CONTENTS & MODULES

MODULE C16

MEDITERRANEAN FLY

Biology and control

Date (02/11/2010)

WHAT IS…	Mediterranean Fruit Fly (medfly) is the common name in English of the insect *Ceratitis capitata*, a very polyphagous species which is one of the key arthropod pests of stone and citrus fruits. Other common names are mouche méditerranéenne des fruits (French), mosca mediterránea de las frutas (Spanish) and mosca delle pesche (Italian). Usually, several larvae develop inside the fruit, facilitating the decomposition of plant tissue by invading secondary microorganisms.
WHY	The high importance of medfly is due to several characteristics: it is a direct pest of high value crops, it attacks fruits near to maturity, it is very polyphagous and the adults can fly long distances, and it is a quarantine species in important countries such as the USA. Chemical control has been, and still is in many areas, the most commonly used control method. Spraying must be applied near to harvest, which strongly limits the insecticides that can be used. Consequently, knowledge of its biology and control are key elements of any IPM programme for pome, stone and citrus fruits.
HOW	The biology of medfly and the registered control methods available vary according to country, despite the ongoing process of standardisation of pesticide registration in the EU. To adapt the module to your own case you should: ► Specify the biology of medfly in your area ► Specify its importance as a pest ► Check the monitoring tools available in your country ► Check the control methods available in your country
SOURCES	http://www.inra.fr/hyppz/RAVAGEUR/6cercap.htm http://www.horticom.com/pd/imagenes/73/718/73718.pdf
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Food Quality and Safety
6TH FRAMEWORK PROGRAMME

PPT presentation	
Taxonomy and distribution	Mediterranean fruit fly (medfly, *Ceratitits capitata*) is an important pest of pome, stone and citrus fruits in Southern European countries (and in other parts of the world), although it also can develop on a wide range of cultivated and wild fruits. Medfly belongs to the Diptera order (flies and mosquitoes), characterised by the presence of only one pair of wings. The members of the family Tephritidae (= Trypetidae) are known as fruit flies, as they mainly attack fruits. The three main species of fruit flies in Europe are mentioned in the slide
Life cycle	Medfly is a multivoltine species (it has several generations per year), whose development is mainly driven by temperature, as it does not have a true diapause but an arrestment of development due to low temperatures. It overwinters in the ground as pupa within a puparium. Newly emerged adults look for food, which is needed for egg maturation. Females lay the eggs under the skin of fruit which is just beginning to ripen. Several larvae develop inside a fruit, facilitating the decomposition of plant tissue by invading secondary microorganisms. Fully grown larvae leave the fruit and jump to the soil, where they pupate. The number of generations per year depends on the temperature and the availability of hosts for larval development.
Damage	Damage in the early stages is difficult to detect, as the oviposition holes are very small. Changes in the colour of the fruit skin and softened areas of the fruit, due to rotting, are later visible.
Monitoring	Monitoring to estimate medfly populations in orchards is essential. Adult monitoring is carried out mainly with traps lured with male attractants (trimedlure) or two-sex attractants (trimetilamine, putrescine and ammonium acetate). There are several types of traps, with varying degrees of efficiency.
Control methods	The general control strategy for medfly should be presented to the audience, before explaining the control methods. The different control methods are explained, but only general indications are given, as they have to be adapted to local conditions. Chemical control, mass trapping, attract and sterilise and attract and kill methods are presented.