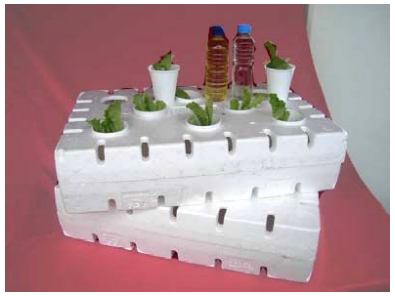
8. Place the seedling plugs on the holes of the cover. See to it that all cups are 'inserted' evenly and snuggly.
9. See to it that the bottom of the cup is touching the nutrient solution by ½ inch deep, not any deeper or shallower. If not, add more water until the desired depth is reached.
10. Examine the boxes for leaks and make some troubleshooting if needed.
11. Visit the set up every morning as early as you can to catch any insect larva that may eat the plants (the larva is visible in the early morning; after that they tend to hide from the sun and may be harder to find).



Expect the nutrient solution level to recede faster when the plants are much bigger than when they were still seedlings. Replenish the solution when its level is more than 1 inch below the cup bottom. However, **NEVER** allow the level of the solution to again reach the bottom of the cup. Replenish until the solution level has reached about 1/2 inch below the cup's bottom.

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

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Simple Nutrient Addition Program *for* Hydroponics

What is SNAP Hydroponics

A low-cost hydroponics system
* A soil-less vegetable production system

Features of SNAP Hydroponics

* Best for home-based vegetable production
* Ideal for small spaces typical in urban area
* Only requires enough sunlight, air movement and protection from rain

Advantages of Using SNAP Hydroponics Over Other Systems

* Beginner-friendly
* Simple to set-up, maintain, and operate
* Needs no electricity because it incorporates passive aeration of the nutrient solution
* Low manpower requirement
* About 90% of the supplies needed to set-up the system comes from recycled materials
* Vegetables can be grown right in your doorstep
* Improves the ability of the crop to adapt to waterlogged condition
* Hastens the growth and maturity of crops

THINKING OF BUSINESS?

* Can be used for commercial scale production of lettuce and other vegetables
* Return of investment can be realized as early as in the first year of operation

TRAINING

* IPB conducts a training course on SNAP Hydroponics upon request.

SETTING-UP SNAP HYDROPONICS

A. Establish the Seedlings

Materials

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

Procedure

1. Fill the sowing tray with a layer of the growing media (about 1 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

* styrofoam cups (8 to 10 oz)
* cutter or knife or hack saw blade
* growing media (coconut coir dust charcoaled rice hull
* seedlings
* BBQ stick or the like

Procedure

1. Prepare the styrofoam cups by making 8 holes (about 1 inch long at the side and ½ inch at the bottom) using a knife or a cutter.
2. Fill the prepared holding cups with the growing media (about ½ inch thick).

3. Transplant the seedlings from the sowing tray. “Dig” a hole in the middle of the growing media in the cup. Use BBQ stick to uproot the seedlings from the sowing tray with care. Transfer only 1 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 lightly and carefully.

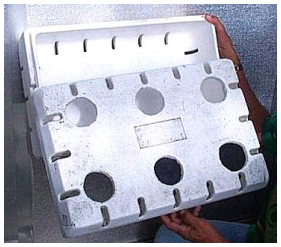
C. Prepare the Growing Boxes

Materials

* styrofoam boxes (example: boxes of imported grapes}
* cutter or knife or used/broken hacksaw blade

Procedure

1. Draw 5 to 6 (for small styrofoam box) or 8 (for big styrofoam box) circles on the lid/ cover of the box. The diameter of the circle should be ¼ inch smaller than the top diameter of the styrofoam cup of the seedling plug.



2. Cut out the drawn circles using a saw-toothed knife or blade to make holes that will hold the seedling plugs in place.

D. Running the SNAP Hydroponics

Materials

* seedling plugs
* SNAP nutrient solution
* growing boxes with 10 liters of water each
* polyethylene plastic sheet
* benches or stand (optional) – where the growing boxes will be placed under a shelter
* rain shelter (optional during dry season) or roof awning facing east for the earliest and longest sunlight duration possible)

Procedure

1. Choose a location where the SNAP hydroponics will be established. The place should receive the morning sunlight, the earlier and the longer, the better. Otherwise, do not expect good growth of vegetables when the plants will just receive sunlight late in the day. Also, the place should be protected from the rains (e.g., roof awning) particularly during wet season.
2. Arrange the growing boxes on the bench (optional). Take off the cover/lid.
3. Lay in the plastic liner to cover the bottom and all the sides of the box.
4. Fill each growing box with about 10 liters of tap water.
5. Add 75 ml of SNAP A to each box with water then stir well.
6. Add 75 ml of SNAP B to each box then stir well.
7. Put back the cover of the box.