

# Growing a Hydroponic Garden Without a pH or EC meter

So you have decided you want to start a hydroponic garden but you do not want to use a pH or an EC meter. It is fairly common for people to feel this way when they are starting their own hydroponic gardening due to several reasons. Maybe you are not very familiar with the technical side of hydroponics, you don't want to get into all that stuff in the beginning or perhaps pH/EC meters are terribly hard to get or expensive where you live. Does this mean that without a pH and EC meter you won't be able to run a successful hydroponic venture ? No. On today's post I am going to talk to you about how you can grow hydroponic crops without a pH or EC meter and yet get good results, sometimes even better than people using all those technical gizmos :o).

As a chemist I think like a scientist and part of this way of thinking is the controlling of variables. I like to control pH and EC because I feel that this allows me to have a record of what is happening within my nutrient solution, without these measurements I would be "blind", so to speak. However when I was beginning my major I started my first hydroponic ventures with absolutely no control over pH or EC. I didn't do this because the cost of an EC/pH meter where I lived was prohibitive so I said, "what the hell" and went for it. I have to say that I got some very satisfying tomato crops after having some significant failures due to both rookie mistakes and disease. I managed to get full, 2 meter high tomato plants filled with delicious vibrant tomatoes and this happened without ever checking my pH or EC.

How did I manage to do this ? After time went by and I got an EC/pH meter, I started to monitor how my crop evolved with time to know what I should or should not do to improve my crop's yields. I found out that the pH of my crop increased steadily – and sometimes came near 8 – before I usually changed my nutrient solution. The EC oscillated widely but my

reposition of the initial “level” of solution with water was enough to keep the EC at a good level. So if you want to be successful with hydroponic crops, it is not absolutely vital for you to have a pH or an EC meter, you just need to follow some simple guidelines to have a wonderful hydroponic crop.

**1. Have one gallon of nutrient solution per plant.** Having this volume of solution in your reservoir per plants allows you to have enough nutrients so that each plant will take a significant amount of time to absorb them. Having less solution is troublesome since your EC will change wildly and your nutrient solution changes will have to be more frequent. A one gallon per plant rule of thumb seems to be the best choice.

**2. Add fresh water to recover the initial level of your solution .** This is one of the easiest things to do. By adding fresh water -without any nutrients- to top off your reservoir to its initial level you will keep the EC near its initial value for the whole time. This simple technique ensures that your EC remains within rational levels and your plants stress-free.

**3. Change your solution every 4 weeks.** After 4 weeks, in a hydroponics system where there is one gallon per plant and the solution is continuously topped off (at least once a day) you will find that your plants have used about 40% of the nutrients at most (this is what I got from full production tomato plants and an atomic emission analysis of the nutrient solution). This means that your solution is now deprived of nutrients and it is time to use the solution to water your soil-garden and prepare everything again.

With this simple guidelines, anyone will be able to grow a hydroponic garden without using a pH or an EC meter. Of course, in the beginning you may find some problems while you find the adequate level of nutrients your plants need (if you do not prepare them yourself) but after a few trial and error

runs you will be able to grow full hydroponics gardens without having to constantly monitor either pH or EC. Certainly, better results are achievable when you are monitoring these variables but it is possible to grow a beautiful hydroponics crop without the slightest monitoring of these aspects of a hydroponic nutrient solutions. People usually underestimate the ability of plants to adapt to changing conditions, something that they are able to do beautifully if you only follow the above advice. **Do you have any advice or suggestions to help people grow without an EC or pH meter ? Feel free to leave a comment :o)**