

Introduction to Autopot Systems

The “Plant Driven” Concept - To each according to its needs.

Autopot Systems are designed so that the individual plants in their individual containers can dictate when they get their water, according to their needs. A wide range of different plants in an Autopot Systems will each take on water at totally different times and cycles, rather than being tied to an automated cycle.

This is achieved without the use of electricity, pumps or expensive plumbing, yet the system operates fully automatically as dictated by the plants themselves. For instance, in Autopot Systems, a potted cactus that may require water every third day or so will happily thrive alongside a tuberous begonia which in summer is demanding water three or even four times a day, each time getting a wet cycle and each time becoming virtually dry again before the water is replenished, as nature intended. Both plants will flourish. This is the vitally different aspect of Autopot Systems which gives the system its unique advantage. Even the most sophisticated computer controlled watering cycle cannot come anywhere near matching the advantages of having the plants dictate their own individual needs.

Why plants grow so well in the Autopot Systems vs other Hydroponic systems.

A further advantage is in the way in which water is delivered to the plant. Many Hydroponic systems recognise the fact that nature conditioned most plants to get alternating cycles of moisture so that they start out wet and then gradually dry out before it rains again to supply more moisture. If the water comes too frequently before the plant has dried out the growth of the plant is inhibited. If the plant dries out completely and stays that way for a period longer than it is conditioned to tolerate, it will either die completely or suffer a severe setback in its growth pattern.

The common conventional hydroponic systems using media are drip to waste and ebb and flow. In a variety of ways and under a variety of systems of control, a water/nutrient mix is supplied to the plants in the system. The control at its simplest is manual, and at its most complicated, computer controlled. Even in the most comprehensive computer controlled Nutrient Film (NFT) systems, the cycle is normally dictated by the needs of the thirstiest of the plants in the system, so the average plant will get more water/nutrient than it needs which is usually also more than is good for it. This is done on the basis that a bit too much water, while perhaps not the ultimate in supplying the best growth rate, is better than too little water. There's an old farmers saying that “you can always grow something in mud but you can't grow anything in dust”.

Another side problem with conventional hydroponic is that all systems recirculate nutrient which very often accounts for the nutrient becoming corrupted and spreads disease problems through the entire system. To alleviate this problem it is standard practice to constantly monitor and balance the pH and CF level of nutrient which requires a significant investment in both equipment and time, or in many professional systems, excess water and nutrient is run to waste.

The five major features unique to Autopot Systems ;

1. Water Efficiency. Every drop of water that goes via the Smart-valve to the growing container is available to the plant. The single minimal wastage of water is through evaporation from the surface of the container. There is no run-off and no recycling of water.
2. Watering According To Demand. The Autopot dictates that the amount and frequency of water provided is exactly as the plants require.

3. Electricity Supply Not Critical. The automating forces of the Autopot Systems are either gravity in the case of a tank fed system or tap pressure in tap fed systems. Absolutely no electricity or battery driven devices are necessary.

4. Inexpensive To Buy And Maintain. There is no expensive outlay in electrical connection, pumps, computers and piping. All the water connections are by a 4mm thick soft plastic tubing that is joined or junctioned by simple press-in types of plastic joiners that are very inexpensive. This small diameter tubing is practical simply because the valves operate independently and seldom will more than one be open at a time. Therefore the demand for water is spread throughout the day. Running the tube over or through walls, under paths, across rafters or wherever it needs to go is very simple compared to the problems and expense of achieving this with polythene, copper or galvanised piping that also normally requires a plumber to install. The thin tubing is normally held in place by simple, inexpensive plastic saddle clamps.

5. Self-scheduling. Conventional irrigation requires expertise in scheduling an irrigating cycle. It relies on human judgement for interpretation of the needs of the plants and at best can only satisfy the needs of the average plant. The Autopot System caters exactly for the plant's ever changing needs throughout the year, winter and summer.

How an Autopot system can be of benefit to you.

For hobby growers:-

- * Control of over watering and under watering. Look at the various house plants that you have. If you are an average hobbyist many of them will be in poor condition. Usually because of over or under watering through over eagerness to prevent drying out or because you were busy and forgot to water.

- * Control of over or under feeding. A common problem. And one that is hard to handle. Too little feeding and the plant will not perform. Too much is likely to kill the plant stone dead. The Autopot Systems provides an exact dose every time the plant gets water.

- * A solution to the time problem. Especially in summer when many plants need water two or more times a day to give the best results.

- * The ability to take a vacation. Every Autopot System is designed to give a long period of watering and even the systems with relatively small storage tanks can be switched over to larger tanks for the period that you are away.

- * Avoidance of the drip problem. Particularly with hanging baskets used indoors, excess watering can be a problem. With the Autopot Systems, there is no run off, hence you are able to put one pot plant below another.

For commercial growers :-

- * Water conservation. The cost of purification or supply of good quality water is one that increases as time goes by. The Autopot Systems is the most water efficient system available.

- * Avoidance of recycling costs. Particularly where legal or financial constraints dictate the elimination of pollution by run off or the cost of water supply is high, the Autopot Systems shines. No capital cost for pumps, ponds, disposal and treatment. No running costs in fuel or power for pumping.

- * Avoiding overhead watering problems. Plants that need sub-irrigating to avoid damage to flower or foliage love the Autopot System.