World Academy of Science, Engineering and Technology
International Journal of Agricultural and Biosystems Engineering
Vol:16, No:08, 2022

Evaluation of Pheromone and Tree Trap Efficiency in Orthotomicus erosus (Col: Curculionidae: Scolytinae) Monitoring in Pine Forests of Iran

Authors : Sudabe Amini, Jamasb Nozari, Somaye Rahimi

Abstract : Bark beetles are one of the most destructive groups of pests in the forest and green space. Mediterranean pine Engraver Orthotomicus erosus (Wollston) is the dominant species in the pine forests of Iran. Pine forests are considered a crucial region in the world and need high protection. Although there is no effective control method, mass trapping is the most common method to suppress the bark beetle population. Due to this, from 2018-to 2020, a survey was conducted on bark beetles mass trapping by using two kinds of traps, including pheromone and tree trap. These traps were evaluated in 10 different sites of pine forests. The statistical results proved that significant differences between the pheromone trap and tree trap were observed. It confirmed that the pheromone trap attracted more beetles than the tree trap. The results of this study suggest that the most effective and applicable method in bark beetle's management of pines forest is using a pheromone trap that suppresses and maintains bark beetle's population at an economic level, although tree traps attract bark beetles too. In the future, using tree-pheromone traps, which would synergist attraction of more bark beetles, is recommended.

Keywords : bark beetle, pines forest, Orthotomicus erosus, pheromone trap, tree trap
Conference Title : ICFEFI 2022 : International Conference on Forest Entomology and Forest Insects
Conference Location : Venice, Italy
Conference Dates : August 16-17, 2022