How to increase a plants growth rate with a deep water culture hydroponics system.

Deep water culture hydroponics is a method of growing plants hydroponically while the roots are suspended in a nutrient solution throughout the entire grow cycle. A net pot or grow cup is suspended from the center of the lid, the roots are suspended in the nutrient solution, in a reservoir under the lid containing the nutrient solution. Air is pumped into the reservoir with the use of an air pump and air stone. This keeps the water supplied with the amount of oxygen needed for the healthy production of roots of the plant. The grow pot or net cup is filled with a grow media such a gravel, clay pellets, lava rock etc. it is suspended in the nutrient solution. The key to fast growth is make sure that when the plants are in there young stage the roots are at least touching the water. As the plant grows and you see signs of roots growing down into the water you can now drop the water level.

Aeration in a deep water culture hydroponics system is one of the most important things of the system. Let me explain, traditionally you would use an air stone to provide air to the pot or reservoir. It is more important to provide an even flow of air through out the entire reservoir or pot than it is to provide a larger amount of air in a portion of the reservoir or pot. If you can look down on the top of your reservoir or pot and see a void of air bubbling to the top, you have a void in the system. The roots below are not receiving the appropriate amount of air. This void can be eliminated by utilizing Air Injection Technology manufactured by modularhydro.com. It allows an even air distribution in the reservoir or pot. There is no where the roots can hide, they are exposed to air and oxygen anywhere in the reservoir or pot. Example if you are growing in a 5 gallon bucket and are using a 3 inch air stone, you have a void of approximately 7 inches. Where you don’t have air bubbling straight up. This is a void area, you now have roots exposed to the void area and are not receiving the amount of oxygen that they need. Also when using a air delivery system that does not evenly distribute air to the entire reservoir or pot it tends to push the roots to the void area.

How to increase a plants growth rate: We talked about it above, you can introduce a technology developed by modularhydro.com to over come the problem of root void when growing with a deep water culture hydroponics system. Your plants will experience an increase in growth rates when you inject an even amount of air into the reservoir of a deep water culture hydroponics system. The roots have no where to hide. The even air delivery allows the roots to grow and not be pushed away by the air bubbles to a void area, such as with the use of a smaller air delivery system like a 3 inch air stone with a void of 7 inches etc.