

THE ROLE OF BROCCOLE CABBAGE IN FOOD SECURITY.

S.T.Sanaev – Doctor on agricultural science

S.Q.Qahhorov – PhD Samarkand agroinnovations and research university

X.Z.Sayfidinov – PhD Samarkand agroinnovations and research university

Annotation. The article focuses on the role of broccoli cabbage in food safety, given its importance, biochemical composition and beneficial properties.

Keywords: Broccoli cabbage, cauliflower, main ingredients, protein, vitamin K, beneficial properties, food safety.

The unripe flower buds of broccoli cabbage are also called crowns. Broccoli cabbage can be light green and purple, preferably green. It resembles cauliflower in terms of morphological features of cauliflower and flowers. The size of immature main flower buds (cabbage) varies depending on the sowing period and varietal characteristics of seedlings and seeds. The size of the crowns is reduced when planted late and planted close to each other plants. The main tubers are 5-25 cm in diameter and weigh 100-750 g, while the buds are 5-10 cm in diameter and weigh 10-100 g. Broccoli cabbage grows well at a temperature of 16-18°C and forms a quality cabbage. At high temperatures (+20 ° C) the cauliflower forms very quickly and the cauliflower

disintegrates as quickly as in Figure 1. When the temperature rises to + 35–40 °, the plant does not wrap the cabbage.

Biochemical composition: Broccoli cabbage is characterized by faster digestion than other cabbages. Main ingredients: it is rich in easily digestible protein (3.2-4.5%) and is superior to potatoes, sweet corn and spinach in quality. Its protein content contains an antisclerotic substance and methionine (4 mg

/ 100 g), which prevents the increase of cholesterol in the body. The unique amino acids in the protein are stronger than lysine and isoleucine in beef, and the amount of tryptophan is stronger than the protein in eggs. Broccoli cabbage is high in



carbohydrates and its stems are rich in sugar. The total sugar content of the plant is 1.5-3.8%, its total content is 5-10% sucrose, 0.4-0.5% starch, 0.7-1.2% fiber. Broccoli cabbage also contains a lot of minerals, namely 100 g of dry weight contains 490 mg of potassium, 105 mg of calcium and 82 mg of phosphorus, which indicates its richness in minerals. 100 g of broccoli flowers contain sodium salts - 13.1, magnesium - 31.0, iodine - 12.0, iron - 1.3 mg. Broccoli cabbage is high in carotene (1.9-4.0 mg / 100 g), which is not found in cauliflower, but less than the amount of carotene in carrots. It also contains many different vitamins: V1 - 0.09; V2 - 0.21; S - 61-160; PP - 1; V6 - 0.25 mg (per 100 g of cabbage) is available. In broccoli flower stalks are 1.5-3 times more vitamin C, 1.3-2.7 times more dry matter and 4.0 times more flavonoids than cauliflower. Broccoli contains almost 2 times more mineral salts than cauliflower.

Useful features: The balance of vitamins, pectin and soft fiber, choline and methionine, as well as mineral salts and other biologically active substances in broccoli indicates that it is a very important dietary product for people of all ages. Its product can be used effectively in the treatment of radiation sickness. Broccoli is very useful for young children, pregnant women and the elderly prone to atherosclerosis. Its use in restoring healthy hair fibres, formation of skin and bone tissue gives good results.

Healing and application in medicine: The scope of application of broccoli in medicine is very wide: duodenal and peptic ulcer disease, flatulence, dysbiosis and digestive disorders, liver disease, inflammation of the biliary tract, type 2 diabetes, cardiovascular disease by eliminating cholesterol compounds, sunstroke, cuts and skin diseases, insomnia, is effective in the treatment of eye diseases. Furthermore, regular consumption of broccoli reduces the risk of cancer.

Role in food security: When cooking broccoli in steam and microwave oven, it is advisable to try to retain the maximum amount of nutrients in it. Chinese scientists also conducted a special experiment in which they used five different methods to study whether broccoli retains beneficial compounds in the cooking process. The methods used are as follows: cooking in the microwave, boiling, roasting, roasting after boiling, steaming. Significant loss of vitamin C, dissolved protein and sugars and chlorophyll was found in all processes except steam treatment, in addition, changes in existing glucosinolates were observed. It should be noted that given the complexity of the preparation process, it is difficult to choose a single method. For example, glucosinates are well preserved until the 1st minute of the evaporation process, starting to disappear from the 2nd minute. The general antioxidant properties are maintained in high amounts for 5-10 minutes. In some cases, it is advisable to use a microwave oven. Frying is the most inappropriate method in the cooking process, as it is not possible to preserve all the nutrients. At this point, nutritionists are faced with the task of studying on that. However, broccoli can also be eaten fresh, but cooking and frying (or mixing both methods) remains a common method. You can also add shrimp, tomatoes, cheese,

mushrooms and eggs in the preparation of quick-cooking dishes of broccoli. This type of cabbage can be used in soups, stews, traditional dishes with vegetables, cheese, sausages. Broccoli is best eaten with meat, potatoes and pasta dishes.

Conclusion: The article discusses the importance and main features of broccoli cabbage using modern literature and their biochemical composition, the role of broccoli in food safety, as well as the use of broccoli in medicine.

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