


Reduction of in vitro plant growth as an effect of pathogenic bacteria interaction

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Micropropagation is one of the in vitro reproduction technique allowing to obtain a large amount of plant material in a relatively short time. Potato in vitro plantlets are particularly susceptible to bacterial infection because of their specific morphology, size and growth in artificial conditions. Therefore, it is important to provide sterile conditions during the process and to prevent infection during the mass production process. The most undesirable microorganisms in this case are quarantine bacterium, like [*Clavibacter michiganensis*] ssp. [sepedonicus] (Cms) which excludes the possibility of maintaining and producing the infected material, leads to its complete liquidation. In the present study, it was found that individual susceptibility to infections depends of potato varieties. The effects of Cms concentration in inoculum on the symptom level on in vitro tested plants were also estimated. Potato cultivars were evaluated for susceptibility to Cms infection by macroscopic analysis. The presence of Cms bacteria in the examined plants was also evaluated by molecular analysis.

As a result of the study, potato cultivars that are particularly susceptible to bacterial infection have been identified. On the other side the effect of infection was very small in tolerant varieties, even with very high concentrations of bacteria in the medium.