

CHAPTER 6

WATER

Take two atoms of hydrogen, a highly combustible gas. Mix with an atom of an equally combustible gas, oxygen, and you have the total ingredients of a compound that will extinguish the conflagration. Water. The building block of life. The essential of all animate things and a commodity that is becoming more and more demanded. Too often too copious in the wrong place and just as often, lacking where and when we would like it to be plentiful.

But it's fairly obvious that the increased demand for water cannot continue, and that the increases in population are very likely to go on. This makes it mandatory that we get better use from the available supplies of water. Not just a thing that would be nice, but an essential strategy to ensure the continuity of world populations. The great Colorado river which flows through the famous Grand Canyon is an interesting phenomenon. Massive at Lake Powell in Utah, the Glen Canyon Dam, the Hoover Dam, the Davis Dam, Parker Dam, Imperial Dam, and Laguna Dam gradually reduce this mighty river to a point where near Yuma in Arizona, still quite some distance from the Gulf of California. The Colorado disappears under the sand.

Man is not only interrupting the flow of rivers. Our demands on our entire ecosystem are reducing the supply of good water, Agricultural and industrial pollution are exacting a heavy toll. The need to be water wise is far more than just an advertising slogan, it will soon become a very necessary ingredient in our survival.

Hydroponic food production is one of the more water conservative means of production, and if there is more water efficient system that Autopot System, we have not heard of it.

Let us take a look at the various types of water on offer today and a quick look at how they react to the Autopot environment.

Rain Water

Rain water is the numero uno drink for plants. Crops that do well in the open on irrigated land are flush and green. But observe the difference after a good soaking rain. It's like adding the magic ingredient. Many Australian city water supplies are among the purer reticulated water supplies in the world, but none are as beneficial as fresh rain water. To the average gardener, the difference is minimal, but if

you're striving for the ultimate or want to cut your water bill or even just like the idea of something good for nothing, you might consider how you can store rain water for your pampered plants.

Tap Water

If you can drink it, so can your plants. And even if you cannot, they might. More reticulated water supplies are good. Sometimes a little heavy in added chemicals to stop the pollution and other introduced additives from making you sick or nauseated but still good.

Like so many factors that influence the degree to which your hydroponic system reaches its potential, water has its place. If you do not have the ideal water supply, consider it a challenge rather than a barrier. The greater the challenge the greater the rewards when you produce a crop.

Your local nursery can be a very valuable resource. Local nurseries cater to local conditions. They will keep and will know which plants perform the best in areas of poor water. They usually will also be competent to advise on water conditioning and fertiliser additives. Talk to them.

Hard Water

Water with high levels of salts. Water that will not lather well, frequently from underground sources. Provided that the problem is simply hardness of the water, the Autopot System is one of the few, if not the only system that will perform reasonably well with no additives required. If you live in a hard water area, you will be well aware of the problems, but we need to come to terms with a lower expectation in the performance of the plants. Since the volume used by hobbyists is small, it may be worthwhile to consider acquiring a small unit of water treatment facility such as those used for domestic water treatment by reverse osmosis.

Acidic Water

Water that is sour to the taste and which gives a meter reading of pH7 and below. Common to areas that produce acid sulphates near catchments or that are fed by streams that for one reason or another have a high organic content.

The general principle here too is that if you can drink the water, so can your plants. If not, you will need to make other arrangements, preferably in collecting your own fresh rain water.



A hand held pH meter for measuring the acidity of water.



The two chemicals used for adjustment of pH. One for raising and the other for lowering the pH of your nutrient solution. These chemicals are essential for recirculating systems as the acidity of their nutrient solutions changes due to decaying organic materials within the solution. However, as for Autopot System, these are rarely needed if from the onset the water is of drinkable quality.