



General Certificate in Beekeeping Husbandry

PROSPECTUS

Applicable from January 2020

Aims

To encourage all new and many existing beekeepers to improve their understanding and practice of beekeeping.

The Candidate will be able to demonstrate a broad range and understanding of beekeeping skills. The Candidate will be required to show that their management of colonies is aimed at producing a strong healthy force of foraging bees for the expected honey flows and that the resultant crop is processed for consumption in a hygienic manner with due regard to legal requirements.

Conditions of Entry

The Candidate shall have been awarded the BBKA Basic Certificate or an equivalent certificate acceptable to the Board. The date when this certificate was awarded shall be entered on the Application Form.

Normally the Candidate shall have kept and managed bees for at least five years.

The Secretary to the Board shall have received a completed Application Form and fee by the 28th February in the year the Candidate intends to be assessed.

The Assessment

The Assessment will normally be conducted in May, June or July at the Candidate's apiary and will last about three hours. **The candidate needs to be mindful to arrange the date when queen rearing is in progress.** The Assessors will visit the Candidate's apiary and test his/her practical skills and knowledge of the important aspects of beekeeping and bee products, as defined in the Syllabus. The Assessors will observe the Candidate's practical skills at opening and manipulating colonies and note the correct use of beekeeping equipment and apiary hygiene. Honey preparation facilities will be inspected and the Candidate will describe their procedures for extracting and packaging honey. The Candidate's understanding of beekeeping, as covered in the Syllabus will be assessed through a discussion with the Assessors who will use the Candidate's records as the basis of the assessment. The candidate is expected to pass all sections of the assessment i.e.: Handling and General Management, Queen Rearing, Four Practical Tasks, Honey Bee Products and Discussion.

Two Assessors appointed by the Board shall conduct the Assessment. The Board may wish a trainee Assessor or Board member to be present as an observer, but prior written agreement of the Candidate shall be obtained.

Preparation

The Candidate will prepare their apiary to show their approach to general beekeeping, queen rearing and swarm control. The Candidate may decide to attend a series of lectures, join a study group or follow private study using standard texts to prepare for the Assessment. Suggested texts and specialist leaflets are listed in the Booklist. In addition, the Candidate will be required to have kept records of activities in the apiary for at least twelve months. Guidance notes on Maintaining Beekeeping Records are available from the BBKA and are recommended for all beekeepers even if they are not taking this Assessment.

Number of Hives

When planning to take this assessment the Board recommends that candidates manage more than three colonies so that if something goes wrong beforehand such as a colony swarms or perhaps dies out over winter the Candidate will still have three honey production colonies for the assessment.

If the candidate cannot provide three honey production colonies the Assessors may abort the assessment.

Queen Rearing

The Assessors will examine the Candidates' method of queen rearing. This does not need to include grafting techniques **but will demonstrate that the candidate is using a specific queen rearing method and not relying on the use of naturally occurring swarm cells.** Photographs and equipment used should be made available if appropriate.

Equipment

The Candidate will ensure the following equipment is ready prior to the Assessment, for inspection by the Assessor, and ready for immediate use:

Three Honey Production Colonies of honey bees.

One Nucleus Colony of honey bees.

Sufficient spare equipment: for preparing colonies for moving elsewhere;
 for feeding the colonies;
 to produce an artificial swarm;
 for queen introduction;
 for queen marking and clipping;
 for swarm collection.
 for undertaking the Bailey Comb change system.

Honey and wax processing and packing equipment.

A minimum of 3 jars of liquid and 3 jars of set honey, labelled as for sale.

Blocks of wax suitable for retail sale.

Personal protective equipment.

Procedure

The Assessor will observe the Candidate's practical skills at opening and manipulating colonies and note the correct use of beekeeping equipment and apiary hygiene. Honey preparation facilities will be inspected and the Candidate will describe their approach to extracting and packaging honey. The Candidate will also be assessed on understanding of beekeeping as covered in the Syllabus. The Assessor will use the Candidate's records to decide which colonies to use for each task. Assessors will use standardised assessment sheets supplied by the Examinations Board so that the outcome may be moderated.

The Assessment is likely to take about three hours. This does not include any travelling to out apiaries or lighting smokers or the preparation in advising the Candidate of the tasks to undertake at the apiary.

Award of Certificate

There are no grades given. The Candidate either reaches the required standard or not. The candidate will normally be informed of the outcome within six weeks of the Assessment. The Certificate will be sent to the Local Examination Secretary for presentation to the successful candidates at a later date.

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SYLLABUS

General

- 1.1 The Assessment will take place at the Candidate's apiary and may be expected to last about three hours. Where candidates have multiple apiaries the assessors should not be expected to visit more than two apiaries.
- 1.2 A minimum of three of the Candidate's own colonies shall be made available for examination. It is desirable that the Candidate's colonies are good tempered and do not follow more than about 5 metres from their hive.
- 1.3 In addition to three colonies, there shall be a queen-right nucleus for developing into a colony.
- 1.4 The Candidate shall have in hand at the time of the assessment, a queen rearing procedure underway to demonstrate the Candidate's ability to rear queens suitable for the needs of the apiary.
- 1.5 On the day of the Assessment the Candidate's Records shall be made available to the Assessors.
- 1.6 The Assessors will look for a satisfactory method of controlling the bees and proficient manipulation of colonies during the required demonstrations.

Tasks to Perform

The Candidate will be required to demonstrate four of the following tasks selected by the assessors:

- 2.1 Demonstrate the inspection of a brood comb for brood diseases.
- 2.2 Demonstrate the procedures for creating an artificial swarm other than using a nuc.
- 2.3 Demonstrate how to prepare a colony for moving to another apiary.
- 2.4 **Demonstrate preparation of a nucleus colony for the purpose of swarm control, sale, increase or queen mating as advised by the assessors.**
- 2.5 Demonstrate the uniting two colonies and the precautions that need to be taken.
- 2.6 Demonstrate changing brood frames **for disease control** using a Shook Swarm technique.
- 2.7 **Demonstrate changing all the brood frames in a strong colony, keeping the existing brood.**
- 2.8 Demonstrate changing brood frames **for disease control** in a weak colony using a Bailey Frame Change.

During the apiary visit the candidate may also be required to:

- 2.9 Demonstrate taking a sample of adult bees for disease diagnosis;
- 2.10 Demonstrate the methods taken throughout the year to monitor and control varroa to non-damaging levels. Demonstrate the use of varroa control equipment in the apiary. Examine a brood chamber and floor for varroa. Demonstrate the use of comb for trapping mites in drone cells;
- 2.11 Demonstrate the procedure for comb renewal and explain the reasons for this.

The Candidate will be required to:

- 2.12 Demonstrate how beeswax is recovered with reference to the actual equipment used;
- 2.13 Demonstrate the equipment used to refine beeswax to produce blocks suitable for retail sale.

Queen Rearing

The Candidate will be required to:

- 3.1 Demonstrate marking and clipping a queen, or use a drone as a substitute if appropriate;
- 3.2 Demonstrate a method of queen rearing. The reasons for selecting a particular queen as breeding material are required.
- 3.3 Review the age of existing queens and plans for their replacement. Describe how replacement of queens is carried out;
- 3.4 Describe the procedures used up to the time of the assessment in the queen rearing method demonstrated and explain what has yet to be done. Describe what is intended for the queens that have successfully mated. Describe the procedure that will be adopted to introduce queens into a colony;
- 3.5 Describe the advantages of marking and clipping queens;

Practical Beekeeping

The Candidate will be able to discuss and show an understanding of:

- 4.1 The progress of the colonies as described in the Records and the intentions for the rest of the season.
- 4.2 The influence of honey production on apiary procedures.
- 4.3 The factors that may initiate swarming and the indications that a colony is making preparations to swarm. Describe the economic and social effects of swarming and the procedures that are used to control swarming.
- 4.4 The procedures for adding supers to colonies.
- 4.5 Methods of beekeeping and how these are influenced by local conditions. Reference will be made to the choice of hives from those types commonly in use in the area, the merits of top and bottom bee space and apiary equipment.
- 4.6 The associated dangers of robbing and methods to prevent robbing and to end robbing once started.
- 4.7 The methods used to minimise drifting and circumstances when diverting bees to another colony can be an advantage.
- 4.8 The situations that may result in honey bees becoming a nuisance to the public or livestock.
- 4.9 The procedures used to prepare a nucleus colony and discuss the many uses for a nucleus colony.
- 4.10 The procedures used for moving a colony a short distance within an apiary and to another site beyond normal flying distance, including the difficulties and dangers involved.
- 4.11 The procedures for general maintenance including preservation of hives, fumigation of comb and equipment, prevention of wax moth damage, the use of predator guards, storing combs and general apiary hygiene.
- 4.12 How super combs are stored and the measures taken to combat wax moths.
- 4.13 The methods and reasons for feeding sugar syrup, candy, pollen and pollen substitute.
- 4.14 How colonies are prepared for winter and the timing of carrying out these arrangements.
- 4.15 The actions required to deal with a vicious stock of bees.
- 4.16 The circumstances in which it may be necessary to kill a colony and how this should be done.

Natural History and Behaviour

The Candidate will be able to describe the following and explain their relevance to practical beekeeping:

- 5.1 The different races of honey bees and their characteristics.
- 5.2 The main external features of the drone and the two female castes.
- 5.3 The function of the hypopharyngeal glands, the Nasonov gland and the wax glands,.
- 5.4 The factors in the production of brood, which result in workers, drones and queens.
- 5.5 The mating of drones with queens.
- 5.6 The main stages in the development of the brood from egg to emerging adult and also the life expectancy of workers, drones and queens.
- 5.7 The changing circumstances throughout a year that influences the egg laying of a queen, indicating how the numbers will vary.
- 5.8 The nutritional requirements of honey bees and their main sources.
- 5.9 The signs in a colony of a drone laying queen and laying workers. Explain how these may arise and how they may be dealt with.
- 5.10 The seasonal variation in the hive population during a year including survival behaviour in winter.
- 5.11 The effect of weather on a colony and foraging.
- 5.12 The type of work done by a worker honey bee throughout its life including reference to summer and winter adapted bees.
- 5.13 The collection of nectar and how it is converted into honey suitable for storing in sealed comb.
- 5.14 The collection of pollen and how it is carried to the colony and used.
- 5.15 The production of wax and how it is used in the colony.
- 5.16 The collection of water and propolis and how they are used in the hive.
- 5.17 The factors that may give rise to swarm, supersedure and emergency queen cells.
- 5.18 The use made by honey bees of the alarm pheromones and the effect these have on the way bees are managed.

Foraging

The Candidate will be able to demonstrate understanding of:

- 6.1 The main plants of local importance to the bees throughout the year, giving details of flowering times;
- 6.2 Any measures taken by the Candidate to enable the bees to forage on a particular crop and any special action needed as a result of foraging on local crops or a crop to which bees have been taken. rape, heather and borage are three possible examples;
- 6.3 Honeydew, being able to name sources and describe the impact of honeydew in the area of the Candidate;
- 6.4 Any sources of undesirable nectar found in the locality of the Candidate.

Hygiene Disease, Pests and Poisoning

The Candidate will be able to:

- 7.1 Discuss the routine measures taken to look for disease in a colony;
- 7.2 Describe the role of good hygiene in the apiary. The candidate will demonstrate satisfactory procedures, both with personal effects and apiary equipment. Spare equipment used by the candidate will be examined;
- 7.3 Describe the appearance of healthy brood and, in contrast, the appearance of larvae, brood pattern and cell capping that will require further investigation;
- 7.4 Describe the procedures taken to avoid or reduce the transmission of infectious diseases and demonstrate that these are followed;
- 7.5 Describe the signs of American Foulbrood and its effects on the colony;
- 7.6 Describe the signs of European Foulbrood and its effects on the colony;
- 7.7 Describe what actions shall be taken to comply with statutory requirements if a brood disease is suspected;
- 7.8 Describe how to distinguish between *Varroa destructor* and *Braula coeca*;
- 7.9 Describe the method adopted in the Candidate's apiary to monitor and control Varroosis;
- 7.10 Discuss the impact of virus damage related to Varroosis;
- 7.11 Discuss the impact of re-infestation of Varroa on the management and timing of Varroa control;
- 7.12 Describe the impact of Nosema disease on a honey bee colony, and its diagnosis and treatment;
- 7.13 Describe Acarine, its detection and possible effects on a colony;
- 7.14 Describe Chalk Brood and Sac Brood, detection and possible effects on a colony;
- 7.15 Describe Chilled Brood and Bald Brood and possible effects on a colony;
- 7.16 Demonstrate familiarity with current regulations and other statutory requirements as they affect diseases and pests concerned with beekeeping;
- 7.17 Describe the signs that suggest a case of poisoning. Describe the actions that should be taken. Describe how a sample of affected bees is collected, packaged and labelled and where this is sent;
- 7.18 Be aware of potential new threats to beekeeping in the United Kingdom.

Stings

The Candidate will be able to:

- 8.1 Describe how to deal with a person who has been stung by a bee but shows no effect other than discomfort and slight local swelling;
- 8.2 Describe precisely the action to take when a person who has been stung by a bee, exhibits a severe reaction or anaphylactic shock.

Honey and Honey Processing

The Candidate will be able to:

- 9.1 Demonstrate the apiary equipment normally used specifically for the production of honey;
- 9.2 Demonstrate devices for clearing bees from supers and discuss their use;
- 9.3 Demonstrate the equipment used to extract and prepare the honey produced in the apiary and show the place used for processing and packing honey;
- 9.4 Have available for inspection by the Assessors, typical samples of packed honey ready for the table and for retail sale, including a minimum of 3 jars of liquid and 3 jars of set honey;
- 9.5 The assessors may choose to sample the honey provided;
- 9.6 Describe the preparation of Liquid Honey and Set Honey (both granulated and soft set) and methods that may be employed to obtain these with good quality results, including mention of the recommended temperatures for satisfactory results;
- 9.7 Describe the preparation of Comb Honey and methods employed to achieve this;
- 9.8 Describe the arrangements for extracting honey from the comb;
- 9.9 Describe the processing and storage arrangements for the honey and packaging for sale;
- 9.10 Describe how the requirements for public health and safety, consumer protection, food hygiene, as overseen by the Environmental Health Officer, apply to Candidates in the area;
- 9.11 Demonstrate familiarity with current regulations and other statutory requirements as they affect those offering honey for sale;
- 9.12 Describe the spoilage of honey particularly by fermentation (including the effect of water content, storage temperature and the presence of yeast).

Records

10.1 The Records may be kept in any convenient form by the Beekeeper and will be used to record the activities and conditions found on each and every inspection of a specific hive. It will also provide information on the performance of the apiary including the quantity of honey taken and processed from the hives.

The Records will provide a continuous record for at least twelve months.

There will be an entry in the Records each time the beekeeper visits the apiary and manipulates a colony.

The beekeeper will enter the date and time of the visit and for each colony and will use a method of assessing the following attributes of the colony:

- The existence of a queen from no evidence to laying queen observed or witnessed.
- The existence or otherwise of queen cells/cups.
- The temper of the colony from very docile to unworkable.
- The degree of disease and probable diseases seen.
- The brood size and pattern.
- Quantity of stores available (including pollen).
- Available space for colony expansion.

10.2 The Records will be used to record the activities of the beekeeper, such as:

- Feeding.
- Frames/supers added or removed.
- Queen rearing activities.
- Swarm control activities.
- Disease control activities including the use of all medicines.
- Details of swarms collected.

10.3 **The Records should also include the following items:**

The apiary layout

This can be pictorial and shows the location of each colony in the apiary and how they are marked. It is always recommended that hives are marked in some way so that other beekeepers and the public can identify the owners.

Plans for work in the apiary

This section will hold plans for managing the colonies in the apiary. It is particularly useful to record the activities and timings planned for queen rearing and swarm control. It can also be used as a reminder for repairing hives or buying new equipment.

If there is any concern over the general vigour or health of a colony it can be marked here as a reminder to replace certain queens or re-site colonies.

Information will also include the dates when inspections and manipulations are needed to raise new queens and other activities.

APPLICATION TO ENTER

Application to Enter

These should be made through the Local Examination Secretary of the Area Beekeeping Association or directly to the BBKA Examinations Board Secretary at the Address given below. Applications are required not later than 28th February in the year the Assessment is to be taken.

Application Form

Any application must be accompanied by a completed Application Form together with the Assessment Fee. Cheques should be made payable to BBKA. The dates when relevant certificates were obtained must be entered on the Application Form. Certificates should not be sent.

Assessment Fee

Details of the current fee for the Assessment may be obtained from the Local Examination Secretary or the Board Secretary.

AUTHORITY

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

The Secretary,
BBKA Examinations Board,
The British Beekeepers' Association,
R.A.S.E.,
Stoneleigh Park,
Kenilworth,
Warwickshire.
CV8 2LG

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