Addressing Med fly with an innovative and environment friendly attractant through an Integrated Pest Management Strategy

LIFE BIODELEAR (LIFE13 ENV/GR/000414)

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Life- BIODELEAR is an ambitious 5-year project which foresees to the development of an integrated pest management strategy (IPMS) for the sustainable control of Med fly (*Ceratitis capitata*) in the absence of insecticides, using the mass trapping technique with a novel no toxic attractant (Biodelear).

The implementation of LIFE Biodelear is being performed in the area of Campos-Chios in Greece and foresees to a wider application in intensively cultivated Mediterranean areas

Project objectives:

Among the main objectives of the project is the elimination of insecticide use, as well as to render Mediterranean farming less dependent on pesticides and to confirm of the EU policy, which aims to enhance biological diversity (92/43 EEC) and eliminate pesticide residue levels in/on food and feed of plant and animal 2005/396/EC.

The Pesticide Residues Laboratory of **Benaki Phytopathological Institute** (BPI), being one of the beneficiaries of the project, is responsible for the monitoring of pesticide residues in the experimental citrus orchards.

During the first two years, **300 citrus fruit samples** have been sampled according to Directive 91972/2003. All samples have been analysed with a multiresidue analytical method capable of analysing 334 pesticides and 18 plant growth regulators, using GC, GC/MS, GC/MS/MS and LC/MS/MS systems.

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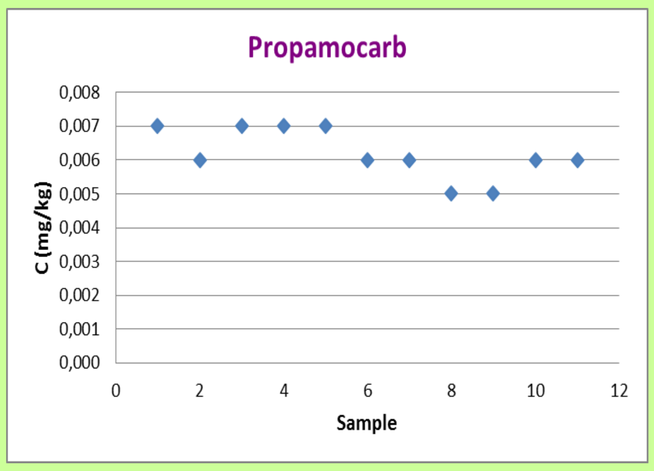
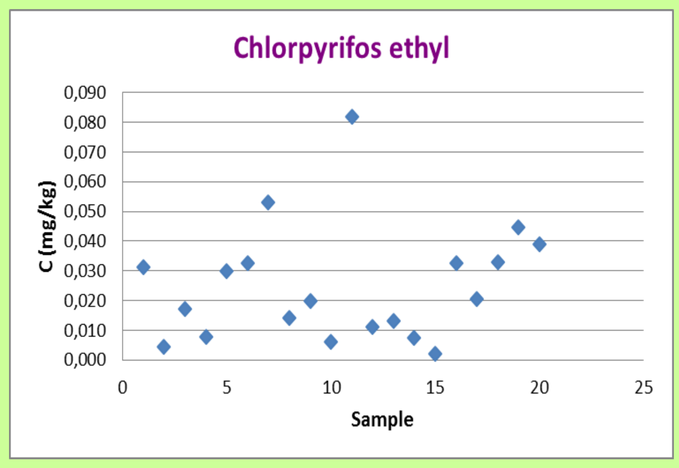
The main pesticides determined so far were mostly the insecticides ***chlorpyrifos*** and ***deltamethrin*** and the fungicide ***propamocarb***. No residues of plant growth regulators were determined.





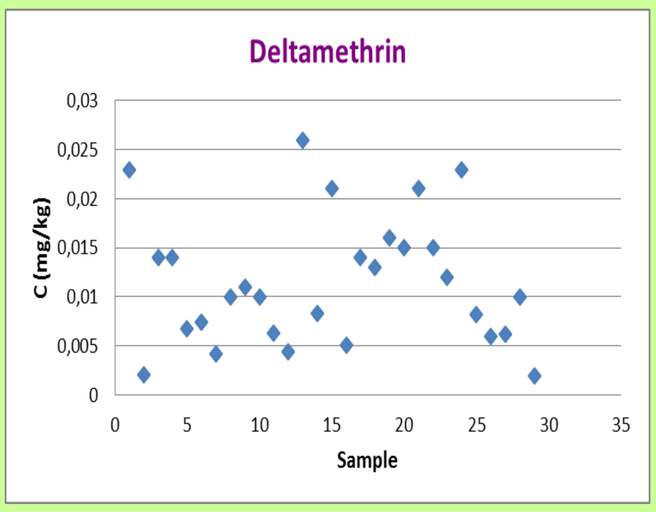


Figure 1-3. *Determination of propamocarb, chlorpyrifos, deltamethrin and residues in citrus fruits using GC, GC/MS, GC/MS/MS and LC/MS/MS systems.*

Those preparatory samplings depicted the pesticide residues fingerprint of the experimental areas prior to the application of mass trapping with Biodelear.

Additional samplings through the whole duration of the project (implementation actions) will confirm the obtained results. In total **more than 1000 samples** of citrus fruits will be analysed.

The decrease of pesticide residues is one of the indicators, that will contribute to the effectiveness of the attractant Biodelear to the control of Med fly and finally to the recovery of the ecosystem.

The project is funded with the contribution of the LIFE+ financial instrument of the European Union.