

**BIOLOGICAL CHARACTERISTICS AND BENEFITS OF MAIZE
(ZEA MAYS L.)**

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Annotation: Due to the fact that some of the raw materials for medicines and vaccines necessary for human health are somewhat scarce and expensive, the need for plants such as corn on an industrial scale is increasing. Therefore, in this article, we focused on the biological description of corn and its benefits and unique properties.

Keywords: Zea mays L., hypokalemia, HbsAg, Nicotine, Vitamins.

Introduction: Maize (*Zea mays* L.) is an annual herbaceous plant, grain and fodder crop belonging to the corn family. Maize is one of the oldest non-wild crops on the planet. It is native to Central and South America. It was first cultivated in Mexico by the ancient Mayan and Aztec tribes before 5200 BC. It was brought to Europe at the end of the 15th century. The areas where corn is grown are up to 40° north latitude. In world agriculture, the area planted with corn is 139.2 million hectares, the yield (in terms of grain) is 43.13 s/ha, the total yield is 600.4 million hectares. , Brazil (11.6 million ha, yield 27.6 s/ha), Mexico (7.2 million ha; yield 25.3 s/ha), China (25.8 million ha; yield 48.8 s/ha), is also

planted on large areas in South and South-East Europe, South-East Asia, South and East Africa (1999). This crop has been cultivated in Uzbekistan since ancient times (productivity of 42 thousand 31.6 s/ha; gross yield 131.4 t; 2000). The stem is erect, up to 5–6 m, jointed, hollow. The root is scaly, it penetrates the ground up to 1-1.5 m. Thick buttress roots grow from the lowest joint of the stem, which keep the plant from going dormant, and a mound of soft soil provides them with moisture and nutrients during harvest. [1,4]

More than 200 varieties are grown in the United States alone, where corn is a popular tradition among many families. In Latin America, the husk is used to make tamales, and ground corn is used as a base for many traditional recipes, including tortillas. Since corn is naturally gluten-free, it is a good choice to use instead of wheat. It's also packed with essential vitamins, minerals, and antioxidants that support your health in a variety of ways. Corn is an excellent source of potassium, an important nutrient that many Americans don't get enough of. Potassium helps regulate the circulatory system, ensuring adequate blood flow and a strong heartbeat. Low potassium levels can lead to a potentially serious condition called hypokalemia. Lutein, a carotenoid similar to vitamin A found in most fruits and vegetables, is known to reduce the risk of cataracts and other eye diseases. Corn is rich in nutrients that are essential for maintaining a healthy lifestyle. Fiber is the main part of plant-based foods that your body cannot digest. Although it is indigestible, the fiber in corn provides many other benefits such as regulating bowel movements, controlling blood sugar levels, and more. In addition, corn contains the antioxidant quercetin. Researchers have found strong evidence that quercetin plays an important role in the treatment of prostatitis, an inflammation of the prostate that affects many men. In addition, research has been conducted on the potential of corn as a vaccine against hepatitis B, and thus the results A team of researchers led by Hania El-Itrubi, director of the Agricultural Genetic Engineering Research Institute in Cairo, has developed

GM corn plants that produce a protein known as HBSAG that can be used as a vaccine to induce immunity against the hepatitis B virus. Scientists are now trying to increase the amount of protein that plants produce. They have yet to test the efficacy of the edible vaccine in animals or humans, but expect trials to begin early next year.[3,4]

Boiled corn is a source of potassium, which is an important nutrient that many people lack. But it is essential to ensure the functioning of the circulatory system, blood flow and heart rate. If the potassium content is not replenished, hypokalemia can occur, which is a life-threatening condition. The quartet contained in corn protects the human body from Alzheimer's disease and dementia. Quartetine has been shown to affect neuronal cells and potentially reduce cases of neuroinflammation, dementia. Corn contains vitamin B6, which is essential for maintaining healthy pyridoxine levels. Lack of this substance can lead to anemia and increase the risk of heart disease as well as depression. [3,5]

Although corn is good for humans, it also has its drawbacks. For example, it contains a large amount of carbohydrates. It also has starch, which can increase blood sugar levels in people with diabetes. It is important to consume corn in moderation and as part of the diet.

Summing up from the above, we can say that based on the many useful properties of corn, it is possible to obtain food, medicine and vaccines on an industrial scale. Research in this direction is waiting for its owner. [5]

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