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CABBAGE BROCCOLI DAMAGE CAUSED BY DISEASES DURING ITS STORAGE DEPENDING ON PROCESSING WITH THE PREPARATION OF ASKORUTIN

For the prolongation of a storage period of fresh fruit and vegetable products, antioxidants are applied, in particular vitamins C and P. Vitamin C is a strong regenerator functioning as an antioxidant. Vitamin P (rutin) along with the ascorbic acid takes part in oxidizing and regenerative processes, has antioxidant qualities, in particular, it averts oxidizing of ascorbic acid. Vitamins C and P are interconnected in the exchange of substances and intensify each other's action.

The aim of our research is to determine the influence of ascorbic acid and rutin on damage of cabbage broccoli heads caused by diseases during its storage. For this purpose we applied aquatic solution of askorutin. Askorutin is a combined preparation, containing water-soluble vitamins C and P (concentration of ascorbic acid and rutin – 50 mg). It is produced in pills, covered with the coat.

Research methods. The research was conducted in 2011–2013 at the Horticulture and Storage Department of KNAU named after V.V. Dokuchaev. Subject of the research is cabbage broccoli heads of Ironman F₁ (control), Agassi F₁, Beaumont F₁ hybrids. Cabbage was stored with the temperature 0 ± 1 °C and relative air humidity 90 – 95%. Before storage heads were processed with aquatic solution of askorutin (concentration of vitamins C and P – 0,5%, dried and packed in boxes, covered with the film of 40 mcm. The film was covered in the form of an envelope. Control is unprocessed cabbage.

Results of the research. During the storage of unprocessed products, the first signs of damage caused by diseases were observed on the 15 – 30 days and ranged within 4,9 – 16,2% depending on the hybrid and weather conditions of vegetation period. The heads which were processed with askorutin, remained undamaged to 30 – 40 days. Later on first signs of damage were fixed for 5,6 – 12,8% of products. Phytopathogenic organisms were developing more intensively on the heads of Agassi F₁ hybrid, while diseases on the hybrids of Ironman F₁ and Beaumont F₁ developed less intensively.

Conclusions. The results of the research showed that damage of cabbage broccoli heads caused by diseases depends on peculiarities of a hybrid and growing weather conditions. Processing with Askorutin allows keeping broccoli heads undamaged within 30 – 40 days and also reduces the intensity of disease development during further storage.

Key words: cabbage broccoli, askorutin, storage.