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## MEASURES TO ENSURE FOOD SECURITY AND PRODUCTION OF PEAT POTS FOR SEEDLINGS

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**Abstract:** *In this article today's world demand in the food industry and the works and normative documents for the development of the food industry in our republic , the importance of seedling cultivation in increasing productivity in agriculture and vegetable farming , the role of biohumus and peat pots in the cultivation of seedlings and also information about the production line of pots from biohumus (organic fertilizer) is given.*

**Key words:** *Soil Fertility, Machinery, Electricity, Root System, Oxygen, Greenhouses, Vegetables and Fruits, Landowners, Wood Chips, Food Products, Peat, Organic Fertilizer, Ingredients, Harvest, Decomposition, Nutrition substances.*

**Introduction.** In the agriculture of Uzbekistan, about 60% of kaleyard crops and vegetable crops are grown from seedlings. In our sunny country, it is possible to harvest 2-3 times a year from fruits and vegetables. This is achieved due to cultivation from seedlings and effective use of protected land structures.

The decision of the President of the Republic of Uzbekistan "On measures for the further development of horticulture and greenhouses in the Republic of Uzbekistan" dated March 20, 2019 No. PD-4246 established the tasks of production of fruit and vegetable products in the off-season in our republic, increasing the volume of exports, and training high-level competitive personnel in the field. In order to provide the population with cheap, high-quality food products, and to increase production, it is urgent to use modern methods of growing kaleyard crops and vegetable seedlings in greenhouses in the Republic [1].

**Materials and methods of research.** Increase and protection of soil fertility. Improving the system of agroservices based on science and innovation. Supplying raw materials to agro-industrial enterprises and increasing production volume by 1.5 times.

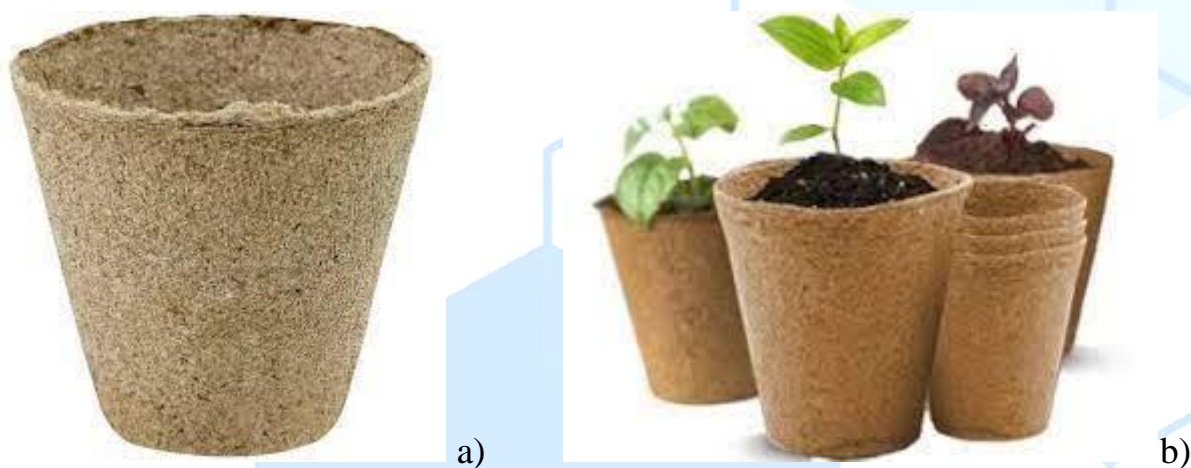
Development of agrolistics centers and increasing the number of modern laboratories. Implementation of the national program on seed and seedling cultivation.

Establishing an international agricultural university together with prestigious international scientific centers and higher education institutions. A number of issues such as deepening the integration of science and practice in the agricultural sector have been identified.

In kaleyard and vegetable farming, the growth and development of plants grown from seedlings is observed in comparison with the same plants grown without seedlings. This promotion leads to faster ripening of the plant, better prices of the product in the market and higher economic efficiency. For this reason, many of our farmers know the benefits of growing rice and vegetable crops from seedlings and growing early crops in open fields and greenhouses. But there is a lack of knowledge and experience in the preparation of rice and vegetable seedlings for some farmers and homesteaders [2].

Implementation of the process of growing seedlings in greenhouses with the help of fully scientifically based mechanisms is one of the urgent problems of the industry today[3,4].

In the cultivation of seedlings, plastic and polyethylene bags are widely used to grow seedlings with fertilizers. The high price of polyethylene products increases the cost of planting seedlings, which in turn leads to an increase in the price of food products ( Fig.1 ).



a - The developed bag by the peak bag      b - The process of growing seedling by a peat pot production line

**Fig.1 Peat bags in seedling cultivation**

The equipment and structures for the preparation of seedlings used in the cultivation of seedlings carry out different technological processes depending on the shape and size of the preparation seedlings and the type of product used for the

preparation of seedlings. Semi-mechanized and mechanized types of existing equipment for the preparation of seedlings are widespread [5,6].

The sequence of operation of the main parts of the plant for mechanized seedling production is automated, powered by 2- or 3-phase electricity. Today, 80% of the seedlings of vegetables and pulse crops grown in agriculture are grown in different district greenhouses and delivered to pre-prepared fields and greenhouses. The size and shape of the pots formed by these devices are made depending on the type of seedling [7].

The line for the production of peat pots for planting seedlings manufactured by the Chinese enterprise "Liming Heavy Industry" (Fig.2).



**Fig.2 Production line of peat pots**

This equipment allows you to make pots of different shapes and sizes. This modern production line has a production capacity of 4,000 pieces of peat moss per hour. the line is automatically adapted to work with 380 V electric current, and 3 workers are needed to provide service and load raw materials into the hopper, as well as to control the quality of the manufactured product [8, 10].

**Results and discussion.** Peat beds are designed for growing various seedlings (tomatoes, cucumbers, etc.), as well as all types of flower crops. They are hollow products, the walls of which are made of a mixture of wood shavings or peat moss. Since the seedlings are planted directly in the soil, the cost of fertilization is significantly reduced (the walls themselves are fertilizer) and the yield increases[9].

Growing seedlings in peat beds has a number of advantages:

1. Due to the porous walls of the container, the root system is well supplied with oxygen and water.
2. Once planted in the ground, the roots grow freely through the flexible and soft walls of the pot without resistance.
3. The base of the pot is strong enough to support the load of soil and seedlings.
4. The peat moss falls to the ground and gradually decomposes and becomes a natural fertilizer for the plant, which provides its nutrition and improves the growth rate.

Peat mulches are made from completely natural ingredients, they do not harm the seedlings, the soil, and do not poison the crop [11].

**Conclusion.** Through the technological process described above, biohumus (organic fertilizer) for growing seedlings can be used to reduce the consumption of labor by preparing seedlings that completely decompose in the soil and mechanizing the preparation of seedlings.

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