RESEARCH ON THE INFLUENCE OF TEMPERATURE, LIGHT AND CULTURE MEDIA ON GROWTH AND DEVELOPMENT OF *Pyrenophora teres* FUNGUS (IN VITRO)

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Abstract

Pyrenophora teres is the causal agent of net blotch fungus disease on barley, one of the most common, destructive foliar diseases in barley pathology. Abiotic factors play an important role for fungal development. Under laboratory conditions it was monitored the abiotic factors influence (temperature, light and culture media) on the *Pyrenophora teres* fungi growth and sporulation. The pathogen have been isolated from barley leaves of Dana variety and incubated at 22°C. Actual research monitored the biological thresholds on the growth and sporulation of *Pyrenophora teres* fungus. Regarding the temperature influence on the colonies development, the observations revealed that the pathogen growth begins at 6°C. The optimal pathogen development threshold is between 20 to 26°C temperatures, the fungus developing colonies measuring 90 mm after 9 days observations. Over 28°C temperature, the growth rate of the fungal colonies decreased, and at 34°C the fungus ceased sporulation. The light influence on the *Pyrenophora teres* fungi development showed that the colonies have been well developing under continuous light conditions, as well under 16/8 alternating light conditions, the colonies` diameter measuring 85 mm after 9 days observations. Under the continuous lack of light conditions (dark), the colony developed slowly, reaching a diameter of 65 mm after 15 days incubation. Under continuous light conditions, *Pyrenophora teres* had the fastest development rate, after 3 days of incubation the colony diameter reached 41 mm and respectively 87 mm, after 9 days of observations. *Pyrenophora teres* fungus had the optimal growth & development on the natural type culture media compared with artificial ones.

Key words: barley, fungus, abiotic factors