

Effect of kaolin WP on Rosaceous branch borer, *Ospherantheria coerulescens* (Col.: Cerambycidae) in Kashmar region

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The rosaceous branch borer, *Ospherantheria coerulescens* Redtenbacher (Col.: Cerambycidae), is an important pest of rosaceous trees. This beetle attacks all stone and pome fruit trees belonging to the family Rosaceae. Adult beetles are active from late May to mid-June. Female insects prefer spring twigs for egg laying. Adult beetles lay a single egg into the upper part of twigs. One of the non-chemical methods is the usage of inorganic compounds of oviposition deterrence and feeding inhibitory. Kaolin is a mineral and non-toxic compound to mammals and is suitable and safe for integrated pest management programs. In the present study, the application of kaolin particle film (Sepidan[®] WP, 5%) and kaolin Mixed with sulfur (WP, 5%), with once and twice spraying, were tested in the gardens of Kashmar region on prunus trees. Experiment was conducted in a randomized complete block design with 5 treatments and 4 replicates, in 2015. The different treatments, immediately, were sprayed over the whole canopy and fruits three, before the beetles laying, two times at 2 week intervals from May to June. The Oviposition deterrence was calculated by collecting Eggs on trees branches during the season (until 35 days after the first spraying). Based on the field studies, kaolin (5%) and kaolin + sulfur (5%) application reduced deterred oviposition of rosaceous branch borer on prunus branches. The percentage of oviposition deterrence were 88.2, 85.2, 84.8 and 84.6% for twice spraying of kaolin + sulfur, twice spraying of kaolin, once spraying of kaolin and once spraying of kaolin + sulfur treatments, respectively. Also, The least oviposition was observed in twice spraying of kaolin + sulfur (4.75 eggs/tree and 0.13 eggs/branch), twice spraying of kaolin (6 eggs/tree and 0.16 eggs/branch), once spraying of kaolin (6.13 eggs/tree and 0.13 eggs/branch), once spraying of kaolin + sulfur (6.24 eggs/tree and 0.14 eggs/branch) and control treatments (45 eggs/tree and 1.16 eggs/branch). Therefore, kaolin (Sepidan[®] WP) and kaolin + sulfur spray over the whole canopy of trees, with 5% concentration, could be used successfully to reduce beetles oviposition and rosaceous branch borer damage.

Keywords: Control, kaolin, *Ospherantheria coerulescens*, oviposition deterrence, sulfur