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Modern Day Soil less Agriculture

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Abstract

The world population is increasing manner and if this continues around 10 billion people are needed to be feed at the end of the century. For the above reason food security is prime important and there is need of abundant food. In present condition this issue is tackled little bit but the more pressing issues such as decrease in land area as well as fertile land are of burning issues. Also there is increasing threats of pathogen because of faulty cultivation practices and monoculture. Crop intensification through modern technology the prime component of food security is posing threat to environment as well as human health. Considering all the above mentioned issues soil less agriculture is now gaining popularity. Among various soil less crop production hydroponics is gaining popularity because of its efficient resource management property, more crop production in less area, real time control of irrigation, fertilizer and disease-pest management. This review focuses on different hydroponics system, their operation and compatibility in water conservation.

Keywords: Crop intensification, Food security, Hydroponics, Water conservation

Considering the world's population has approximately 9 billion people and it will continue to grow, go forward, and reach about 10 billion by the end of the century, it is rational to argue that there needs to be abundant food provided to support these populations. The art is pretty much tackled to a certain degree, but it is found that the meaning of the word decreases if the fertile soil surface is reduced. On the one side, the high intensification of the development cycles (around 6,000 times) allowed for a constant spread of pathogens (Shafique *et al.* 2016). On the other hand, the monoculture method favoured the dissemination of several pathogens, a growth of the corresponding pathologies, and unparalleled outbreaks of the significant ones. In addition, the use of agriculture has become a much more complicated problem because of the increasing issue of food security and the poor management practises by local water shortages. In addition, the soilless cultivation of microorganisms offers a constructive solution for the future use of biomass that is most frequently harvested from non-cultivating systems (crop systems) and where the cultivation will influence the biomass in an important way (variation is suggested in biomass due to the application of pre-cultivation treatments) or even negatively, meaning that the biomass decreases when it is cultivated. Moreover, it should be highlighted that this cultivation approach also represents a favourable response toward a more environmentally friendly agriculture (Tajudeen and Taiwo 2018) as well as a promising tool also in the vision of the general challenge of food security.

Hydroponics is a branch of agriculture in nutrient solutions with or without the use of inert supports including certain gravel, vermiculite, rock wool, peat

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