

What is Hydroculture?

Hydroculture (hydroponics) is the “soiless” cultivation of plants; water and liquid fertilizer are used in place of soil, and clay aggregate is used to anchor the plants in place. The plant roots are constantly submerged in water, but the plants will not die as most people would think because the “water” roots have expanded space for oxygen storage in their outer cells.

There are many advantages to hydroculture, the most obvious one being that watering and feeding only require topping off the reservoir. Also, soil born pests do not effect hydroculture plants and plant growth is generally more vigorous.

Materials

There are two types of containers most often used in hydrocultures: single and double. A single container is simply one that is water tight and not made of metal (which can react with the liquid fertilizer). Glass is the best for a single container because it allows you to monitor the water level without disturbing the plants. Water gauges can be bought to monitor non-glass containers. However, double containers are simply two containers, with the smaller, perforated one suspended at rim level inside the larger, watertight one.

Clay aggregate is best for the anchoring material since it is heavy enough to be a substantial support but light enough not to crush the plant roots. It must be clean and should be rinsed before used the first time.

Plants can be acquired for hydroculture from special nurseries, which sell them ready for this purpose, but more likely you will want to do this on your own. The easiest method is to take cuttings and let them “root” in water, then place them in their containers.

Transferring

Transferring a plant from soil to hydroculture is more difficult but can be done successfully with a little care. The plant will suffer trauma when going through this transfer so it is recommended to give it high humidity and warm temperature while its old roots are replaced by new “water” roots. This process usually takes 10-12 weeks. Do not use a rare or treasured specimen. The following steps tell you how to transfer a plant from soil to hydroculture.

1. Using both hands remove the mature plant from its pot being careful not to damage the root ball. It is not advisable to use your rare or treasured specimen.

2. Support the plant with one hand. Carefully tease apart the root ball, removing as much of the potting mixture as possible without tearing out the roots.

3. To remove the final traces of potting mixture, wash thoroughly under a gentle tap. Make sure the water is not cold, as this will cause further trauma to the plant.