



The Influence of Exometabolites of Fungus *Botrytis Cinerea* on the Growth of Chinese Cabbage's Callus Tissue (*Brassica Pekinensis*)

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Currently vegetable crop loss from fungal, bacterial and viral diseases during storage and cultivation is a large proportion, sometimes even 100%. Substantial damage to the culture of Chinese cabbage causes gray rot.

The objects of the study were the seeds of Chinese cabbage three genotypes, which are not resistant to botrytis: grade Khibinskaya, grade Ljubasha and hybrid Nika F1. Callus tissue obtained from different segments isolated from 7-day-old sterile seedlings. Pure culture of *Botrytis cinerea* was represented by three isolates: JC/F, HP/F, KM/Hrf. Callus tissue were cultured in a nutrient medium containing the pathogen exometabolites, which concentration was at 5, 10, 15, 20 %. Toxicity of culture filtrate was evaluated in terms of the growth of callus tissue. For this purpose callus tissue was weighed at the beginning and then at the end of the passage.

We found in this study that the presence of the fungus *Botrytis cinerea* isolates JC/F, HP/F, KM/Hrf in low concentration (5 %) in a nutrient medium does not lead to a substantial reduction in the growth of the callus tissue of all three genotypes studied. In this case, the growth of the callus tissue is decreased by 15-20 % compared with control. Consequently, this concentration of culture filtrate does not create the toxic effect on the growth of callus cells. When the concentration of the fungus' culture filtrate in the culture medium is increased, the growth of the callus tissue is reduced by an average of 23 - 49 % compared with the control depended on the genotype. Maximum reduction in growth of callus tissue noted for hybrid Nika F1, for which the index was reduced 60 % (at 20% culture filtrate) in compare with the control. It was also shown that the most non-aggressive isolate is JC/f, and the most aggressive - isolate KM/Hrf.

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