MIRZO ULUG‘BEK NOMIDAGI
O‘ZBEKISTON MILLIY UNIVERSITETI
JIZZAX FILIALI



"BIOTEXNOLOGIYANING RIVOJLANISH ISTIQBOLLARI VA MUAMMOLARI"

MAVZUSIDAGI RESPUBLIKA MIQYOSIDAGI ILMIY-TEXNIK ANJUMAN TO‘PLAMI





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МИНИСТЕРСТВО ВЫСШЕГО ОБРАЗОВАНИЯ, НАУКИ И ИННОВАЦИЙ РЕСПУБЛИКИ УЗБЕКИСТАН

ДЖИЗАКСКИЙ ФИЛИАЛ НАЦИОНАЛЬНОГО УНИВЕРСИТЕТА УЗБЕКИСТАНА ИМЕНИ МИРЗО УЛУГБЕКА

СБОРНИК ТЕЗИСОВ РЕСПУБЛИКАНСКОЙ НАУЧНОЙ КОНФЕРЕНЦИИ

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EVALUATION OF BIOMETRIC INDICATORS OF *ARONIA MELANOCARPA* (MICHX.) ELLIOT GROWN IN SAMARKAND REGION

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Abstract. This article provides information about *Aronia melanocarpa* seeds. Conclusions are given about the structure and weight of seeds. Information about the chemical composition and other beneficial properties of the seed is also provided.

Key words: *Aronia melanocarpa*, seed, aronia seed oil, bioecological, biometric.

Introduction. *A. melanocarpa* is an evergreen shrub of the family Rosaceae, subfamily Maloideae, genus Aronia [1,2]. *A. melanocarpa* is vegetative and can be propagated from seeds. In vegetative reproduction, the parkhesh method is widely used, the method of propagation by cutting and dividing a plant with soft and hard wood along with the root. Some varieties can be propagated from seeds. Sometimes some varieties are almost seedless, it is difficult to reproduce them from seeds [3]. The seeds of this plant are stored in cold conditions for several months before sowing. Seeds germinate well in sandy soils. Regardless of what time they are planted, they may grow spring germination possible [5]. In the laboratory, regardless of the season, it requires certain techniques and conditions. Usually, the fertility of seeds is preserved for 2 years [4]. In our next experiments, we studied various bioecological characteristics and biometric indicators of the seed in order to evaluate the biological potential of the plant by microclonal reproduction from seeds in vitro and by traditional methods from seeds.

Material and methods

Fruits of *A. melanocarpa* grown in the SAG AGRO in vitro laboratory were taken as a research object. Information about the composition and use of *A. melanocarpa* seeds was collected from a number of articles. Ripe fruits were picked in early September. The seeds isolated from the fruit were evaluated according to various indicators.

Nutritional value of *A. melanocarpa* seeds

A. melanocarpa seeds contain a small amount of healthy fats: omega-3 and omega-6, palmitic acid, stearic acid, and oleic acid [5]. These fats are important for a variety of bodily functions, including supporting heart health and stimulating brain function. Aronia seed oil contains about 80% of all essential fatty acids. *A. melanocarpa* seeds provide a moderate amount of protein necessary for the growth, repair, and maintenance of body tissues. Seeds contain more than 35%

dietary fiber. It is essential for promoting healthy digestion, maintaining bowel regularity, and supporting overall gut health. In addition, chokeberry seeds are known to be rich in antioxidants, particularly anthocyanins. These compounds have powerful antioxidant properties that help protect the body from oxidative stress and inflammation. The seeds contain small amounts of various important vitamins (E, C, and K) and minerals (manganese and potassium) [5].

Dried chokeberry seeds are also used in food and cosmetics. Including in the enrichment of confectionery, milk and bread products, giving unusual color, taste and health benefits to foods and drinks, obtaining *A.melanocarpa* seed oil useful for various products and in the field of cosmetics, for soap and face can be used in the production of masks. The aronia seed oil obtained from it is extracted under cold conditions and retains its medicinal properties. is a natural remedy without additives [6].

The obtained results and their analysis. At the beginning of September, the fruits of *A. melanocarpa* grown in SAG AGRO in vitro were collected and a number of biometric characteristics were evaluated. The fruit is located in a two-ray complex flower, and the number of fruits in the flower varies from 8 to 24. *A. melanocarpa* seeds are very small, the average length is 3 mm, and the width is 1-1.5 mm, they are brown in color, semi-deltoid in shape. When measured on an analytical scale, the average weight of 1 seed is 0.0036 g, 10 is 0.0360 g, 100 is 0.36 g, and the weight of 1000 seeds is equal to 3.6 g (Figure 1).



Figure 1. Biometric indicators of *A. melanocarpa* seeds

The number of seeds in each fruit is different. Among them, it was determined that there are no seeds, one, two, three, four and five seeds. To determine the ratio of the number of seeds in the fruit, 100 seeds were separated from the mesocarp of the fruit and the seeds from each fruit were evaluated (Figure 2).

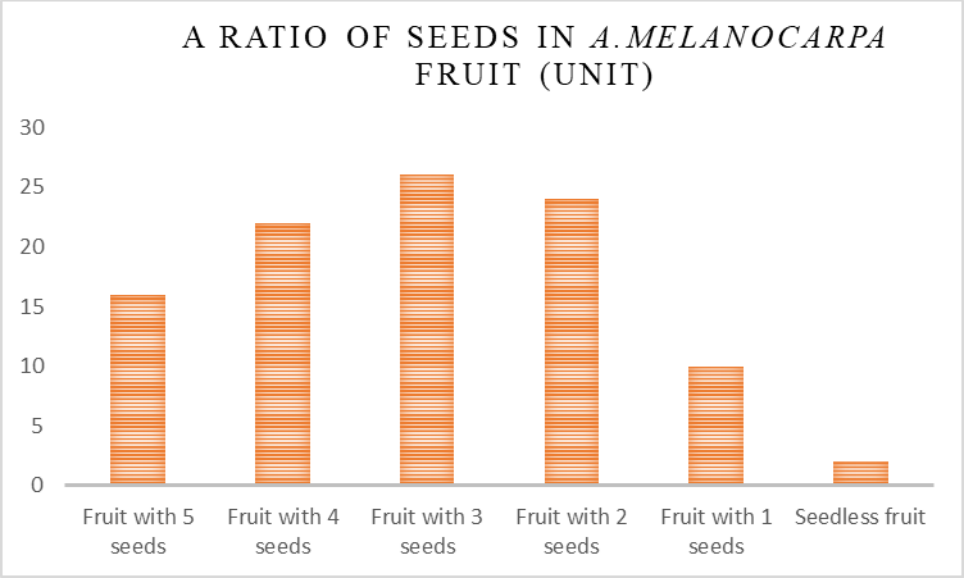


Figure 2. *A. melanocarpa* (Michx.) Elliot fruit content of seeds (unit)

The highest number of healthy seeds in the fruit corresponded to fruits with 3 seeds (26). The lowest indicator was found to be seedless fruits (2).

As a conclusion *A. melanocarpa* seeds have various health benefits and cosmetic value, it can be used as an additive to food products. The oil obtained from its seeds has both nutritional and medicinal value. the seeds are very small and the number of seeds in the fruit is also different.

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