

- Project Title** : Natural effectiveness, dispersal and possibilities on utilizing of egg parasitoid *Telenomus busseolae* (Gahan) (Hym.: Scelionidae) against the corn stalk borer *Sesamia nonagrioides* Lef. (Lep.: Noctuidae) in maize areas of Aegean Region.
- Start /End Date** : 2010-2013
- Supporting Body** : GDAR
- Leader** : Dr. Bilgin GÜVEN
- Co-researchers** : MSc. Çiğdem SAHİN, Birol MIHÇI
- Summary** : This study was carried out in Aydın, Izmir, Muğla and Manisa provinces during the period 2010-2013. Primarily *Telenomus busseolae* was recorded as an egg parasitoid species of Corn stalk borer *Sesamia nonagrioides*. In the first year of study, egg masses of Corn stalk borer were determined with natural parasitism ratio of %16 totally. The highest parasitism ratio of 36% and 51% was observed in Muğla and Izmir provinces, respectively. In the second year, a total natural parasitism ratio of 5.74% was recorded. The highest parasitism ratio of 92% and 36.83% was recorded in Izmir and Aydın provinces respectively. 25% of all sampling egg masses were found completely parasitized, and the rest of egg masses were partial parasitized. *T. busseolae* was determined in all region.
- With regard to mass production of *T. busseolae* towards biological control against *S. nonagrioides*, artificial diets, fresh maize cut stem pieces and corncobs used as natural diet were tested. For this purpose fresh corncobs were collected from second crop maize fields and stored in a cold storage unit. Also corn was planted in research station greenhouse and the corncobs were stored too. In the time of Corn stalk borer rearing with fresh corncobs, egg parasitoid *T. busseolae* was also reared successfully. Unfortunately fungal agents caused the decay of corncobs so that all the stored corncobs became unusable. Under these conditions corncobs were stored for 3-4 months at most.
- Moreover, for the mass rearing of *T. busseolae* Greater wax moth *Galleria mellonella* eggs were used as an alternative host, but this parasitoid showed no preference to the eggs of this pest. With this study, natural effectiveness and distribution of egg parasitoid *T. busseolae* was determined for the first time on second crop maize areas of the Aegean Region. At the same time, difficulties in mass rearing of Corn stalk borer were revealed. It is concluded that a suitable alternate host should be found for mass rearing of Corn stalk borer.