

Promotion of Pine Seedling Resistance to Phoma Blight Due to Fertilizer Applications

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Planting stock stem blight is a new wide spread disease in Byelorussian forest nurseries. Soil micromycetes of *Phoma* spp. Sacc genus able to evolve in various origin organic and nonorganic substrates are this disease agents.

Development of planting stock prevention and protection issues including promotion of seedling resistance to this disease is specially important due to poor wood plant stem blight study and lack of protection operation package.

The paper presents field trial data on additional fertilizer spray applications of 1 % solutions of carbamide, ammonium nitrate and integrated nitric, phosphorous, potassic fertilizer as well as absolute fungicide in forest nursery seeding section against Scotch pine stem blight.

Studies found that by vegetation end disease occurrence in sections with double fertilizer spray applications was under 6% that is roughly twice lower compared to controls. These findings are compatible to absolute fungicide applications respectively 3,2 u 2,1 %. The most visible positive impact (71,6 % biological efficiency) was found in double carbamide spray applications.

It was found that high nitrogen fertilizer applications result in not only plant surface part biometric indicator improvement but sufficiently cut stem blight occurrence (3,5 times) and its evolution (2,5 times) at double applications.

It was found that nitrogen fertilizer application efficiency for prevention at early disease and outbreak development stages is close to systematic fungicide applications. Special attention should be paid to coniferous seedling spray applications with mineral fertilizers in particular with high ammonium and nitrate nitrogen such as carbamides and ammonium nitrate in planting stock prevention and protection against stem blight.