

# Ditch the Dirt:

## Home Hydroponics for Everyone

### Resources:

<https://www.nal.usda.gov/farms-and-agricultural-production-systems/hydroponics>

### Plans

#### Nutrient Film Technique (NFT) Systems:

*NFT systems pump a continuous flow of Nutrient Solution through a series of descending pipes with holes drilled for plant pots.*

- <https://hydroplanner.com/blog/how-hydroponics-can-be-done-diy-guide>
- <https://growwithoutsoil.com/how-to-build-a-nft-hydroponic-system/>

#### Ebb and Flow Systems:

*Ebb and Flow Systems pump Nutrient Solution up into a flow tray on a regular schedule, where it bathes the roots and then drains back into the reservoir*

- <https://www.bghydro.com/kbase-build-your-own-system/>
- <http://www.cheapvegetablegardener.com/simple-and-cheap-homemade-ebb-and-flow-hydroponics-system/>

#### Deep Water Culture (DWC) Systems:

*DWC systems have plant roots suspended in Nutrient Solution that is aerated by an air pump and air stone*

- <https://www.yourindoorherbs.com/diy-deep-water-culture-hydroponics/>
- <https://growwithoutsoil.com/deep-water-culture-diy/>

#### Passive (Kratky) Systems:

*Passive systems rely on the level of the Nutrient Solution dropping over time to provide roots with oxygen. Best with leafy greens*

- <https://www.trees.com/gardening-and-landscaping/the-gratky-method>

### Tools and Materials for DIY Systems

*Things to acquire at big box stores*

- Power drill
- 3 Inch Hole drill bit
- Reservoirs (Opaque, preferably black, food grade (BPA Free, recycling number 1-6)
  - 5 gallon buckets with lids

- Rubbermaid type Totes, size depends on how many plants you want to grow
- Food grade liners if necessary
- Construction paper, aluminum foil or black paint to block out light
- Power strip
- Timer
- Budget LED Grow Lights (2 or 4 foot)
- Rack/Shelving System (Optional)
- PVC Pipe and Fittings
- ½ inch hose

*Things to acquire on Amazon or in Hydroponic shops*

- 3 inch Netpots
- Rock Wool, Hydroton or some other coarse media
- Fancy LED Grow Lights (Optional, 2 or 4 foot)
- PH and EC/Temperature Meters (optional, get them if planning to do larger, fruiting plants)
- Nutrients
- 16% or more concentrated Hydrogen Peroxide (for sterilizing)
- Specialized overflow and drain fittings where called for

## Suppliers:

*Note: These are both brick and mortar and online suppliers*

- HTG: Several stores throughout Massachusetts <https://www.htgsupply.com>
- New England Hydroponics, Marlboro: <https://www.nehydro.com/>

## Contact:

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