

# MY PLANTS LOOK UNHAPPY



This sheet was designed to help out growers with common problems. The questions and solutions detailed in this info sheet cover a large percentage of the issues growers face when starting out with this hobby. Most growers wait too long to address a problem. The trick is to nip the trouble in the bud. Another issue we see is that growers usually want to address the symptom (i.e. an individual nutrient deficiency) instead of addressing the root problem (in the previous example it would most likely be pH or too much or too little nutrient in solution).

## Products of Interest:

**Hygrometer/Thermometer** - a critical tool to any garden. It is essential to know what the temperature (at both your leaf level and your ambient space) and humidity levels are.

**Clearex** - Super easy to use. Highly effective.

**H16 Finish** - This is our flushing product of choice.

**Hygrozyme** - A great metabolic enhancing enzyme cocktail. Speeds up root & shoot growth.

**H16 Roots** - Best overall Root enhancing / Root protecting product on the market.

**Zone** - Alternative to H16 Roots - Sterilizing agent. Will keep pathogens away from root zone. (Not for use with Hygrozyme. It will kill active ingredients).

**PH Shaker Tester** - Cheapest way to effectively measure your pH.

**PH UP** - Essential to ALL gardens.

**PH DOWN** - Essential to ALL gardens.

## My plants look unhappy, what is wrong?

### Are your lights at the right level?

For the average grower with a 400 watt grow light, lights should be kept between 12" - 14" above plant tops. They should be kept 18" - 20" away with a 600w light and 24" away with a 1000w. (This is from the bottom of the bulb to the tops of the plants.) If the plants are seedlings or clones, more height may be necessary - the lights can be lowered in increments of 6" at a time over a few days until they are at the desired level for the wattage. (Always look for new healthy growth before you start to lower the lights.)

### What is the environment like in your room?

The temperature range should be between 75 to 85 degrees (ideal temperatures being 76-78 degrees). The humidity range is 45%-65% humidity with ideal humidity being between 60%-65% for vegetative growth, and 45%-55% humidity for bloom. Make sure there is ample fresh air flowing to the plants, as refreshing the air in an indoor environment is crucial to the plant's processes.

### Is your PH too high or too low?

Flush and adjust to required PH. (Please refer to our **info sheet** on "**Flushing**" for more information on how to correctly Flush.) pH is a VERY critical element to every garden and it must be monitored at all times. When using a medium like soil, coco or rockwool (that holds water) we need to not only monitor the nutrient solutions pH but we have to be aware of the medium itself. If you have a nutrient deficiency, odds are either your pH is off or your T.D.S. (ppms) are off.

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## Examine your roots!

Roots should be white, nutrient stains on roots are ok, but there should be evidence of new root growth happening. Fuzzy roots are best! Mushy, Foul-smelling roots are signs of disease or pathogens. Roots are the hardest part for any beginning grower to Master. They are the most difficult part of the plant to make Healthy and keep Healthy. Roots should grow out of the plant in the beginning and remain healthy the whole way through the Bloom (Fruit / Flower.)

## What you can do to help your plants through a difficult period:

The first thing to do is identify the problem (or what you think is the problem.) After identifying the issue, we now need to fix the problem and help the plants get over any stress related to this issue, and get them up and moving as fast as possible. Below you will have some info on Flushing and a good general remedy "cocktail" to get them over their initial stress and another remedy to get them REALLY CHARGING forward again.

## Flush your plants.

Drain your reservoir of all nutrients, clean and refill with fresh water. Add **Clearex** (if in hydro adjust PH to 5.5-5.8) (if in soil adjust pH to 6.5) and flush your plants. Check out the Info Sheet on "Flushing" for more info.

## If plants are in a recirculating hydro system.

Flush for 1-2 hours or so. In the beginning of the flush the PPMS will rise higher as the salts are flushed from the roots, once the ppms no longer rise steadily it is ok to stop flushing.) Then drain your reservoir. . .and go to after the Flush below. Check Info Sheet on "Flushing."

## If plants are in soil or other (coco, rockwool, etc.) drain to waste:

Use clean water and add **Clearex**, adjust the PH as necessary for your given medium - Rockwool, Coco - 5.8-6.0 with 250-300ppms of **Cal-Mag** Solution. Soil - 6.5) and flush your plants. Flush entire reservoir through plants (at least three times the amount of nutrient solution that you normally give to your plants). Check the ppms and the pH periodically from the run off until the ppms are low and the pH is within an acceptable range for the plants. See "info sheet" on Flushing / Drain to Waste for more info.

## After the FLUSH:

Drain the reservoir, Clean and refill with fresh water. Add 200-300 ppms less of nutrients than you had been feeding. Add a root protection product such as **Zone** or our favorite, **H16 Roots**. Adjust PH to 5.8 if you are in hydro, and 6.5 if you are in soil. Run this regime for 3-7 days, until the plants improve. You should see new happy healthy growth coming from their tops (apical meristems).

**Next:** Drain the reservoir, clean the reservoir and refill with fresh water. This time when you dose the reservoir add **H16 Roots** and **Hygrozyme**, the Nutrients (which should be 200-400 ppms lower than what your previous ppms were at- an example of this say your ppms were at 1200ppms, then you would want to now be at 900 ppms) and adjust the PH last (5.8 in hydro, 6.5 in soil).

## If you are still having problems after this or have any questions about this then:

Call us! The phone numbers for ALL store locations is below.