

## Status and Management of Grape Stem Borer, *Celosterna scabrator* with Soil Application of Chlorantraniliprole 0.4 gr

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**Abstract :** Grape stem borer, *Celosterna scabrator* is an important production constraint in grapes in India. Hitherto this pest was a severe menace only on the aged and unmanaged fields but during the recent past it has also started damaging the newly established fields. In India, since Karnataka, Andhra Pradesh, Tamil Nadu and Maharashtra are the major grape production states, the incidence of stem borer is also restricted and severe in these states. The grubs of the beetle bore in to the main stem and even the branches, which affect the translocation of nutrients to the areal parts of the plant. Since, the grubs bore inside the stem, the chewed material along with its excreta is discharged outside the holes and the frass is found on the ground just below the bored holes. The portion of vines above the damaged part has a sticky appearance. The leaves become pale yellow which looks like a deficiency of micronutrients. The leaves ultimately dry and drop down. The status of the incidence of the grape stem borer in different grape growing districts of Northern Karnataka was carried out during three years. In each taluka five locations were surveyed for the incidence of grape stem borer. Further, the experiment on management of stem borer was carried out in the grape gardens of Vijayapur districts under farmers field during three years. Stem borer infested plants that show live holes were selected per treatments and it was replicated three times. Live and dead holes observed during pre-treatment were closely monitored and only plants with live holes were selected and tagged. Different doses of chlorantraniliprole 0.4% GR were incorporated into the soil around the vine basins near root zone surrounded to trunk region by removing soils up to 5-10 cm with a peripheral distance of 1 to 1.5 feet from the main trunk where feeder roots are present. Irrigation was followed after application of insecticide for proper incorporation of the test chemical. The results indicated that there was severe to moderate incidence of the stem borer in all the grape growing districts of northern Karnataka. Maximum incidence was recorded in Belagavi (11 holes per vine) and minimum was in Gadag district (8.5 holes per vine). The investigations carried out to study the efficacy of chlorantraniliprole on grape stem borer for successive three years under farmers field indicated that chlorantraniliprole @ 15g/vine applied just near the active root zone of the plant followed by irrigation has successfully managed the pest. The insecticide has translocated to all the parts of the plants and thereby stopped the activity of the pest which has resulted in to better growth of the plant and higher berry yield compared to other treatments under investigation. Thus, chlorantraniliprole 0.4 GR @ 15g/vine can be effective means in managing the stem borer.

**Keywords :** chlorantraniliprole, grape stem borer, *Celosterna scabrator*, management

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