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«Potato phytopathogene bank and *in vitro* seed farming: illumination, medium»

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Problem statement

• Potato seed farming development statement
• Light spectrum influence on growth and development of potato single node cuttings *in vitro* investigation
• Screening of potato tubers and plant cuttings, had been collected across Krasnoyarsk Territory, for phytopathogenes presence
• Microtuberization efficiency increasing
• Development of phytopatogen collection for varieties tolerance tests
Solution methods

- Apical meristems were used as explants for microplants creation and cultivated on Murashige-Skoog medium with adding. Microplants were exposed to three light treatments: red LEDs, blue LEDs and white luminescent lamps.

- Regionized cultivars were involved into the study.

Influence of different light wavelength on root formation in single-node cuttings culture (mean±SE)
Conclusions

Results, implementation

- Red light is not suitable for potato single node cuttings cultivation *in vitro* under light intensity of 45 µmol photons/m²s.
- The maximum of nodes per plant developed under blue and white light.
- The influence of genotype on node quantity was detected.
- Microtuberization was obtained on the node cultivation medium.
- *Alternaria* and *Fusarium* genera dominated among detected micromycetes.
- Isolates of *Botrytis*, *Aspergillus*, *Penicillium*, *Trichothesium* genera were recovered.
Contacts

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