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INNOVATE THE WAY WE

GROW



NUTRIENT MIXING INSTRUCTIONS

Nutrients for Leafy Greens & Lettuce

- Hydroponic 800g to 1000 litres of water.
- Solu-cal 800g to 1000 litres of water.

Mixing Instructions



- In general, we use 2 x 10L buckets to mix a concentrated mix keeping Hydroponic & Solu-cal separate! Important as when mixed together and left to stand sedimentation occurs.
- Empty the contents of the Hydroponic packet (100g) into one bucket.
- Stir or shake well till fully dissolved (this becomes the concentrate mix).
- Fill one easy squeeze just makes it easier.
- Empty the contents of the Solu-Cal packet (800g) into the other bucket.
- Stir or shake well till fully dissolved (this becomes the concentrate mix).
- Fill the other easy squeeze.
- When topping up our NFT reticulation tank for the various crops using say a 10 liter bucket of water we add (from concentrate) 100ml Hydroponic & 100ml Solu-cal, provided the nutrient rich solution is moving little or no sedimentation occurs.

From our mixing instructions we suggest using 2x 10L buckets which separately keep as the “concentrate stock”. This mixed, one bag Hydroponic into 10L water, the other 10L takes the bag of Solu-Cal, mix/shake well until properly dissolved. Note: these are concentrate mix, store in a dark place.

At day of mixing a new batch/top-up of nutrient for the “growing stage” (second truss to flowering) add to each 10L fresh water 100ml Hydroponic concentrate and then 100ml Solu-Cal concentrate. Note: If the nutrient solution is left to stand sedimentation may occur, thus the pump is let to run continually.

For the “seeding stage” (seed to first truss/leaves) we suggest using a lighter mixture – to each 10L add only 50ml concentrate of each. So 1L having only 5ml of each.

With regards to the pH, the nutrients being a little acidic naturally bring down the pH a little so that should be fine for the meanwhile, we would however recommend long term you do invest in a E.C. and pH tester. We recommend a combined one from Hanna Instruments



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NUTRIENT MIXING INSTRUCTIONS

Nutrients for tomatoes, Cucumbers & Peppers,

Mixing Instructions

- **TOMATOES**

Transplant to first flower truss:

600 g HYGROPONIC + 490 g SOLU-CAL

First flower truss to third flower truss:

800 g HYGROPONIC + 620 g SOLU-CAL

Third flower truss to end:

800 g HYGROPONIC + 620 g SOLU-CAL +

200 g POTASSIUM NITRATE



- **CUCUMBERS**

- 1st two weeks:

500 g HYGROPONIC + 500 g SOLU-CAL

Thereafter:

800 g HYGROPONIC + 800 g SOLU-CAL



- **PEPPERS**

- 1st three weeks:

600 g HYGROPONIC + 600g SOLU-CAL

- **Thereafter:**

900 g HYGROPONIC + 900 g SOLU-CAL



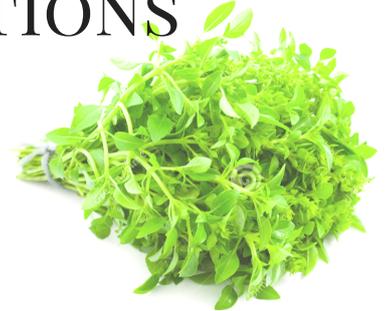
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NUTRIENT MIXING INSTRUCTIONS

The importance of plant PH/EC/PPM



EC – Electrical Conductivity

This is a measurement of the strength of a nutrient solution. It is also known as CF (Conductivity Factor), but since CF is only one decimal place away from EC, we will stick to EC. The measurement of EC is in milliSiemens per cm (mS/cm). It is a measurement of the strength of the nutrient solution as a whole and will not tell you if one or more of the nutrient salts is out of balance. Plants take up different nutrient salts at different stages of growth and in different climatic conditions, as well as different pH levels.. The speed that different nutrient salts are taken up also varies. For instance, nitrogen is taken up quite quickly, but calcium is a slow mover! For the home grower it is advisable to change the nutrient solutions at regular intervals, say every week in summer and every two weeks in winter.

If the EC rises, it means that the plants are taking up water faster than nutrients. This usually happens in hot weather, when the plant tries to keep cool. When this happens you add water until the required EC is reached. On the other hand, if the EC falls, the plant is taking up more nutrients than water, so you have to add more nutrients.

If you are a serious home grower you will obtain an EC meter and have the peace of mind that your plants are being fed optimally. The EC meter should be calibrated regularly, say once a month. The practical use of EC readings becomes apparent when you realize that plants can be categorized into low, medium and heavy feeders. It follows from this that you should feed plants in the same category together from one reservoir if you are going to attain optimum results. If you feed lettuce with a high EC intended for tomatoes, the lettuce can become bitter. Likewise, if you feed tomatoes with a low EC, suitable for lettuce, the tomatoes will be tasteless!

pH

This is the measure of acidity or alkalinity of a solution, on a scale of 1 to 14, where the neutral point is 7. Most plants in soil grow best in a pH6.5 – 7.0 conditions, while hydroponically-grown plants prefer slightly more acid conditions. You should aim for a pH of between 5.5 and 6.5. This is the range within which nutrients are most available to plants.

A high pH can reduce the availability of iron, manganese, boron, copper, zinc and phosphorous to plants. A low pH can reduce the availability of potassium, sulphur, calcium, magnesium and phosphorus.

If the pH moves out of the desired range, it can be lowered by the addition of phosphoric or nitric acid to the solution, or raised by adding potassium hydroxide. There are pH adjusters better suited for vegetative growth, and others for fruiting phase. The pH can be tested by using an indicator solution or a pH meter. This should be done daily. Calibration of the pH meter should be done weekly and the probe kept wet at all times.

