

## Adult emergence success of mass produced predatory insect, *Calosoma Sycophanta* L. Larvae in pine forests in Turkey

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**Abstract:** Larvae of two *Thaumetopoea* (Lepidoptera: Thaumetopoeidae) species (*T. pityocampa* and *T. wilkinsoni*) are very harmful to *Pinus brutia* (Ten.) forests in Turkey. Their urticating hairs cause allergic reactions in human and animals. *Calosoma sycophanta* L. is a good and important predator of *Thaumetopoea* species in Turkey. This predator consumes both the larvae and pupae of these forest pests. Mass production and releasing of *C. sycophanta* have been used against the *Thaumetopoea* species in many countries. More than two hundred thousand *C. sycophanta* are released in each year in Turkey. But we have little information about adult emergence success of *C. sycophanta* larvae in forest conditions. Therefore in this research, we aimed to search effects of development sites that soil depths (10, 20, 30 and 40 centimeters), altitudes (0-250, 251-500, 501-750 and 751-1000 meters) and directions (north and south) on adult emergence success of *C. sycophanta* in field conditions. According to our results the directions and altitudes of the forest area that released the larvae are important factors on adult emergence success rates. The north direction has more adult emergence rates compared to south direction. The emergence success rates of adults were compared for altitudes; at 0-500 meters we were recorded more and statistically significant adults than 501-1000 meters. The depth of development area that released the larvae was not effect on the emergence success rates of the adult beetles.

**Keywords:** Adult emergence success, Forest, Mass production, *Calosoma sycophanta*

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