DELIVERING HIGH
QUALITY TRAINING

CERTIFICATE IN MOSQUITO MANAGEMENT

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TRAINING

Introduction

In the UK mosquitoes can create a distressing biting nuisance, which affects the well-being of local residents and which can pose a major economic problem in areas where tourism is a main source of income to the local community.

Experts agree that climate change will make the UK more vulnerable to the problems caused mosquitoes. There is already evidence of the resurgence of a number of serious mosquito-borne diseases in temperate regions of Europe and the USA. Mosquito control work is quickly becoming an essential part of professional pest management.

Recent publication have emphasised the need for preparedness in the event of an outbreak of mosquito-borne disease. In response, various pest management experts, devised this definitive training course which covers the essential elements of an effective and safe mosquito control programme.

This course is for those, currently or potentially, involved in the control of mosquitoes in the UK. It will provide you with the indepth knowledge and practical skills to enable you to:

- Identify key mosquitoes
- Survey areas for mosquito activity
- Carry out a range of targeted measures to reduce mosquito problems

Course description

This qualification is designed to provide a greater understanding of mosquitoes and their control for established pest control technicians. It is intended principally for individuals already within the industry who wish to develop specialist expertise in order to be able to respond to the emerging threat posed by mosquitoes.

The syllabus covers the biology and identification of mosquitoes, site surveys, chemical and non-chemical control methods and health and safety requirements.

Attainment of the Learning Outcomes will be assessed by an examination and a practical assessment.

Course outline

MOSQUITO SIGNIFICANCE, IDENTIFICATION AND BIOLOGY

Mosquito Significance: role of mosquitoes as vectors of disease and biting nuisances; diseases carried and transmitted by mosquitoes.

Identification: importance of correct identification of mosquitoes; features of mosquitoes which distinguish them from other insects in the UK; features of mosquitoes which distinguish the different genera; how to obtain identification of mosquitoes at species level.

Biology and behaviour: biology and behaviour of the main genera of mosquitoes; interaction of mosquitoes with other wildlife and the environment; mosquito habitats, to include saltmarsh, urban and woodland; mosquito species associated with these different habitats; particular problems caused by mosquitoes in these habitats; importance of mosquitoes at airports, nurseries and used–tyre facilities.

SURVEYING AND MONITORING

Health and safety and legal requirements: legal requirements relating to site surveys; powers and procedures for accessing and surveying sites; risk assessments; health and safety considerations during site surveys; use of personal protective equipment.

Survey and sampling techniques: techniques for sampling immature and mature mosquitoes; survey techniques for locating potential breeding sites; survey techniques for locating immature and mature mosquitoes.

Post-survey requirements: storage of specimens for later identification and processing; methods for recording and storing information.

Mosquito control stratergies

MOSQUITO SIGNIFICANCE, IDENTIFICATION AND BIOLOGY

Non-chemical control methods: Health and safety and use of personal protective equipment when carrying out non-chemical control procedures; methods for, and effectiveness of, proofing buildings; methods for, and effectiveness of, influencing public behaviour; biological control methods; methods for elimination of breeding sites and the limitations of these methods.

Chemical control methods: Health and safety and use of personal protective equipment when carrying out chemical control procedures; uses and application of larvicides; calculation of larvicide dosage; uses and application of pesticides for the control of adult mosquitoes; calculation of pesticide dosage; regulations for the use of larvicides and pesticides; methods for assessing effectiveness of chemical control.

Organisation of mosquito control: organisations that may be involved in mosquito control; relationships between organisations; legal requirements for mosquito management; graded responses to mosquito infestations; differences in response required for local nuisance problems compared to regional disease outbreaks.

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DAY 1

MOSQUITO SIGNIFICANCE, IDENTIFICATION AND BIOLOGY

08:30 – 09:00 **Coffee & Registration**

Welcome and Introduction

09:00 – 10:30 **Module 1:** Mosquito Significance

- Mosquitoes: A biting nuisance
- Mosquitoes: A disease vector
- Risk of mosquito importation

10:30 – 10:45 **Coffee Break**

10:45 – 13:15 **Module 2:** Mosquito Identification

- Importance of mosquito identification
- Separating mosquitoes from other flying, biting insects in the UK and also from other similar but non-biting or aquatic insects
- UK mosquito identification to genus level, at larval and adult stages
- How to obtain identification of mosquitoes at species level

13:15 – 14:15 **Lunch**

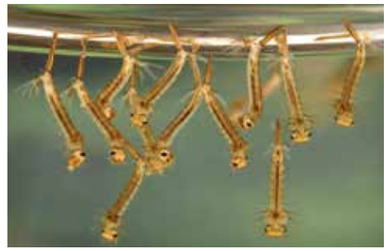
14:15 – 15:30 **Module 3:** Mosquito Biology and Behaviour

- General biology and behaviour of the main mosquito types
- Mosquitoes as a component of the natural wildlife

15:30 – 15:45 **Coffee Break**

15:45 onwards **Module 3: Continued**

Mosquito problems and species in the three common habitats:
- Salt-marsh
- Urban areas
- Woodland areas



DAY 2

SURVEYING AND MONITORING

09:00 – 10:30 **Module 4: Mosquito Surveying and Monitoring**

- The process and powers for gaining access to land for mosquito surveys
- Techniques for sampling immature mosquitoes

10:30 – 10:45 **Coffee Break**

10:45 – 12:00 **Module 4: Continued**

- Surveying an area for potential breeding sites and immature mosquitoes
- Surveying an area for adult mosquitoes
- Storage of specimen (larval & adult stages) for subsequent identification or processing
- Importance of record keeping

12:00 – 13:00 **Lunch**

13:00 onwards **Fieldwork**

- Site inspection/surveying
- Sampling techniques for immature mosquitoes - dipper, ovitraps
- Sampling techniques for adult mosquitoes – live baiting, adult monitoring traps

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DAY 3

MOSQUITO CONTROL STRATEGIES

09:00 – 10:30 **Module 5:** Mosquito Management by Non-chemical Means

- Techniques and effectiveness of proofing buildings
- Techniques and effectiveness of personal protection
- Techniques and effectiveness of influencing public behaviour
- Techniques for biological control of mosquitoes
- Techniques, issues and limitation of breeding site elimination

10:30 – 10:45 **Coffee Break**

10:45 – 12:00 **Module 6:** Mosquito Management by Chemical Means

- COSHH assessment of environmental and personal safety
- Larvicides – Registered products in the UK, characteristics, usage, application, dosage calculation, relevant regulations
- Adulticides – Registered products in the UK, characteristics, usage, application, dosage calculation, regulations
- Assessment of treatment efficacy

12:00 – 13:00 **Lunch**

13:00 – 15:00 **Practical Session:** Use of Application Equipment

15:00 – 16:00 **Module 7:** Organisation of Mosquito Control

- Range of organisations potentially involved in mosquito control and their relationships
- Legal context of mosquito management work
- Responses to local nuisance problems, and to regional disease outbreaks

16:00 – 17:00 **Examination**

The timing and location of this course has specifically been chosen to allow the greatest chance of mosquito surveying to be done in the field. Delegates will be expected to sample live mosquitoes and should, therefore, ensure that they bring appropriate footwear and clothing.

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