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Impact of corona discharges on germination and infection of winter wheat seeds

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The effects of positive and negative corona discharge on seeds of soft winter wheat infected with common smut, Alternariosis and Helminthosporiasis were studied, with a discharge exposure time of 20 minutes to 120 minutes. It was shown that the treatment of winter wheat seeds with a positive crown had a stronger disinfecting effect compared to a negative crown. With the identified suppression of alternariosis and helminthosporiasis by plasma, there is no need to use chemical seed disinfectants. At the same time, when treated with a positive corona discharge, the germination of seeds after treatment deteriorated by 5–7 %. It was also found that with an increase in the time of processing the grain with a corona discharge, the contamination of the grains decreases.

Keywords: corona discharge, seeds, infestation, germination, disinfection, fungal diseases.

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