ATLAS AGRO
Biocontrol & Pest Management

Use of the sexual-aggregation pheromone to control the Western Flower Thrips *Frankliniella occidentalis* in pepper crop greenhouses in the region of Teboulba in Tunisia

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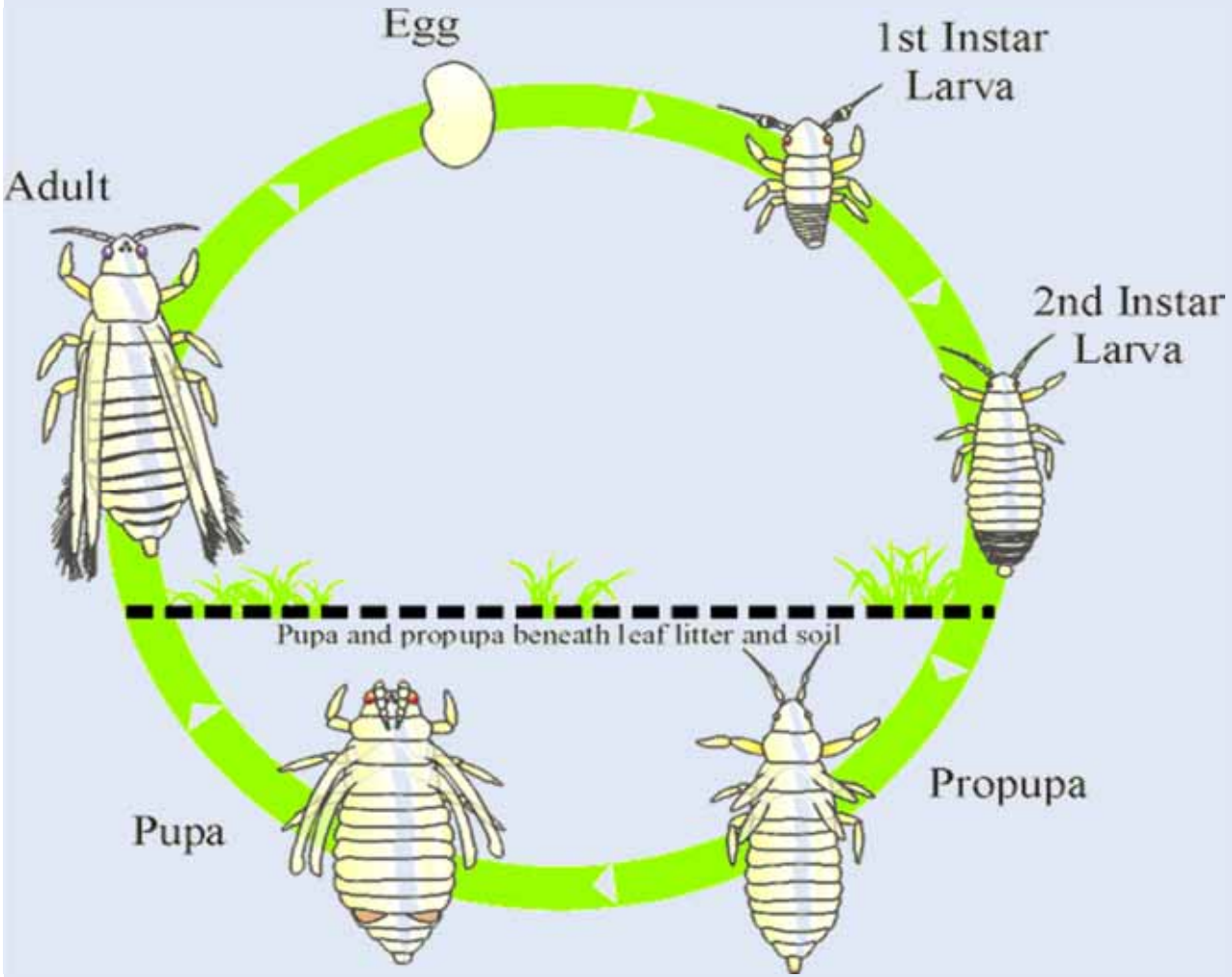
F. occidentalis Biology



The adult ley an egg into the vegetal.

A 1st larval instar emerges and into few days transforms into a 2nd larval instar which in the end of its development fall into the soil for the nymphosis composed by to instars and then an adult emerges from the soil.

F. occidentalis Damages

Direct Damages

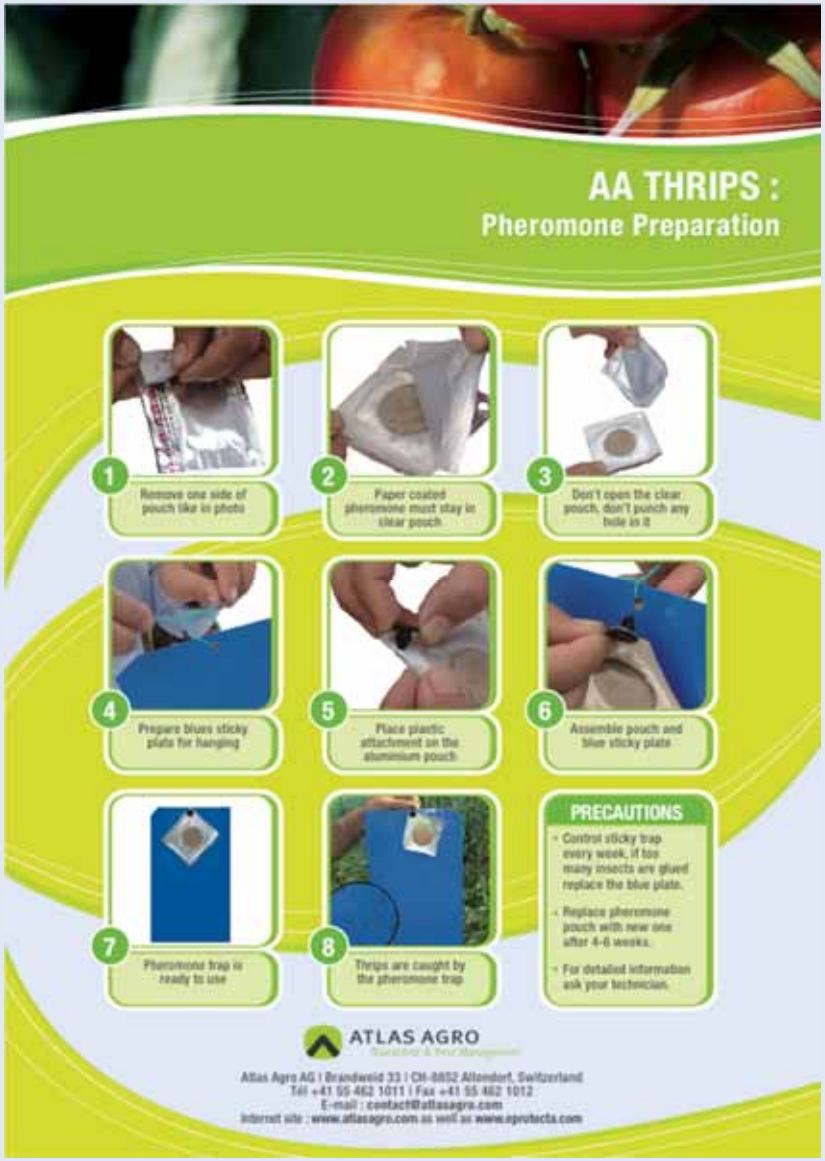
Indirect Damages

Tospoviruses

TSWV

INSV

Aim



The aim of this study was to test the effectiveness of the product AA LURE THRIPS to control WFT in pepper crop greenhouses and their effect on the WFT population development

Geographic localization of the experimental sites

Four pepper crop greenhouses were used and situated in the region of Teboulba (Governorate of Monastir, Tunisia)

- Control greenhouse

- Greenhouse with five traps without AA LURE THRIPS

- Greenhouse with five traps with AA LURE THRIPS

- Greenhouse with ten traps with AA LURE THRIPS

The trapping of adults' started on April 4, 2012 in the greenhouses using blue sticky traps (25 cm long and 10 cm wide). AA LURE THRIPS provided by Atlas Agro AG

Traps were renewed weekly, and the capsules each month.

Flowers sampling from each pepper crop greenhouse

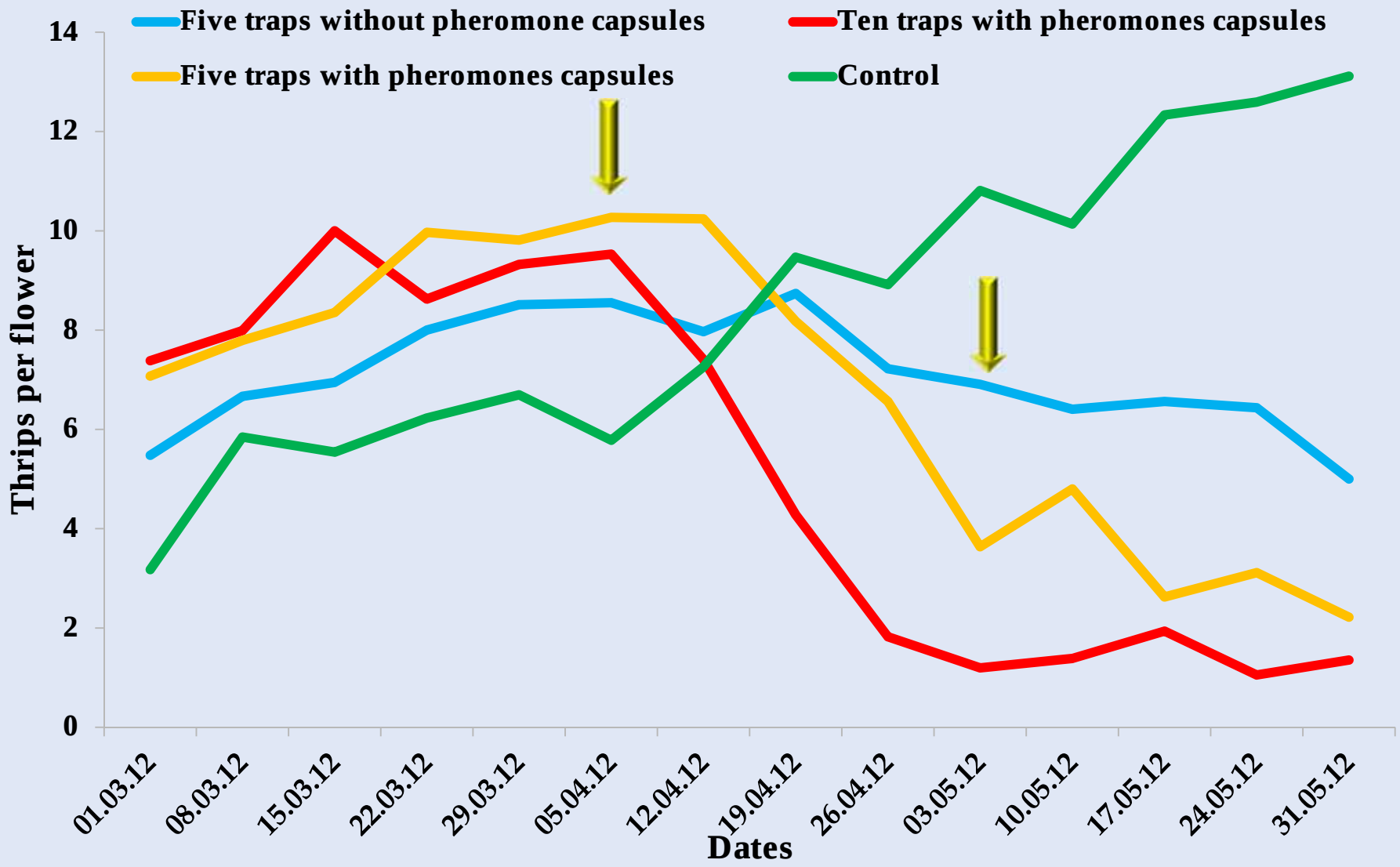
Each greenhouse was divided into four blocks and each block into five experimental units making thus a total number of repetitions of about 20 in each greenhouse.

From each sampling unit, a pepper plant was randomly selected from which three fully opened flowers were collected.

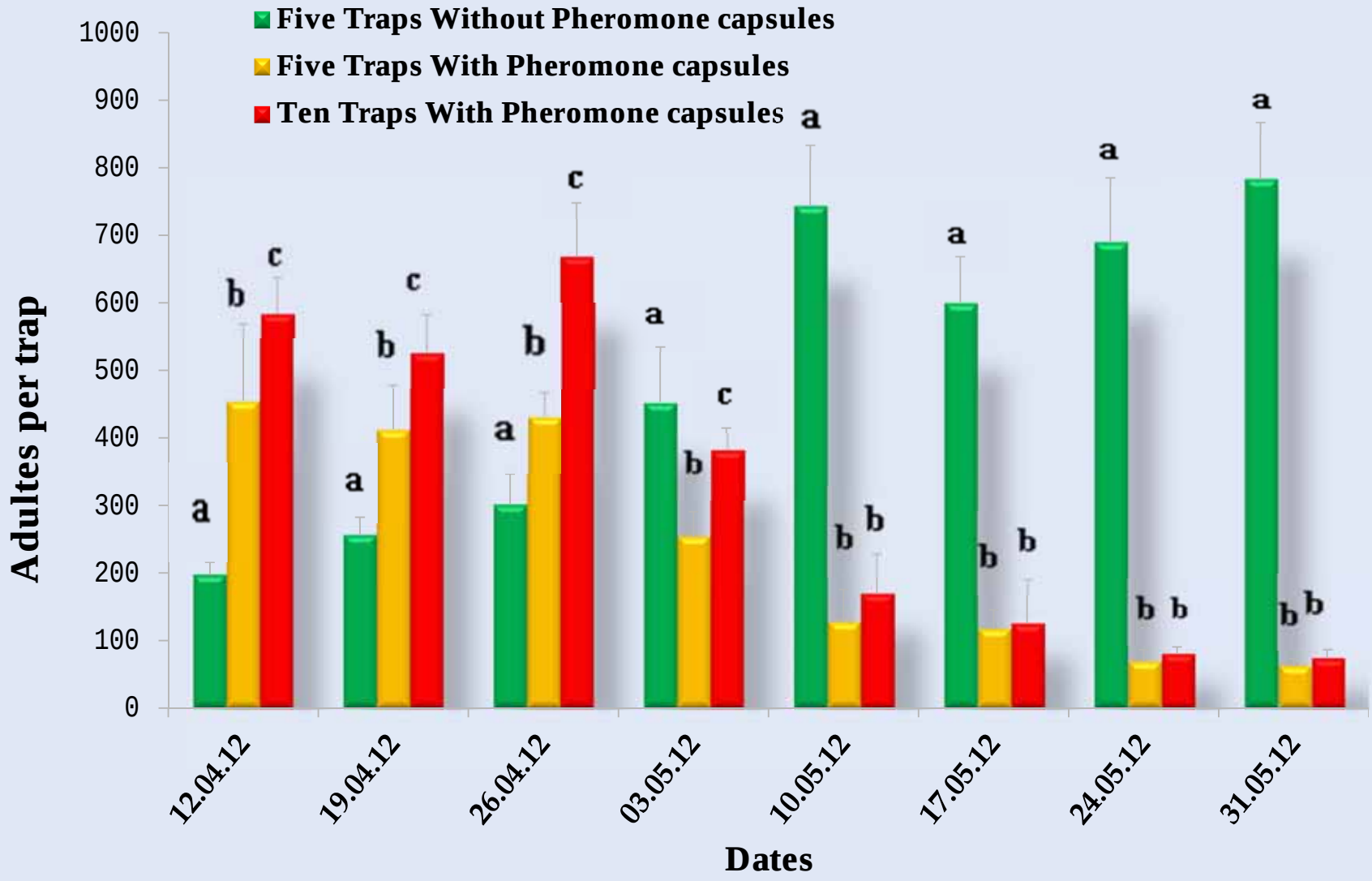
Every single pepper plant that was used for sampling was marked in order not to serve for the following week's sampling.

Each sampled flower was placed in a plastic bag on which the number of sampling units and strata had been marked.

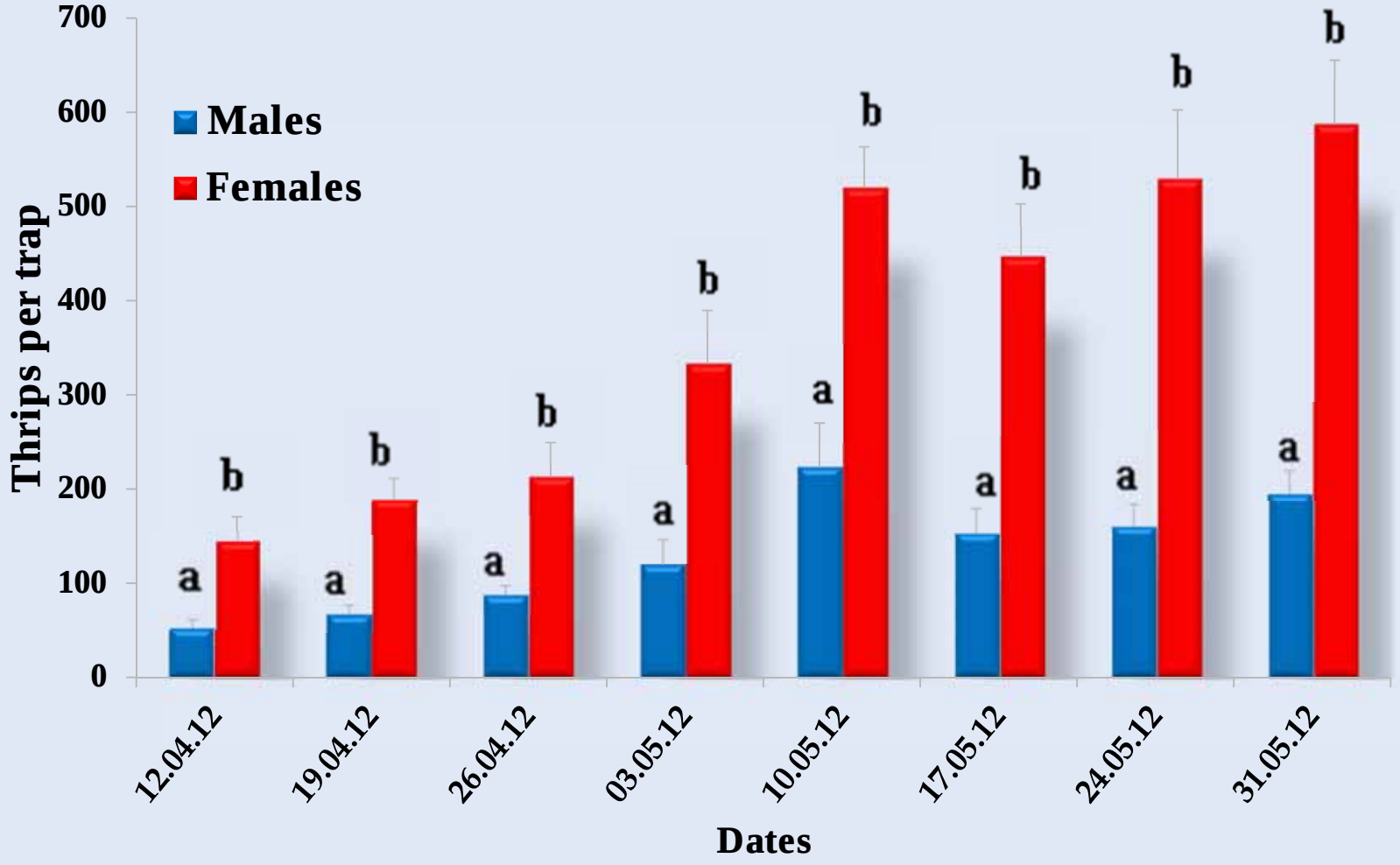
Evolution of thrips population in sampled flowers



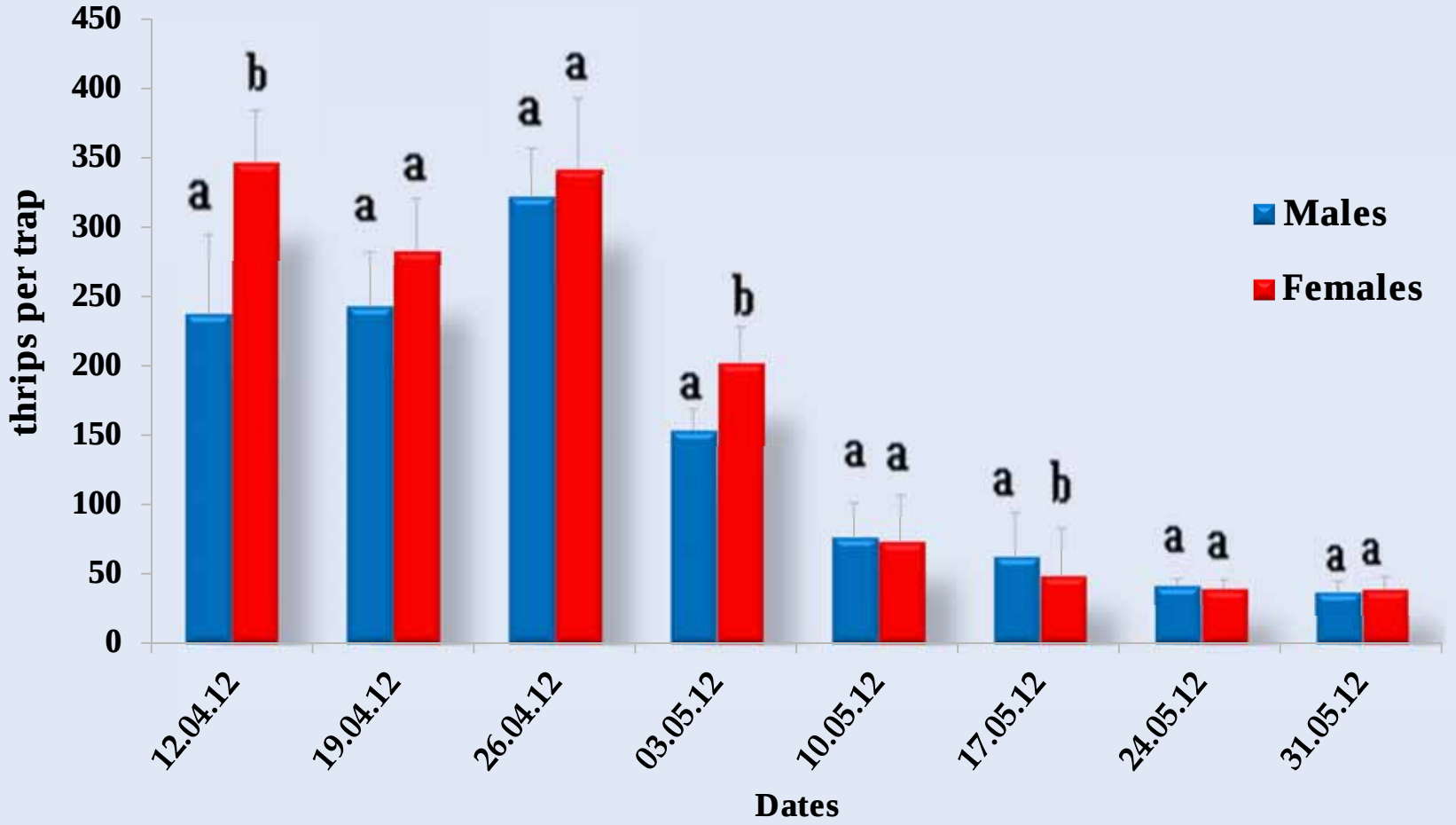
Thrips population evolution on blue sticky traps



Both sexes evolution on blue sticky traps



Mean numbers of *F. occidentalis* both sexes on blue sticky traps non-associated to AA LURE THRIPS . Means followed by the same letters are significantly different at *p* = 0.05.



Mean numbers of *F. occidentalis* both sexes on blue sticky traps associated to AA LURE THRIPS in the greenhouse where ten traps were installed. Means followed by the same letters are significantly different at $p = 0.05$.

Conclusion

Results showed that traps associated with AA LURE TRHIPS have the ability to attract much more number of adult thrips than traps without AA LURE TRHIPS with high significant differences.

On the other hand, greenhouses where traps with AA LURE TRHIPS were installed showed a thrips population decrease till reaching very low values while in greenhouse control thrips population continued to proliferate progressively which proves the efficiency of the pheromone capsules to control this pest.

Use of pheromone/Kairomone capsules to control *F. occidentalis* seams to be an alternative way of biological control that may substitute other control methods such as the chemical way.

On the other hand, results showed that AA LURE THRIPS do not attract only females but also males which leads to a decrease in thrips population.

Thank you for - attention