MODULE 3
HONEY BEE DISEASES, PESTS AND POISONING
SYLLABUS

Applicable from January 2020

Aims

The Modules are designed to give beekeepers the opportunity to study the craft of apiculture further with the goals of obtaining an Intermediate Theory Certificate and an Advanced Theory Certificate.

Conditions of Entry

The Candidate is recommended to have kept and managed bees for at least 2 seasons.

Modules can be taken in any order with the exception of Module 8, which shall be the last module to be taken.

The secretary to the Board shall have received a completed Application Form and fee by the 10th February for March Series and by 30th September for the November series of the Module Examinations.

A maximum of FOUR modules can be taken at any one session

Award of Certificates

A BBKA Certificate will be awarded for each module passed and the pass mark will be 60% for all modules. (Credit 70%, Distinction 80%)

In addition:

- The BBKA Intermediate Theory Certificate will be awarded when modules 1, 2, 3 and one other from 5, 6 or 7 have been passed.
- The BBKA Advanced Theory Certificate will be awarded when all modules been passed.
- The BBKA Master Beekeeper Certificate will be awarded to a beekeeper who has obtained a BBKA Advanced Theory Certificate and the BBKA Advanced Certificate in Beekeeping Husbandry.
- In order to qualify for either a BBKA Intermediate or BBKA Advanced Theory Certificate the necessary modules must be passed in a time period not exceeding 12 years.

The Examination

Each module examined consists of a written paper. There will be three sections to the paper; Section A requires one or two word answers, Section B (4 questions from a choice of 5) requires short answers in note form, Section C (1 question from a choice of 2) requires more detailed answers. Candidates will be expected to use scientific nomenclature where applicable.

The Examiners may include in any Module examination any topic from the Basic Assessment syllabus.

Candidates' papers will be retained by the Examinations Board. The candidate is able to request a résumé of their paper on payment of the appropriate fee.

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The Candidate shall be able to give:-

3.1 a detailed account of the field diagnosis of American foul brood (AFB) and European foul brood (EFB), including lateral flow devices and a detailed account of the signs of these two diseases;

3.2 an account of the life cycle of the causative organisms of AFB and EFB and their development within the larvae;

3.3 a detailed account of the development of AFB and EFB within the colony;

3.4 a detailed account of the ways in which AFB and EFB are spread from one colony to another;

3.5 a detailed account of the authorised treatment of colonies infected with AFB and EFB including methods of destruction of colonies and the sterilisation of equipment;

3.6 the features that aid recognition of the Asian Hornet (*Vespa velutina*) and the notifiable pests, small hive beetle *(Aethina tumida*)and *Tropilaelaps* mites

3.7 a detailed account of the statutory requirements relating to notifiable diseases and pests and the implementation of these requirements in the United Kingdom,

3.8 an account of the statutory requirements relating to the importation of honey bees;

3.9 a description of the life cycle and natural history of *Varroa destructor* including its development within the honey bee colony and its spread to other colonies;

3.10 a detailed account of the signs of Varroosis describing methods of detection and ways of monitoring the presence of the varroa mite in honey bee colonies;

3.11 a detailed account of methods of treatment and control of Varroosis, including Integrated Pest Management (IPM) and an outline of the consequences of incorrect administration of chemical treatments, together with a way of determining the resistance of varroa to such treatments;

3.12 a detailed account of the cause, signs and treatment (if any) of adult bee diseases currently found in the United Kingdom these diseases to include Nosema, Dysentery, Acarine and Amoeba;

3.13 a simple account of the structure and function of the alimentary, excretory and respiratory systems of the adult honey bee and of the life cycle of the causative organisms of adult honey bee diseases;

3.14 a detailed account of the cause, signs and recommended treatment (if any) of the following brood diseases and conditions:- chalk brood, sacbrood, chilled brood, bald brood, neglected drone brood and stone brood;

3.15 a detailed account of the laboratory methods of diagnosis of Acarine, Nosema and Amoeba diseases in worker honey bees;

3.16 a detailed description of the fumigation of comb using ethanoic acid (acetic acid), including safety precautions to be taken;

3.17 a detailed description of procedures by which a colony can be transferred onto clean comb including any precautions that need to be taken and the circumstances which merit such procedures. These procedures to include shook swarm and Bailey comb change;

3.18 a description of the effects of chronic bee paralysis (both syndromes), acute bee paralysis virus, black queen cell virus, sacbrood and deformed wing viruses together with an elementary account of the effects of other viruses affecting honey bees including their association with other bee diseases and pests where applicable;

3.19 the scientific names of the causative organisms associated with diseases of honey bees;

3.20 an outline account of the life cycle of *Braula coeca,* its effect on the colony and a description of the differences between adult *Braula* and *Varroa;*

3.21 an outline account of the signs of poisoning by natural substances, pesticides, herbicides and other chemicals to which honey bees may be exposed;

3.22 an account of the ways in which honey bees can become exposed to agricultural and pest control chemicals;

3.23 a detailed description of the action to take, and practical measures possible, when prior notification of application of toxic chemicals to crops is given;

3.24 an outline description of a spray liaison scheme operated by a beekeeping association;

3.25 an account of the action to be taken when spray damage is suspected;

3.26 a description of the damage caused to colonies and equipment by mice, woodpeckers and other pests and ways of preventing this;

3.27 a detailed account of wax moth damage and the life cycle of both the Lesser and Greater wax moth (Achroia grisella and Galleria mellonella);

3.28 a detailed account of methods of treating or storing comb with particular reference to preventing wax moth damage;

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Arrangements

The Assessment venue and the Invigilation are arranged by the Local Examination Secretary. Approval for these arrangements shall be obtained from the Secretary to the Board at least five weeks before the date of the Assessment.

Application to Enter

These should be made through the Local Examination Secretary of the County Beekeeping Association or directly to the Secretary of the Board at the address given below. Applications are required at least six weeks before the date on which the Assessment is to be taken. Available dates for the Assessments can be found on the BBKA Website or may be obtained from the Board Secretary.

Application Form

Every application must be accompanied by a completed Application Form together with the Assessment Fee. Cheques should be made payable to BBKA.

Assessment Fees

The current fee for any Assessment may be obtained from the Secretary to the Board or the Local Examination Secretary.

AUTHORITY

The above is issued by the BBKA Examinations Board and all communications in respect of the Assessments should be addressed to:

The Secretary
BBKA Examinations Board
National Beekeeping Centre
Stoneleigh Park
KENILWORTH
Warwickshire
CV8 2LG

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