

Hydroponics Cultivation of Crops

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Abstract

Hydroponics technology is possibly the most intensive and a versatile method of growing crops production at present as it allows optimum utilization of nutrient solution, water and space, as well as a better control of climate and plant protection factors. Hydroponic technology can be an efficient mean for food production from extreme environmental ecosystems such as deserts, mountainous regions, or arctic communities. Furthermore, hydroponics production increases the quality of crops and its productivity, which results in higher competitiveness and economic income. Several types of hydroponics systems can be used to grow the crops. Commercially Nutrient Film Technique (NFT) has been used across a globe for successful production of the leafy as well as other exotic vegetables cultivation. Hydroponic systems use mineral nutrient solutions to feed the plants in water of using several non-soil growing media. Despite of having few disadvantages, Hydroponics technology provides variety of benefits when compared with conventional farming methods.

Keywords: Hydroponics, growing media, structures, nutrient solution

1. Introduction

The word hydroponics was derived from combination of two greek words, hydro, meaning water, and ponos, meaning labor (i.e., working water). It may be defined as the technique of growing of plants in nutrient-rich solutions instead of soil. Hydroponics is used in the commercial production of many greenhouses crops. Hydroponics is the fastest growing sector of agriculture, and it could very well dominate sustainable food production in the future. As global population increasing rapidly and arable land declines due to urbanization, people will turn to new technologies like hydroponics or soilless farming. This soilless growing technique uses nutrient solutions to feed plants