

Recent advances in Medfly trapping: Experiments conducted in Chios, Greece

Katsoyannos B. I.¹, N. T. Papadopoulos² and N. A. Kouloussis¹

¹University of Thessaloniki, School of Agriculture, 541 24 Thessaloniki, Greece

(katsoy@agro.auth.gr, nikoul@agro.auth.gr)

²Laboratory of Entomology and Agricultural Zoology, Department of Crop Production and Rural Environment, University of Thessaly (nikopap@uth.gr)

Introduction

Results obtained the last few years (2000 – 2003) in the frameworks of an international program coordinated by the International Atomic Energy Agency showed that plastic McPhail type traps baited with the synthetic attractants Ammonium Acetate (AA) and Trimethylamine (TMA), and provided with water and the surfactant Triton comprise the most effective and female selective trapping system for the Mediterranean fruit fly, *Ceratitis capitata*.

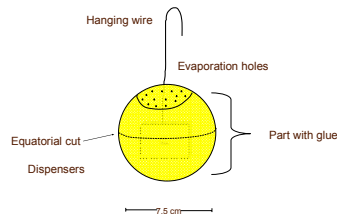
MultiLure trap (MLT)



Easy trap



Internally baited yellow sphere (IBYS)



Captures of medflies on a IBYS

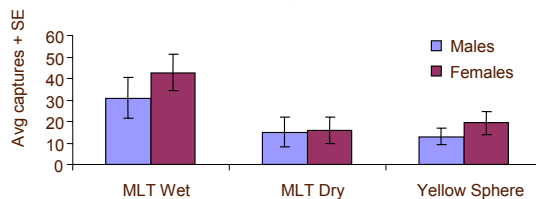


First experiment

Based on earlier findings, during 2004, we tested the performance of AA and TMA in:

- Wet MultiLure trap MLT (McPhail trap type) provided with water plus Triton,
- Dry MLT trap (no aqueous solution), provided with a dichrofos (DDVP) patch to kill the attracted flies
- Internally baited yellow, hollow, 7.5 cm diam. polyethylene sphere (IBYS). Spheres were covered with Tangeltrap adhesive, except their upper ¼ part, which was perforated with 40 small holes for the evaporation of the attractive odours.

Experiment 1

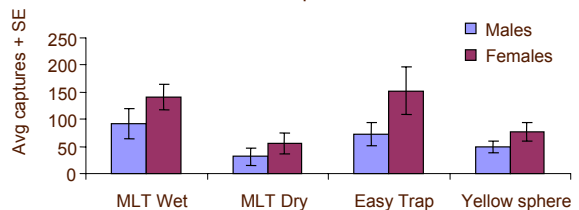


Wet MLT traps outperformed yellow spheres and dry MLT. Spheres and MLT were equally performed.

Second experiment

In a second experiment, we tested the above three trapping systems against the "Easy trap" a new trap developed in Spain, baited with AA and TMA and provided with DDVP (dry trap).

Experiment 2



"Easy trap" was as effective as wet MLT and 3 times more effective than dry MLT.

Conclusions

Wet MLT traps baited with ammonium acetate and trimethylamine provide the most efficient, female selective trapping system for the Mediterranean fruit fly.

Yellow spheres baited internally with AA and TML might provide a useful tool for developing lure and kill systems for medflies.

Also, the our results suggest that the "Easy trap" could be adopted for mass trapping purposes.

References

Katsoyannos, B. I., and N. T. Papadopoulos. 2004. Evaluation of synthetic female attractants against *Ceratitis capitata* (Diptera: Tephritidae) in sticky coated spheres and McPhail type traps. *Journal of Economic Entomology* 97: 21 - 26.