
**CULTIVATION OF THE INTRODUCED MEDICINAL PLANT AMARANTH
IN THE FERGANA VALLEY**

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Abstract

Amaranth, a non-traditional medicinal plant used in agricultural biotechnology, is attracting the attention of agricultural workers and researchers due to its rich protein content, high yield, and the presence of many vitamins and mineral salts. It is considered a leading raw material not only as food and feed, but also as an invaluable medicinal plant.

Keywords: Amaranth, leaf, amaranth seed, amaranth seed, biogas.

Introduction

In our republic, improved technologies for deep processing of agricultural products, obtaining semi-finished and finished food products from them, obtaining necessary preparations for the food, pharmaceutical, and medical industries from their secondary materials have been created. In the action strategy for the further development of the Republic of Uzbekistan, "deepening structural changes and consistent development of agricultural production, further strengthening the country's food security, expanding the production of environmentally friendly products, significantly increasing the export potential of the agricultural sector" tasks are defined. In this regard, among other things, scientific research aimed at creating technologies for the production of import-substitute products from locally grown medicinal plants is of great importance.

Study of agro-ecosystems of amaranth medicinal plants in agriculture, preparation of food additives for functional nutrition, feed with high value for livestock in agriculture based on local varieties of plant amaranth, in this regard, amaranth The tasks of extracting the leaves, inflorescences, and seeds from the varieties as the main products, extracting the oil from the seeds, drying the remaining pulp, and preparing these components for turning them into food supplements are carried out. increase is determined [1].

Today, the practice of planting, growing and processing of non-traditional medicinal plants introduced to local conditions and production of nutritional supplements based on them is underway.



577 of the 4230 species of plants in our country have been found to be medicinal plants. The amaranth plant, which belongs to the "Gultojikhoroz" class, is a unique medicinal plant known in our country since ancient times. During the time of Abu Ali ibn Sina, it was used to treat skin diseases (for example, measles, red rash, etc.). There is information about the widespread use of amaranth in the treatment of cuts and wounds, halitosis and other diseases.

Machin (gultojiho'roz) (Russian "shchiritsa, barkhatnik, aksamitnik, petushinye grebeshki, koshachiy khvost, lisiy khvost", Latin "amaránthus", Greek "amáranthos") is a widespread, annual herbaceous plant with small flowers united in spike-shaped inflorescences, belonging to the family "Amaranths" (Amaranthaceae). The grain is small - 1,800 grains weigh 1 gram, the body grows up to 2-4 meters and yields in 3.5 months (Fig. 1). It gives good honey during flowering [2].

The original homeland of amaranth is South America, and it is known from history that it was used as a cultivated plant by the local population 8 thousand years ago.



Figure 1. Uzbekistan-M variety

Research progress:

For the experiment, it is very important to conduct the experiment in a place with high productivity. We have started experimenting with this plant in low yielding and rocky land. Initially, we aimed to loosen the ground and began to loosen the ground with the help of farm equipment. During the softening of the land, it was cleared of various weeds. First, the land was softened and formed. Furrows are taken, the point to be noted is that the seed is planted for 2 different purposes, as a protein-rich feed for livestock and to obtain various nutritional supplements and other substances from the seed. The width of the slats is 45 cm, and 12 per meter is optimal. The furrows for seed should be 70 cm and 4-5 per meter. The seed was sown in the prepared soil, and then the soil was watered on the same day. On the 4th day from the day of planting, the seeds began to germinate. During the vegetation period, 500 g of machavina was treated with mineral

fertilizer, as a result, it was observed that the plant grew a lot, its height was 0.3-0.5 cm (Fig. 2).



Figure 2: Vegetation period of 28-90 days of amaranth medicinal plant

In conclusion, it is worth saying that: to get a high yield from amaranth's blue mass, a 45-cm furrow is taken and 10-12 seedlings are left for each meter of length. Agrotechnics for the purpose of obtaining seeds is slightly different, the furrows are 70 cm, 4-5 seedlings are left per meter. The planting period is the same as that of corn, and it is advisable to do it when the soil temperature is 8-10°C. Since the seed is very small, it is recommended to mix it with topsoil powder and plant it. Seedling germination takes 10-12 days when the soil temperature is 14-16°C and moisture is sufficient. After the seedlings germinate, it is necessary to remove the wild plants around the seedlings for three weeks, after which the amaranth starts to grow rapidly, not giving any harm to its "enemies". Amaranth roots are very strong, deeply branched, absorb water and minerals from the soil and form the necessary biomass.

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