



Albuquerque Hydroponics and Lighting

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Organic Hydroponics

There has been little research on the subject of organic hydroponics, but the experience of several innovative growers and a three year test project by *The Growing EDGE Magazine* suggest that none of the problems normally associated with organic nutrient solutions are insurmountable for the hydroponic grower.

High quality powdered nutrients-- worm castings, bat and seabird guanos, purified fish products and seaweed extracts-- are easy to store and mix to produce a solution with a mild earthy smell, similar to a good quality houseplant soil. Clogging of small openings with undissolved particles can be a problem if your system uses drip emitters, although it is not a concern with most hydroponic systems. If clogging occurs, try straining your mix through a fine cloth before adding to your system, or use a pump filter bag.

It is true that standard hydroponic monitoring equipment, electrical conductivity or pH meters, are useless for monitoring organic solutions. On the other hand, organic systems may not need the type of monitoring recommended for traditional systems. The system at *The Growing EDGE*, a timer controlled top feed unit with a perlite medium, has gone for up to a year between nutrient changes, just an occasional topping up with water or dilute solution, with no sign of macronutrient deficiency. Micronutrient deficiencies are headed off with foliar applications of seaweed extract.

Monitoring of organic systems is much more intuitive-- keeping an eye on the plants, being aware of changing conditions. Good records-- planting dates, the types and quantities of nutrients added, general comments on plant health and performance-- can do a lot to enhance intuition.

The following recipes have been used with success in *The Growing EDGE* system. No doubt there are other ingredients and combinations that would work as well:

Vegetative/General Purpose Mix

5 gallons water, warmed to room temp.
2 Tablespoons dried earthworm castings
4 Tablespoons bat guano (or 3 tablespoons
guano w/ 1 tablespoon *fish flour)
5 drops Superthrive
1 Teaspoon soluble seaweed powder
such as Maxicrop

* fish flower is included for extra nitrogen. Do not use liquid fish emulsion in your hydroponic system unless you plan on wearing a gas mask.

Flowering/Fruiting Mix

5 gallons water, warmed to room temp.
5 tablespoons seabird guano
5 drops Superthrive supplement
1 Teaspoon soluble seaweed powder
such as Maxicrop

Premix all ingredients in about one pint of water (a second-hand blender works great) before adding to the remaining water. Allow mixture to stand for 24 hours, stir occasionally, screen if needed

