



Comparing the growth of the eggplant in different agricultural medium

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Research questions:

- 1- How can direct normal soil be replaced with other mediums?
- 2- What are the problems that farmers face when planting directly on the soil?
- 3- What are the results of using other agricultural mediums as a substitute

References:

Sameh Amin, Al-Watan newspaper (5/4/2018), success in finding agricultural mediums locally and that are eco-friendly, Muhammed bin Suleiman Al-Tai
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Mechanisms of agriculture without soil
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Summary:

Our research aims to exploit natural resources in the agricultural production process and find different agricultural mediums that replace the soil due to the presence of the problems that it suffers from, such as salinization of the soil. We have prepared three questions to answer them through experiments and research studies and they are as follows:

How can the regular direct soil be replaced with agricultural mediums? What are the problems that farmers face when planting directly on the soil? And what are the results of using other agricultural mediums as a substitute for soil?

And we used the ground cover protocol to carry out studies on eggplant. which we distributed over five pots containing different agricultural mediums: (pitmos, sawdust, palm fronds, valley soil, and valley soil mixture with pitmos) and we monitored their growth weekly for four Weeks until we concluded that the pitmos are the best agricultural medium for their high porosity, which allows gases to reach the roots, as it contains large proportions of organic materials. We also found that sawdust and palm fronds are the least preferred mediums even though they have been sprinkled with water. and while we were doing this, we faced the problem of the erosion of the leaves and it was solved by boiling neem leaf, and finally we recommend farmers to use pitmos and valley soils, especially in areas where there is a problem of salinization or other problems.

Research methods:

The protocols used: plant protocol

Climatic characteristics: winter

Data Collection:

We distributed five agricultural mediums in five pots, where we first brought the soil of the valley from a valley near the school. Then we put it in the pot allocated for it and then we brought two samples for sawdust and palm fronds in cooperation with the Agricultural Research Centre and finally we put the pitmos that were brought from a nursery in the last pot. Then, we mixed all these mediums with water and then we planted the (eggplant) on it for easy handling and rapid growth. It was watered daily with water and implemented the ground cover protocol in the farm by monitoring the length of the plant and the number of leaves per week for a period of time (Four weeks).

