be combined with coir dust and or charcoaled rice hull)
3. seeds (buy from your local aggie store)
4. watering solution (water with SNAP nutrient solution)

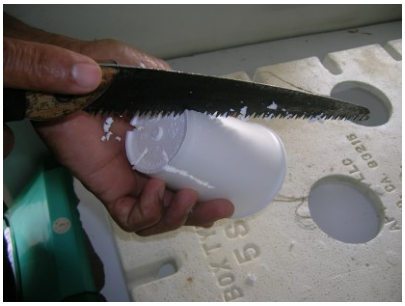
Procedure

1. Fill the sowing tray with a layer of the growing media (about1 inch thick)
2. Level the media
3. Scatter the small seeds uniformly and thinly (the amount depending on your need)
4. Water liberally as needed (Expect germination in 3 to 5 days)
5. Grow the seedlings for 10 days before transferring to individual growing cups (called seedling plugs)

B. Prepare the seedling plugs

Materials needed

1. Styrofoam cups (8 to 10 oz)
2. Cutter or knife or hack saw blade
3. growing media
4. seedlings
5. BBQ stick or the like



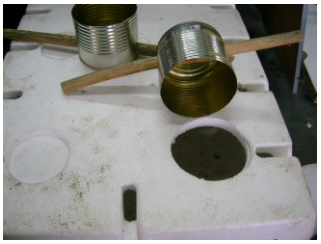
Procedure

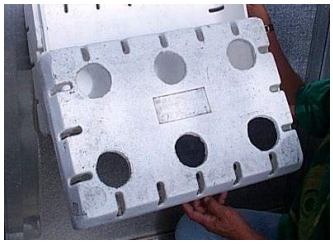
1. Prepare the Styrofoam cups as shown. Use a knife or cutter to make 6 to 8 narrow slits (about 1 inch long at the side and ½ inch at the bottom).
2. Fill (about half full) the prepared holding cups with the growing media
3. Transplant the seedlings from the sowing tray. "Dig" a hole in the middle of the growing media in the cup. . Use a stick to uproot the seedlings from the sowing tray with care. Transfer only one seedling per cup. Make the transferred seedling stand firmly by replacing the 'dug' media to the base of the seedling.
4. Water the seedling plug carefully and lightly.

C. Prepare the growing boxes

Materials needed

1. Styrofoam boxes (boxes of imported grapes}
2. 20 x 30 inch plastic bag (to be used a liner to prevent leaks or seepages of the nutrient solution
3. tin can of big evaporated milk with lid opened by the side
4. masking tape or packing tape





[1] This publication is an output of the DA-BAR funded project on 'Promoting SNAP Hydroponics as a Sustainable Food Production System for Urban Areas' being implemented by the Institute of Plant Breeding, CSC-CA, UP Los Baños.

Procedure:

1. Use the sharp edge of the tin can to make 5 to 8 perfect circular holes (depending on the box size and as equidistant and as far apart from one another) on the box's lid/cover.
2. Lay out the plastic bag on to the box's bottom half to make it hold the nutrient solution; tape the edges onto the rim of the box to prevent the side lining to collapse.

D. **Running the SNAP hydroponics system**

Materials needed

1. seedling plugs
2. SNAP nutrient solution
3. growing boxes
4. (optional) benches or stand– where the growing boxes will be placed under a shelter
5. rain shelter (or roof awning facing east for the earliest and longest sunlight possible)
6. plastic drum or Orocan drum – where the SNAP nutrient solution will be mixed

Procedure

1. Arrange the growing boxes on a bench under a rain shelter or roof awning facing EAST with no obstruction.
2. Fill each growing box with about 10 liters of tap water
3. Add 25 ml of SNAP A to each box with water then stir well
4. Add equal amount of SNAP B to each box then stir well
5. Put back the cover of the box
6. Place the seedling plugs on the holes of the cover.
7. See to it that the bottom of the cups is touching the nutrient solution **at most** by ½ inch deep, not any deeper. If not, add more water until the desired level is reached.
8. Examine the boxes for leaks and make some troubleshooting
9. Visit the set up every morning as early as you can to catch any insect larva that may feed on the plants (the larva is visible in the early morning after that they tend to hide already and harder to find)

Expect the nutrient solution level to go down when the plants are much bigger than when they were still small seedlings. Replenish the solution when more than one inch from the cup bottom has been depleted. However, **NEVER** allow the level of the solution to reach the bottom of the cup; Replenish until about ½ inch below the cup's bottom.

NOTE: It is more practical to prepare the nutrient solution in a drum and then just distribute the prepared solution to each growing box and use the rest of the solution for replenishing.

For more information, please contact:
Physiology Laboratory
Institute of Plant Breeding
UP Los Baños
Phone: (049) 576-6947/ 576-3189
E-mail: pjasantos@yahoo.com/ eteresaocampo@yahoo.com