

# Static Hydroponics

HAWAII 4-H  
HALE LEARNING



Create a simple hydroponics system for your school, organization, or home!



## Materials:

Small jar or container

Water

1 gallon container or gallon bottle

Drill gun with 2" bit to make holes in larger containers if needed

Sharp knife or scissors to make holes for 1 gallon containers

Foil or paint to cover see-through containers





2-inch Hydroponic Cup



or K-Cup



or a little red plastic cup punched with a few small holes on the bottom



← — Potting soil or Hydroponics media

## Fertilizer Solution:



1 teaspoon Calcium Nitrate (water soluble) per gallon of water



1 teaspoon Hydro Gardens Fertilizer per gallon of water



1/2 teaspoon Magnesium Sulfate per gallon of water or Epsom Salt

Lettuce, green onion, or kai choy seeds or propagated plants such as mint clippings



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## Directions:

1. Prepare seedlings ahead of time by planting them in a) potting soil or in a b) pot/starter or the hydroponics media.
2. If using a clear container, cover it with foil or paint to reduce algae build up.
3. Create the 3-part fertilizer once the seedlings are ready to plant.
4. Add the Calcium Nitrate into a small jar or container.
5. Mix the Calcium Nitrate with a little water in a small container.



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6. Make sure that the fertilizer pellets are completely dissolved in the water.

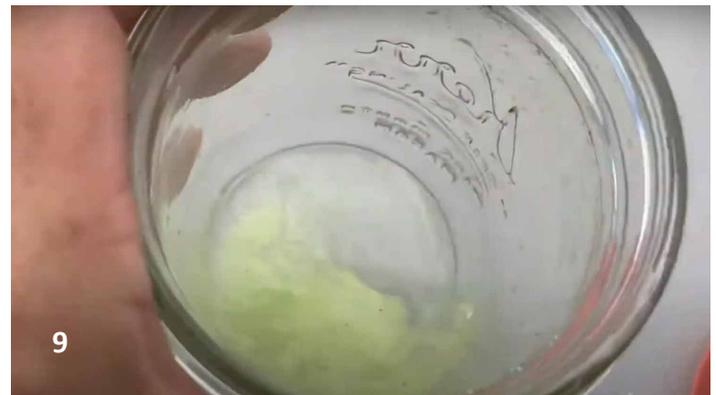


7. Pour the mixture into the gallon container.

8. Mix the a) Hydrogardens Fertilizer and Magnesium Sulfate b) with a little bit of water.

9. Make sure to completely dissolve the fertilizers in the water.

10. Add the fertilizer mixture to the Calcium Nitrate mixture in the gallon container.



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11. Fill the one gallon container completely with water.
12. Add the seedling into the hydroponic basket, k-cup or small red plastic cup.
13. Place the basket or cup into the gallon container.
14. Check to make sure that the roots are touching the fertilizer-water mixture.
15. If the roots are not touching the water and the plants are drying out, add enough water to touch the roots. Too much water will suffocate the plants.
16. Remove or harvest the whole plant between 3-5 weeks. The time to harvest will depend on the type of plant used.  
**REMOVAL:** Cut the head/top from the roots.  
**HARVEST:** Pick the mature leaves as needed and let the crop continue to grow until the solution completely dries out.

Adapted from Sugano, J. (2019, February 26). *Hydro-King Inter 3.1.19*. Retrieved from <https://www.youtube.com/watch?v=qwfWAApcj9w>. Static Hydroponics Project developed by Dr. Bernie Krackie.

