OBSERVATIONS ON THYSANOPTERA AND THEIR DAMAGE ON FIELD CHILI PEPPER - PRELIMINARY RESULTS

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INTRODUCTION

Chili pepper is an increasingly more popular plant all over the world as well as in Hungary. The aim of the study was to monitor the arthropod pests and their natural enemies on different varieties under different growing conditions. In this paper we focus on Thysanoptera.

MATERIALS AND METHODS

Study was carried out in 2019 at the experimental field of Szent István University (predecessor of MATE), Institute of Crop Production Science, Department of Horticulture in Gödöllő. Two chili pepper varieties (Yellow Scotch Bonnet, Trinidad Scorpion Butch T) were planted in plots of 12.96 m^2 (3.6x3.6 m). Plots were established in a randomised complete block design with 3 replicates. Three different plant-to-plant distances (30, 40, 60 cm) and two different irrigation frequency (daily, 40 minutes; every second day, 20 minutes) were used. Row spacing was in all cases 60 cm long. Fifty flowers (5 flowers/plant) were collected weekly from each plot and thrips individuals were counted. Thrips damage on all single fruit was investigated after harvest. For statistical analysis ANOVA and General Linear Model were used.

RESULTS AND DISCUSSION

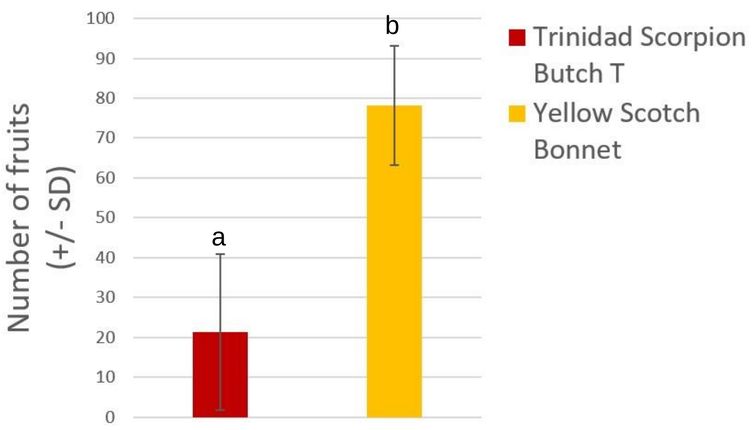
The occurrence of phytophagous and predatory Thysanoptera individuals was higher both in the flowers of variety Trinidad Scorpion Butch T and in the plots of both varieties with less irrigation. More Thysanoptera larvae and adults were found in plots with higher plant distance. Significantly higher thrips damage was observed in the fruits of variety Yellow Scotch Bonnet.

The number of phytophagous thrips showed a higher value in rarely irrigated rows. Consequently more frequent irrigation is recommended. The yellow color of Yellow Scotch Bonnet variety's fruit probably attracted more thrips thus higher thrips damage was observed.

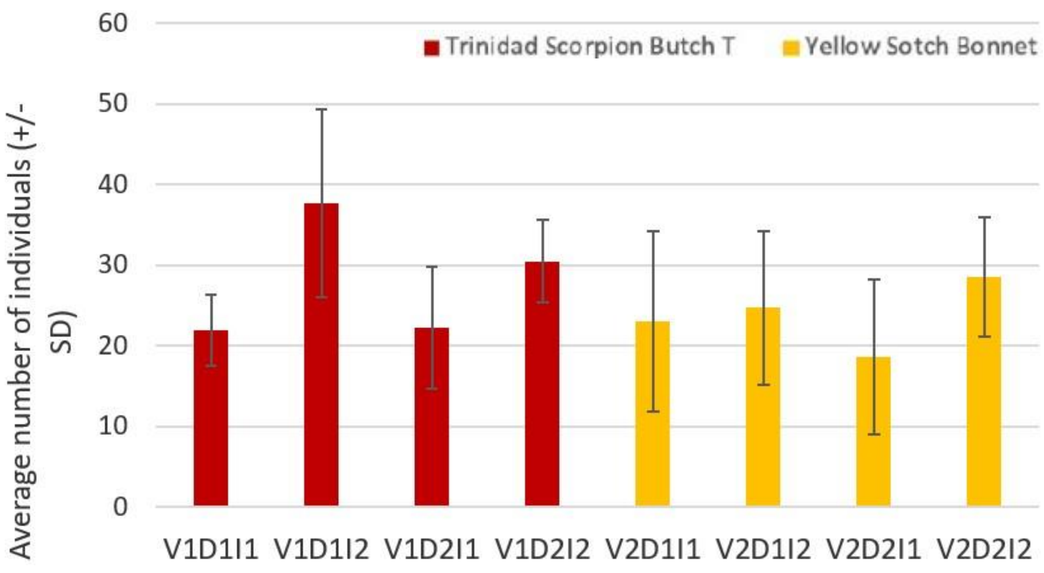
Flower samples

Trinidad Scorpion Butch T (above)
Yellow Scotch Bonnet (below)

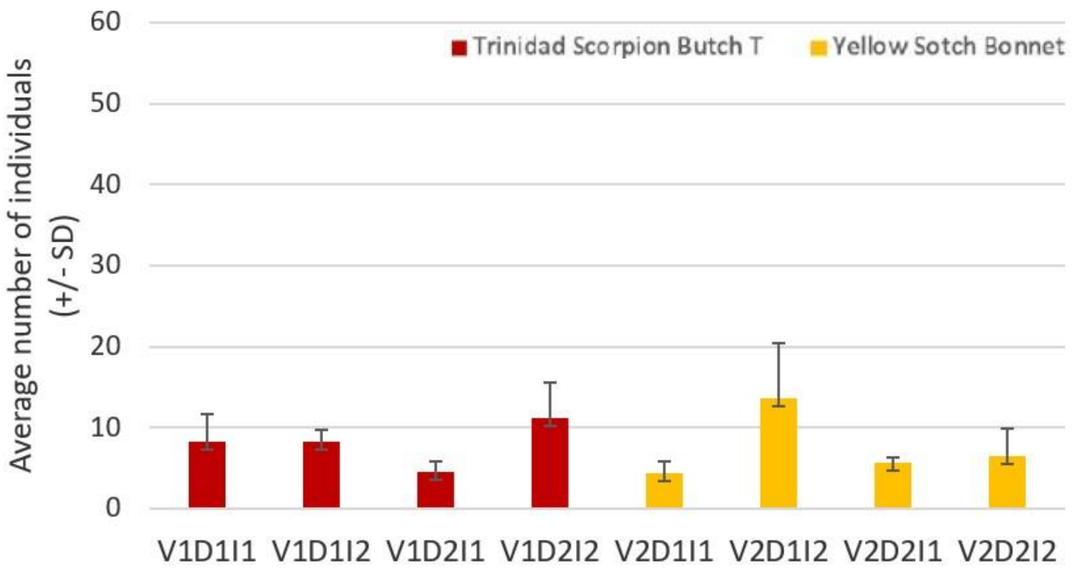
Experimental field



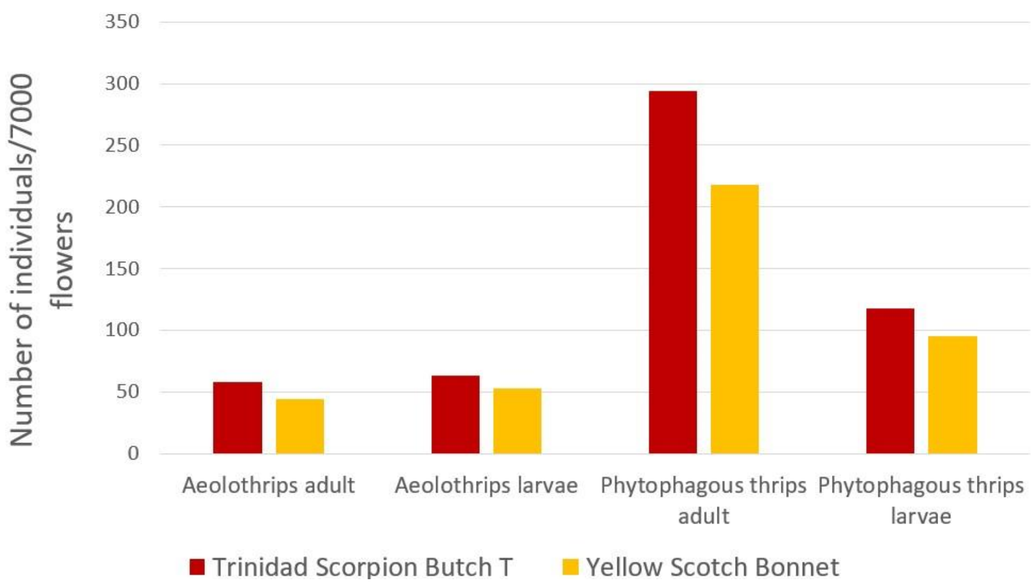
Number of fruits damaged by phytophagous thrips
(Different letters indicates significant differences)



Average number of phytophagous thrips by treatments and varieties



Average number of *Aeolothrips* spp. by treatments and varieties



Total number of Thysanoptera individuals in the flowers

V1: Trinidad Scorpion Butch T
V2: Yellow Scotch Bonnet
V1D1: 60 cm plant to plant distance
V1D2: 40 cm plant to plant distance
V2D1: 40 cm plant to plant distance
V2D2: 30 cm plant to plant distance
I1: Irrigation daily, 40 minutes
I2: Irrigation every second day, 20 minutes

Acknowledgement
The work is supported by the EFOP-3.6.3-VEKOP-16-2017-00008 project. The project is cofinanced by the Europen Union and the Europen Social Fund.
This research was supported by the Ministry for Innovation and Technology within the framework of the Thematic Excellence Programme 2020 – Institutional Excellence Subprogram (TKP2020-IKA-12) for research on plant breeding and plant protection.