POTENTIAL OF TRAPS BAITED WITH AGGREGATION ATTRACTANT OF THE SUGAR-BEET WEEVIL

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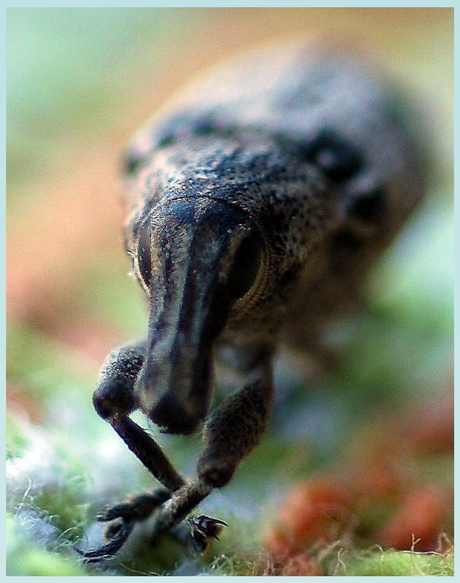

Recently a powerful synthetic attractant has been described for the sugar-beet weevil (Tóth et al., 2002a,b, 2006). It was discovered that the (E/Z)-3,3-dimethylcyclo-hexylidene) acetaldehyde isomeric mixture (grandlure III+IV) was active in attracting individuals of *B. punctiventris* adults. Both males and females were attracted to the traps (Tomašev et al, 2007; Toth et al, 2007)

This study is a part of a broader study on potential of mass trapping. The aim of this paper is to present results on gender issues of the sugar beet weevil population cought in traps baited with aggregation attractant

MATERIAL AND METHODS

The trial was set up in sugar beet filed at locality Bajmok. Pitfal traps baited with sugar beet weevil agregation attractant were used in this study (Picture 1). Sets of 10 and 30 traps per ha were placed in 4 replicates in a zig zag maner. Each replicate covers surface of 1 ha. Within a period of duration of the trial (31. march – 15. april 2004) traps were checked weekly. Each baited trap was followed with unbaited trap. Five soil samples (50 x 50 x 50 cm) from each replicate was checked for number and sex of overwintering beetles.

Picture 1 Pitfal trap baited with sugar beet weevil agregation attractant used in this study.

RESULTS

Results of the present study refers to sugar beet weevil population imigrating from overwintering sites to sugar beet fields. This popualtion is responsible for damages to seedlings. Those female induviduals which survived and sucesfully mated are laying eggs in this field. Therefore sex ration of beetles present in the field and those which are captured in the baited traps were counted. We presume that beetles captured in unbaited traps are representing actual number of males and females.

Results of the study showed that both males and females were captured in traps baited with agregation attractant. In two different test with 10 and 30 traps/ha we obtained data showing similar sex ratio of the beetles caputured in baited and unbaited traps. Percentage of females in population making damages to young sugar beet plants was 23% and 30 %. Percentage of females capured in baited traps was from 26% to 31%. Percentage of females captured in unbated traps was from 32% to 40%. On graf 1 one can see mean values of percentage of females captured in our trial.

Sex ratio in baited and unbaited traps was similar, suggesting that attraction was equally strong for the two sexes, and thus sex ratio of captures in an attractant baited trap would represent the natural sex ratio of the population in the field. Since baited traps are capturing realistic proportion of females their potential use for mass traping is making a sense. By mass traping of such proportion of females we can expect that population can be significantly reduced. Further tests have to prove magnitude of this reduction.

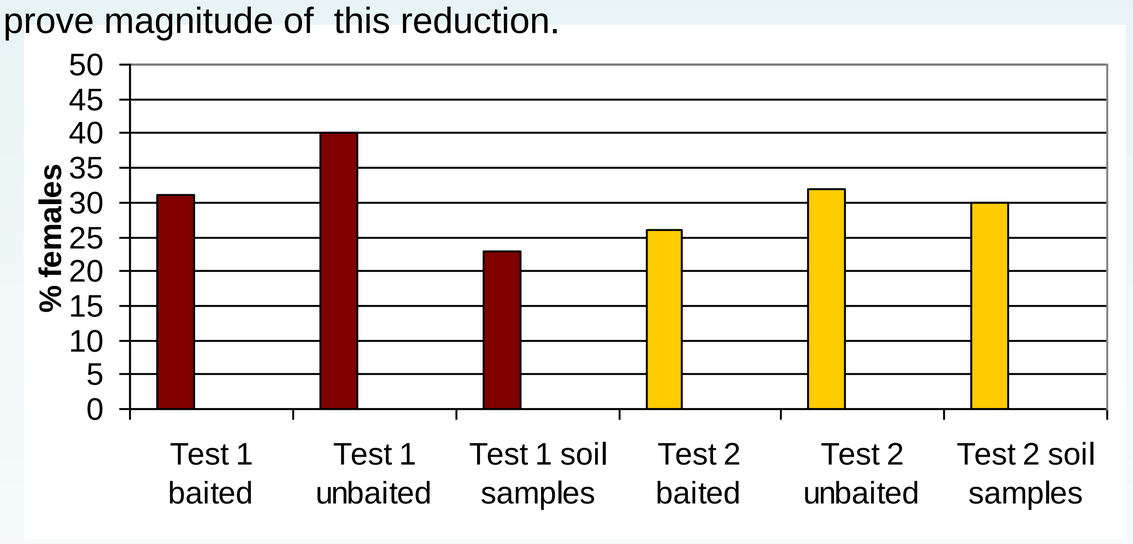

Figure 1 Sex ratio of sugar-beet weevils (*B. punctiventris*) in traps with or without the synthetic attractant and in soil samples in field tests in Serbia, 31. march – 15. april 2004

Picture 2 Pitfal trap with caught sugar beet weevils