

CONDENSED GROWERS GUIDE

QUESTION : What E.C. (PPM) or C.F. should I maintain ?

ANSWER : This with the growth phase and time of the year, it also is different for each nutrient brand. The following recommendations are for Powergro Nutrient and most good quality nutrients.

GROWTH PHASE	SUMMER	WINTER
Vegetative :	1450 ppm 2.2 EC 22 CF	1650 ppm 2.4 EC 24 CF
Flowering :	1700 ppm 2.4 EC 24 CF	1850 ppm 2.6 EC 26 CF

Q : What pH should I maintain ?

A : The pH should be kept between 5.5 – 6.5 with 6.3 being ideal

Q : How long should I run my lights ?

A : Light hours depends on growth phase, Vegetative 18 hrs per day Flowering 12 hrs

Q : Does the nutrient solution need to be hearted or aerated ?

A : It is best to maintain nutrient solution between 18 – 21 degrees C in cooler weather to maintain optimum growth. If the room temperature falls below 17 degrees C during the dark period, then you will require heating.

Q : What causes plants to die ?

A : The can be a number of reasons for this. Firstly eliminate the obvious things like lack of water, high temperatures or a broken stem. Root diseases are the most common cause of sudden death of plants and can cause many problems from loss of yield to complete collapse. "STO P W I L T" is a product that is proving very useful. Directions are on the bottle. Pythium is the most common root disease.

Q : What cause the tips of the plant to burn ?

A : This can be caused by too much fertiliser (too high E.C) to much salt in the water, not enough water, or lights are too close. Certain nutrient deficiencies can also cause leaf tip to burn. Use a good nutrient and if in doubt change the solution.

Q : What causes leaves to turn yellow ?

A : This can be caused by a number of factors.

1. Low oxygen levels due to lack of aeration or to much water
2. The onset of root disease
3. pH is too high
4. The solution is too hot
5. Too much salt in the water. All these stop the plant from taking up the nutrient in the correct quantities and balance.

Q : What humidity should I maintain ?

A : Humidity is best maintained at around 50 % in the centre of the plant canopy. Between 40 % - 60 % is ok. Too high a humidity runs the risk of disease and stretching.

Q : Whys do plants Stretch ?

A : Plants stretch when the light is insufficient or humidity is too high. **Lack of ventilation** is normally the cause of high humidity, also to many plants in a small area. Plants stretch when sufficient light is unavailable. The light may be too far away from the plants or there may be too many plants competing with each other for the available light.

Q : What temperature should the growing room be ?

A : Room temperatures need to be maintained at around 28 degrees C in the vegetative phase and a couple of degrees lower in flower. It is better also to have dark period temperature lower than the light period temperature. 15 – 18 degrees C is ok for flower. Always run your lights during normal daylight hours and allow normal light temperatures to produce the cooler period. This is an essential process for correct flower maturation.

Q : How much ventilation is necessary ?

A : Ventilation needs to be enough to maintain a temperature of about 28 degrees C and a Humidity of about 50 % in the centre of the plant canopy. Generally it is better to have Too much ventilation than too little. As a rule of thumb, during summer give about 120 litres per second of air going in and the same amount being vented per square meter of floor area. Try to maintain the temperature inside no higher than outside. In winter, vent according to temperature and humidity, you will usually need less ventilation.

Q : Should I use EC and pH meters ?

A : Trying to run a hydroponic system without meters is very difficult and it would be hard to achieve optimum results.

Q : How often should I “Dump” my solution ?

A : There is no hard and fast rule on this one, generally the cheaper the nutrients require Dumping more often than the better ones. The quality of the water you use is one of the MAJOR factors. The lower the water quality the more frequent the need for dumping. The size of the reservoir relative to the number of plants is also important. Usually a quality nutrient like POWERGRO requires dumping every 3 – 4 weeks.

Q : What size reservoir should I run ?

A : For ease of control use a minimum of 45 litres sq/meter of growing area, less than this requires frequent Adjustments

Q : Is it necessary to leaf prune plants ?

A : There is no real need to leaf prune plants provided they aren't being grown too large. Large plants may need some of the larger lower leaves removed, especially if they go pale green or yellow. Remember the leaves are the plants food factory.

Q : Is it necessary to aerate the nutrient solution ?

A : Aerating the nutrient solution is a good idea. It guards against stagnant water and improves plant health

Q : How long should it take for clones to strike roots ?

A : The time taken to strike roots on clones varies according to the time of the year and the health of the clones. About 5 – 12 days is usual. Using QUICKSTART will increase speed of strike and the subsequent health of the plant.

Q : What is the best water to use ?

A : The best water will have low salts and contaminants. Rainwater is probably best though normal tap water is usually satisfactory and convenient as long as it is under 150 ppm. The lower the ppm the better the result.

Q : Whys are my plants roots brown ?

A : Brown roots are usually those that have been attacked by disease, probably Pythium. Using STOPWILT plant tonic will be of great assistance and usually eliminates the problem. Another frequent cause is too high a flow of water which cant drain quickly through pot drainage holes blocked by roots growing through. Normally roots should clearly be white. NB : Dead roots what ever the cause will always go brown.

Q : What is the purple colour on the plants leaves ?

A : The purple colour is a pigment called ANTHOCYANIN. It is produced by plants which are growing under some stress. It is often caused by cold growing conditions and also happens during flowering. Temperature stress is a natural process and is absolutely essential for bud maturation.

Q : My Plants have small bugs that spin webs. What are they ?

A : These are a troublesome pest know as SPIDER MITE. They can cause severe damage and should be treated. We recommend using KILL-A-MITE insecticide. For 100% control repeat spray after 7 days to kill any newly hatched eggs.

Q : Are there any other pests which attack my plants ?

A : Whitefly, thrips and caterpillars can also be troublesome. Proprietary remedies are available .

Q : What is the brown rotting on the flowers ?

A : This is probably a disease called BOTRYTIS (grey mould). It is best controlled by keeping humidity under control. Regular use of a fungicide will help control Botrytis.

Q : There are small black flies around the root system of my plant. Are they a problem ?

A : These flies are probably Scarid fly or fungus gnats. Their larvae can cause severe damage to feeder hairs on roots. Regular use of SCARID 70 sprayed on your medium will keep these pest under control

