THE EFFECT OF STORAGE CONDITIONS ON THE MICROBIOT AND MYCOBIOT OF THE TOMATO FRUIT PHYLLOSHPHERE

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The plant organisms’ phyllosphere is characterized. The microorganisms’ existence conditions, microbial composition and ecological form of micro-communities existence in the phyllosphere are analyzed. It is identified that relatively low content of the nutrients such as carbohydrates, organic acids and amino acids, sugars is on the surfaces of plant organs. Their content depends not only on the type of plant, its age and physiological state, size, the presence of micro-injuries on the surface. The content of carbon-containing nutrients is the basic condition for the plant tissues surface colonization by microorganisms. The study of the microbiota and mycobiota number of the tomato fruits phyllosphere of the botanical varieties Karas, Viscount Malinovoe, Chaika, Iryshka was carried out during the whole shelf life. The obtained results over the whole period of the experiment reflect the general tendency to colony forming units increasing under shelf life increasing for both bacteria and fungi. The minimum 14 days shelf life is set for the tomato fruits of the botanical variety Irishka, which belongs to the Cherry variety. It is explained by the rapid growth and spread in small areas, which leads to rapid spoilage of the product and longer colonization of vegetables with larger area surface. The predominance of non-spore gram-positive bacillus over gram-negative and gram-positive cocci is found under studying the composition of the tomato fruits phyllosphere microbiota.

Keywords: tomatoes, storage, phyllosphere, microbiota, mycobiota, phytopathogens, bacteria, fungi.