FUMIGATION OF BARK BEETLE INFESTED WOOD BY EDN

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Ethanedinitrile is one of the few currently available fumigation alternatives to methylbromide. EDN® is known as an enormously broad-spectrum fumigation product showing good potential to disinfest wood as well as to sterilize soil and control insects, diseases, nematodes, weeds and other parasites, before planting. Wood fumigation with EDN has recently been proposed as a promising new method for the treatment of wood infested by bark beetle. For the first time in history, the infested spruce logs (with bark) were treated with EDN covered by tarpaulin directly in the forest in the Czech Republic in 2017-2018. In this validation study, 100% inhibition of the development and hatching of three species of the bark beetle (*Ips typographus, Pityogenes chalcographus* and *Dryocoetes autographus*) and the longhorn beetle (*Tetropium fuscum*) were recorded. The EDN fumigation product proved to be highly effective: even when 2 746 adult bark beetles emerged per 1 meter of the control-untreated spruce wood through new exit holes in the bark, no single adult finished development and merged from spruce logs treated by EDN. Based on the data obtained so far, EDN fumigation product seems to be a promising alternative for reducing the adverse effects of bark beetle forest calamities.