AQUAPONICS AN ALTERNATIVE METHOD OF LAND FARMING

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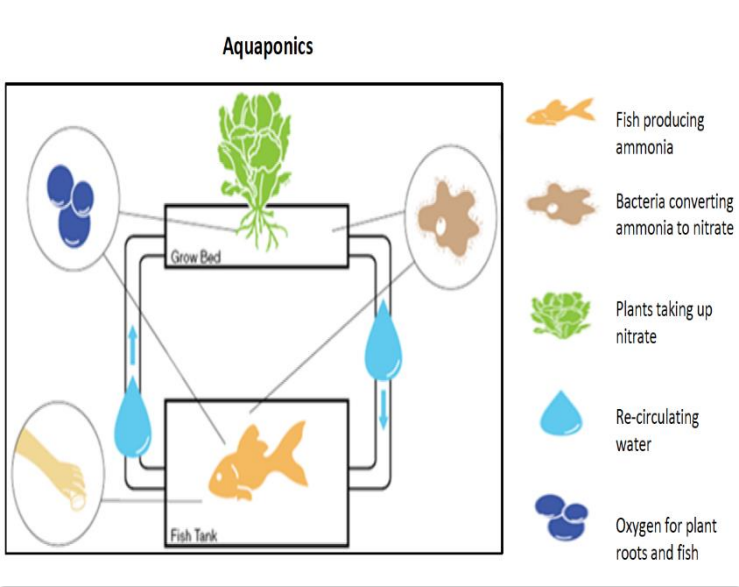
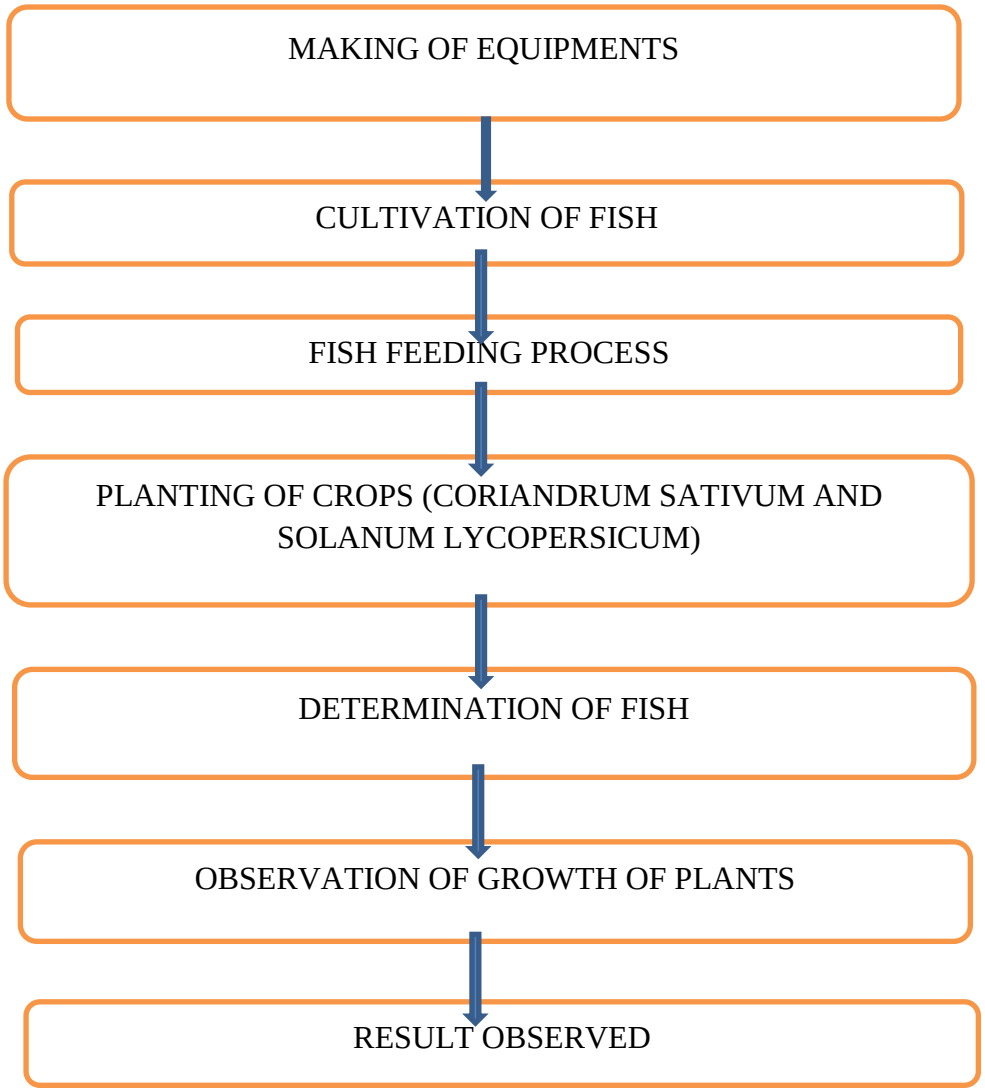
Objectives:

- To show that the crops like coriander, lettuce and tomatoes can be grown faster in aquaponics system
- To analyze the relation between the level of pH to the yield of crop
- Effects of aquaponics on the yield of coriander and lettuce in terms of land farming

Methodology:

Aquaponics is a method of sustainable food production system, in which aquaculture and hydroponics complement each other to make growing of different crops feasible. With the two-in-one process that, fish leaves the effluents in the water filter to make the latter grow. The production systems for consumable plants likes corriander (Coriandrum sativum) and tomato (Solanum lycopersicum), were evaluated, associated with the semi-intensive cultivation of fish like tilapia (Oreochromis niloticus). Data will be collected during the experiment, such as: Information on nutrients and pH, and size of the plant. Any problems or unusual conditions in the aquaponics as well as soil garden are recorded. Test conducted during the project are pH test, Bacterial plate count.





Result:

- **Plant Growth:** Aquaponic farming had more growth compared to Land cultivation
- **Health of The Fish and Plants:** Aquaponic plants had better plant health compared to Land cultivation
- **Reduced Water Use:** Aquaponics uses 90% less than Land cultivation
- **Maintenance:** Aquaponics maintenance is low compared to Land cultivation

Conclusion:

This project interprets the elaborate implementation and observations of land cultivation and aquaponics system. The aquaponics system is functioning a model for canal irrigation for small scale agriculture. From this project the traditional farming culture and aquaponic media system were determined and made result as media-based system has higher growing than Land cultivation. The Land cultivation and tank farming equivalence rate is nice enough here to provide nutrient made water moreover as recirculation water to cultivation. Thanks to interconnected characteristics of aquaponics, it may be associate degree application for each low level and high-level technical implementation. supported

literature reviews this project demonstrates that the leveling rate of aquaponics system, water quality parameters and study regarding environmental conditions will facilitate to assess the potency of this method. The leveling rate rely on variety of fish and their food feeding rate, production of ammonia level, tank farming sort, density of plant sowing, variety of aquaponics beds. From this sort of agriculture technique implementation each rural and concrete setting will serve property food production on to the shoppers.