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SIGNIFICANCE OF THE SIMMYT И ICARDA MATERIALS FOR CORN BREEDING IN UZBEKISTAN

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Annotation: Breeders observed morpho-biological and valuable economic characteristics of maize in maize samples from the crop research Institute, international research institutes, SIMMYT international research centers, and the gene pool of the ICARDA world collection of organizations. Obtained results are recommended to field breeders and research centers as a primary source for creating large seed varieties with high maturation, fertility, grain yield and green mass, 1000 units of grain mass.

Keywords: collection, corn, seed, selection, crossed, variety, hybrid, primary material.

Introduction: According to the Resolution of the President of the Republic of Uzbekistan Sh.M. Mirziyoyev "On radical improvement of the seed system in the Republic of Uzbekistan" dated April 27, 2018 No PP-3683, variety and seed control is an important factor in ensuring food security. Therefore, when talking about the prospects for the development of the agricultural sector in the country, given the limited land and water resources, the only right way is to develop agriculture on an intensive basis, radically improve land reclamation, expand selection and seed production, introduce high-efficiency modern agro-technologies and the cultivation of high and quality crops from crops based on the rational use of water [1].

Today, corn is one of the most important food and feed crops and occupies a high place among the most common cereal crops in the world agriculture. All parts of corn are used directly (grain, leaf and stalk mass), as well as waste products from its processing (bran, cereals, kunjara, malt and so on). To date, the main part of corn seeds is imported from Turkey, France, Russia, Serbia, Kazakhstan and Ukraine due to insufficient cultivation of local maize seeds in the country and

insufficient demand of the population. According to the FAO (International Organization for Agriculture and Food Security), in 2018, corn was planted on more than 184 million hectares worldwide, with a gross grain yield of 806 million tons. More than 60% of the corn grain produced came from industrialized North American and European countries, where its grain yield averaged 5.5-74 t / ha. 44% of the world's corn is produced in the United States, where in 2020 the crop was planted on more than 89 million hectares, with an average grain yield of 8.93 t / ha. Despite the fact that in Central Asia, including our Republic, corn has been grown for many years, high yields of local grain and green mass, resistant varieties resistant to diseases and pests are almost non-existent [2, 3].

Materials and methods: In the collection of the Scientific Experimental Station of Corn Breeding and seed production. More than 50 samples of corn from the world collection of the Botanical Research Institute, international research institutes, international research centers SIMMYT and ICARDA are collected, During 2012-2019, breeders conducted selection observations on morphobiological and valuable economic characteristics of 22 samples of foreign and domestic corn, as well as simple and complex cross-breeding. In the mathematical analysis of field experiments used the method of analysis of variance BA Dospekhov "Methodology of field experiment" (M. 1985) [4]. The duration of the growing season of maize and biometric measurements were carried out on the basis of the methods of the All-Russian Grain Crops ITI (1991). Seed quality indicators GOST-12038-94 "Seeds of agricultural crops. Methods for determining the quality of seeds" and Oz DSt 2823: 2014 "Variety and sowing qualities of agricultural seeds. Specifications" standards are used [5].

Results and their analysis: The main goal of many years of selection work was to create forms with high economic yields of grain and green mass, resistant to diseases and pests, fast-ripening and valuable economic characteristics of 1000 grains. In the experiments conducted in 2019-2021, the collection of corn was used as a simple hybrid of Uzbekistan 100 (mother form) and high-yielding Uzbekistan 601 ESV (paternal form) with a high yield of green mass, belonging to the type of silicon subspecies, Through perennial selection, a new Esdalik 80 variety with high yield of green mass was created. During many years of study, the Esdalik-80 variety remained stable at 55-58 t / ha for grain and 8 00-820 ts / ha for green mass and from 2020 was included in the group of promising varieties in the State Register. The stem is cylindrical, the core is red, large, 25-28 cm long. The number of rows of grain in comb is 16-18, the number of grains in each row is 44-48, the number of grains in comb is 820-870, the weight of comb is 350-400 g. Grain yield is 70-72%. Grain-medium size, toothed silica, weight of 1000 grains 270-290 gr, color yellow. The leaves are green, broad, of medium length. Stems erect, height 320-330 cm. Resistant to lying down because the stem is strong. In the production of this new variety resistant to powdery mildew, high results were obtained when sowing 23–25 kg of seeds per 1 hectare with a thickness of 55 thousand seedlings [6].

Conclusion: As a result of effective use of the gene pool of the corn collection by breeders: has valuable farm traits, high variety and high crop quality ensures the creation of new varieties and hybrids such as high Esdalik-80.

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