Czech Academy of Agricultural Sciences

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Geostatistical simulation of bark beetle infestation for forest protection purposes

Hlásny T., Vizi L., Turčáni M., Koreň M., Kulla L., Sitková Z.:

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[fulltext]

Geostatistical analysis of bark beetle activity and its use for the improvement of pest control measures are presented. Data on the volume of salvage timber felling due to bark beetle infestation for the period 2002–2004 were used for the analysis. Research was carried out in the northwestern part of Slovakia. The techniques used were variogram modelling, Turning Bands Simulation and selected techniques of simulation post-processing. The maps indicating the probability that a critical volume of timber felling was exceeded in a particular location were produced. The proposed system may be used effectively for the improvement of pest control measures and development of slow the spread strategies. The benefits and shortcomings of this approach in forest protection are discussed.

Keywords:
bark beetle; geostatistics; probability maps; forest protection; Slovakia

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