



MODULE 8 HONEY BEE MANAGEMENT, HEALTH AND HISTORY 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 is expected to have a broad based knowledge of beekeeping.

The Candidate shall be able to give a detailed account of:-

- 8.1 the assessment and management of the quality of a colony for honey production;
- 8.2 the management of colonies for the production of oil seed rape (*Brassica* spp.) and ling heather (*Calluna vulgaris*) honey, the techniques involved in overcoming problems associated with extracting these honeys;
- 8.3 the management of colonies for the production of comb honey (sections and cut-comb) and its preparation and presentation for sale;
- 8.4 the properties of honey including specific gravity, refractive index, viscosity, hygroscopicity, electrical conductivity, reactions to heat and ageing;
- 8.5 the process of honey crystallisation including factors that affect its speed, crystal size, and the texture of the final product;
- 8.6 the preparation and bottling of liquid honey and set honey, including the requirements of the current UK statutory regulations relating to hygiene, handling, bottling, composition, labelling and weight of packs of honey;
- 8.7 the identification of pollen grains by their colour, size, specific shape and structure, using named examples, and an outline of the technique of melissopalynology to determine the floral source(s) and geographic origin of honey samples;
- 8.8 the nutritional value of honey to the honey bee colony;
- 8.9 the main constituents and physical properties of beeswax and propolis;
- 8.10 the commercial manufacture of wax foundation;
- 8.11 how foundation can be made on a small scale by the beekeeper including one method of wiring frames and embedding the wiring into this foundation;
- 8.12 the production and use of pollen supplement and pollen substitutes;
- 8.13 the assessment of the qualities of a queen and her colony and their subsequent management for queen rearing;
- 8.14 the structure and changes in function of the exocrine glands throughout the life of the castes of a honey bee colony, and the implications this has for the management of a honey bee colony;
- 8.15 the management of colonies used for migratory beekeeping for both honey production and pollination services;
- 8.16 the use of honey bees as pollinators in orchards and fields of seed crops including arrangements to be made with the farmer/grower;
- 8.17 the management needed to cope with geographic localities, weather conditions and the timing of the flowering of forage plants;
- 8.18 methods of swarm control suitable for use in small and large beekeeping enterprises;





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- 8.19 the setting up, and management throughout the season, of an observation hive, and the uses to which it can be put;
- 8.20 the preparation of a risk assessment and safety policy relating to the handling, demonstrating and showing of live honey bees;
- 8.21 methods of monitoring and seasonal management of the health of colonies;
- 8.22 the signs of disease and pest infestations of honey bees; the potential impact on bee health, the economic effect and how these diseases and pest infestations impact on the management of the colony.
- 8.23 procedures related to good hygiene practices on matters of personal clothing, manipulations and equipment to prevent the spread of disease between colonies and between apiaries
- 8.24 the development of hives and beekeeping equipment used in the United Kingdom (refer to list in Appendix);
- 8.25 the life histories of one selected species of each of the following found in the United Kingdom: solitary bee, social bee (other than *Apis mellifera*), solitary wasp and social wasp, and their interaction with honey bees.

The Candidate will be able to give an outline account of:-

- 8.26 the history of beekeeping through leading contributors (listed in Appendix) to the knowledge of honey bees and beekeeping practices;





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Appendix to module 8

A guide to help candidates prepare for 8.24 and 8.26

History of beekeeping

| Hives | Names |
|---------------------------------|--|
| Collateral hive | Rev Stephen White 1756, Thomas Nutt 1832 |
| Leaf hive | Huber (Switz) |
| Stewarton | Robert Ker 1819 |
| First moveable frame hive in UK | T.W.Woodbury 1862 |
| First Double walled hive | T.W.Cowan |
| WBC | W.B.Carr 1890 |
| Langstroth and bee space | Rev L.Langstroth 1851 |
| Dadant | Dadant |
| Commercial (16x 10) | Simmins |
| Smith | Smith |
| British National and Modified | Evolved from various sources |
| National | |
| Long Hive | Robin Dartington |
| Top Bar Hive | Bill Bielby 1968 (Catenary) |
| | Dr Maurice Smith 1971 (Kenyan Hive) |
| Warre Hive | Abbe Warre (1867-1951) |

| Introduction of Beekeeping Equipment | Names |
|--------------------------------------|--|
| Queen excluder | Abbe Collin (Fr) |
| Smoker | Moses Quinby, T.F. Bingham |
| Bee escape | E.C.Porter 1891 (US) |
| Frame spacing | W.B.Carr (metal ends), Hofmann, Manley |
| Wax foundation | J Mehring 1857 (Germany), E.B.Weed 1896 (US) |
| Wired frames | Capt Hetherington |
| Extractor | Major Von Hruschka, T.W.Cowan |
| Feeder | Miller, Ashforth |
| Queen introduction cage | Dr Colin Butler |
| Swarm control board | Snelgrove |

| Introduction of bee strains to UK | Names |
|-----------------------------------|-------------------|
| Intro of Italian Bees | T.W Woodbury 1859 |
| Intro of Carniolan | W.C.Cotton 1870 |
| Intro of Cyprian | T.B.Blow 1887 |
| Development of Buckfast strain | Br Adam |





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| Development of Beekeeping methods | Name |
|---|--|
| Swarm control Queen rearing Two queen system Bailey comb change Moveable bar combs Bee Space | Snelgrove, Taranov, Pagden Miller, Doolittle G.Wells 1894 Dr L Bailey Sir George Whelar 1682 (introduced idea from Greece) Rev. L. Langstroth |

| Founding of important organisations | Name |
|---|---|
| Founding of BBKA Founding of BBJ Founding of E.H.Taylor Ltd Founding of I.B.R.A Founding of BIBBA | T.W.Cowan, C.N.Abbott, W.B.Carr, T.W.Cowan, C.N.Abbott T.B.Blow Dr Eva Crane Beowolf Cooper |

| Research areas | Names |
|---|--|
| Swarming, spring feeding Bee behaviour Mating outside hive Parthenogenesis Pheromones | J. Simpson Ribbands, Rosch, Von Frisch, Lindauer, Gould Huber, J.Janscha, Beowolf Cooper J.Dzierzon Dr C.Butler, Dr J Free |

| Influential authors | Texts |
|---|--|
| Rev Charles Butler Rev W.C.Cotton 1842 F.R.Cheshire 1886 Dr T.W Cowan 1881 W. Herod-Hempsall A.I Root (US) 1877 Rev L Langstroth Dr J Free Brother Adam Dr Eva Crane. E.B Wedmore R.O.B Manley Ted Hooper Dr M Winston K von Frisch M Lindauer J Gould and C Gould Annie Betts Dorothy Hodges | The Feminine Monarchie My Bee Book Bees And Beekeeping British Beekeeping Guide Book British Beekeeping Guide Book + Other texts ABC Of Bee Culture The Hive And The Honey bee Several Texts In Search Of The Best Strains Of The Honey bee + other texts Several Major Texts A Manual Of Beekeeping Honey Farming Guide To Bees And Honey, Encyclopaedia The Biology Of The Honey bee The Dance Language and Orientation of Bees Communication Among Social Bees The Honey bee Diseases of Bees Pollen Loads of the Honey bee |





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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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