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agric@tubitak.gov.tr

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The Effect of Log Seasonality on the Reproductive Potential of Monochamus galloprovincialis Olivier (Coleoptera: Cerambycidae) Reared in Black Pine Logs under Laboratory Conditions

Süleyman AKBULUT, Akif KETEN, İsmail BAYSAL, Beşir YÜKSEL
Düzce University, Faculty of Forestry, Forest Entomology and Protection Unit, Konuralp Campus, 81620 Düzce - TURKEY

Abstract: Monochamus galloprovincialis (Olivier) is the vector of the pinewood nematode, Bursaphelenchus xylophilus (Steiner and Buhrer) Nickle, in Europe and Asia. Reproduction is probably the most important event in the life history of insects and may be affected by a number of factors, such as seasonal changes in larval or adult nutrition. In this study the effect of season on the reproductive potential of M. galloprovincialis females reared in black pine logs was investigated by constructing fertility tables for each of 43 pine logs that differed only in the season that they were cut. Population parameters were compared among 3 seasonal cohorts. The intrinsic rate of increase and related population parameters of the beetles that emerged from autumn logs were mostly higher than for beetles that emerged from spring and summer logs. These results suggest that seasonal differences in the nutritional quality of the logs (for immature development) and pine twigs (for adult feeding) may have caused the observed differences in M. galloprovincialis survival and reproduction.

Key Words: Pinus nigra, fertility tables, intrinsic rate of increase, pine wilt disease, season

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