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# The Effectiveness of Farming in the Method of Hydroponics

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**Abstract**: Kidroponics is a method of growing plants in an artificial environment without soil. In this method, it is possible to achieve the cultivation of mainly vegetables, flowers, berries, greens for livestock and poultry, much more effective than other methods of watering and forming a glaze.

**Keywords:** hydroponics, plants, agriculture, greenhouse, film coating, feeding, mineral wool.

## Introduction

Gidroponics is the cultivation of a plant in a soil-free, artificial environment. There are several ways of kidroponics. The method of growing a plant on a fine gravel or sand is more applicable. For the laying of gravel or sand, a flat chord with a depth of 25-30 CM, a width of 80 cm and a length of 240 cm is prepared, into which the piping with holes is installed so that the nutrients come from the mixed water. The top is covered with a wire mesh, so that the holes in the pipes do not fall out. The chord is filled with gravel or clean sand. Seeds are sown in the sand. Then, depending on the season of the year, the age and variety of the plant, the property of the solution is given a mixture of nutrients 1-5 times a day. Giving the mixture takes 30-50 minutes. The concentration of the mixture is checked and updated from time to time. Gravel and sand can not be replaced for several years. In the method of kidroponics, cervitamin greens are grown mainly for vegetables, flowers, berries, livestock and poultry. By this way, it is possible to harvest 4-5 times a year. In the food mixture must be all the substances necessary for the plant (nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, boron, copper, zinc, molybdenum, cobalt, etc.). Their ratio varies depending on the season of the year, Vegetable Variety and age.

The difficulty of growing quality food is also worth trying, hard work. By planting and harvesting only summer crops, market stalls can not be replenished in winter summer. Especially at a time when the number of people today is growing day by day. This in turn creates the need for farming even in the four seasons of the year.

For this reason, the head of our state adopted the resolution № PP-4246 “on measures for further development of horticulture and greenhouses of the Republic of Uzbekistan”on March 20, 2019. This was a big turnout in the greenhouse industry. Takitlash keragki method of hydroponics is being established in greenhouses in all regions of our country. Such compact and efficient greenhouses allow to grow high-quality melons, create a large number of jobs.

In this way, exactly the same South Korean technology is distinguished by its comprehensive compatibility with our climate. It has the property of capturing heat and forming by itself. And this, of course, is important in order for the cost of the product to be acceptable.

Suppose, on sunny days in the winter months, it is possible to create a set temperature, even if the Heat Supply is disconnected. Because its film coating is able to absorb heat and deliver sunlight and useful elements to the crop up to 93 percent at the time of transfer to the inside.

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In addition, the process of irrigation, feeding is carried out precisely and qualitatively. These two tasks are performed through a computerized system. If the automatic "Messenger" does not go to any seedlings with water, it will give information to the agronomists until the point of its location. Another aspect is that if each of the thousands and thousands of seedlings should drink 50 grams of water, then their roots are given so much obihayot. This guarantees the same development of the crop in all areas. Most importantly, the quality of the harvest is also the same — excellent.

This modern method ensures the implementation of the farmer's plan that will grow exportbop products. Seedlings packed in the soil are three to many diseases. The reason is that such conditions create a favorable environment for the emergence and reproduction of various pests. And in hydroponics, any centimeter, which is their original Nest, is not left open land. The entire area is covered with a special film, as if the fur carpet is covered. The location is that if an insect appears, its destruction after chemical processing is visible on the surface of the moth.

To further increase the effectiveness of kidroponics, now the complete localization of the soil-substituting nutrient collection is the main issue. If this task is fulfilled, the cost of the grown product will sharply decrease. Since the current year, production and supply of so-called “minivata” crop food has been beginning in our republic. In another aspect, in this regard, the use of biogumus, bamboo stem and flooring edge should be tested.

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In the experimental area, the tomato crop grown by irrigation methods was determined by the terms during the ripening period. The results of the study are presented in Table. The data of this table show that the average yield of 4,5 kg/m2 of tomatoes was obtained in a simple greenhouse variant, in which the method of roughing irrigation was used throughout the whole season, and in tomatoes grown with the support of the method of hydroponics 36 kg/m2 of tomatoes.

In the gidroponics method, the yield of tomatoes should be more than 18,4 kg/m2 compared to the ordinary greenhouse, in which the irrigation method is applied, the conditions favorable for the growth, development of tomatoes in this method (the norms of irrigation are reduced, the irrigation numbers increase, the supply of mineral fertilizers and micro fertilizers with water throughout the season)

When the commodity status of tomatoes grown in the experimental area (Option 1) was studied, tomatoes grown in the method of gidroponics (option 2) were 99, 2 %, and tomatoes grown in the method of cultivated irrigation with a high commodity quality of 97,6%.

**Yield of tomatoes in the experimental area, kg/m2**

| Irrigation method | repetitions | | | Average | Commodity case, % |
|---|---|---|---|---|---|
| | I | II | III | | |
| Rut irrigation | 16,5 | 17,6 | 15,8 | 17,6 | 97.6 % |
| Drip irrigation | 35,3 | 36,0 | 36,2 | 36,0 | 99, 2 % |

**Conclusion.**

There are a lot of figures that can express the effectiveness of gidroponics, give imagination about it. For example, under normal greenhouse conditions, if one Bush of tomato seedlings weighs an average of 3 kilograms, then in hydroponics it reaches up to 12 kilograms. In other words, both the roots of the seedlings and the leaves of the tanasiyu will have a long life span of seedlings, which are tightly harvested (or protected) from various pests and diseases. This can be explained by the fact that the seedlings planted in November Live about a year. Consequently, if the first 3-4 months is the period of introduction of seedlings into the harvest, then it is possible to cut off the yellow tomatoes from it for 6-7 months. And in order for the height not to reach the ceiling, the lower part of the stem, freed from the fruit, is lowered to the Earth. Thus, through gidroponics, records appear in the ledger of the peasant on the receipt of 120-140 tons of tomatoes from one hectare, 80 — 100 tons of cucumbers. In turn, since the harvest period is short, there is also an opportunity to plant the basement three times a year. Again and again, it is worth to say that if we take advantage of this method on account of unsuitable fields for growing, abandoned and cultivated, we will have overcome the food problem in our country. It can be seen that gidroponics and other advanced methods show prosperity at every address of our country, our native land will continue to be more generous.

**Used literature:**

[1]. Decree of the president of the Republic of Azerbaijan on measures to ensure more effective organization of the process of acquisition of rights over land parcels and other immovable property;

[2]. Decree of the president of the Republic of Uzbekistan on measures to ensure more effective organization of the process of acquisition of rights over land parcels and other immovable property as part of the South Caucasus Pipeline expansion project more ...

[3]. Decree of the president of the Republic of Uzbekistan “on approval of the concept of development of the water economy of the Republic of Uzbekistan for 2020-2030 " dated November 10, 2020 PF-6024

[4]. V.I. Zoev, A.A. Atakhadzhaev, SH.I. OVOV, A.K. Kadirkhodzhaev protected place vegetable growing. Tashkent -2014.

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[5]. V.I. Zoev, A.A. Atakhodzhaev, A.K. Kadirkhodzhaev, cultivation of seedlings and vegetables in protected lands. Tashkent -2010.

[6]. T.E. Ostanakulov, V.I. Zoev, A.Q.Zire " lost in Test match "Vegetable" Tashkent-2010 Year.

[7]. B. Azimov, R. Hakimov Vegetable Production

[8]. Text of vegetable lectures. Andkxi-2009.

[9]. Scientific Research Institute of vegetable-melons and potatoes of Uzbekistan. Growing vegetables in greenhouses. Tashkent-2007.

[10]. Badger H.CH, Sultanov K.S, Epdukeyomav Z.A favorite vegetables: choose, grow and apply. Tashkent -2014

[11]. Scientific Research Institute of vegetable-melons and potatoes of Uzbekistan. Guide on the fight against pests and diseases of vegetable melons and potato crops in Uzbekistan. Tashkent-2007

[12]. www.Lex.uz;

[13]. www.Ziyonet.uz you know what?