

Scottish Beekeepers' Association

Education and Examination Committee



Syllabus

of Examination in Apiculture

SCOTTISH INTERMEDIATE PRACTICAL CERTIFICATE

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AIMS

Nov 2023

1. To improve the standard of beekeeping in Scotland.
2. To give beekeepers who have gained the SCOTTISH BASIC BEEKEEPING CERTIFICATE or the JUNIOR BEEKEEPER CERTIFICATE, and have owned and managed at least two colonies continuously for at least five years the opportunity to sit the practical and oral examination to obtain the SCOTTISH INTERMEDIATE PRACTICAL CERTIFICATE.
3. To enable candidates to test their knowledge and competence in their continuing beekeeping career.

CONDITIONS OF ENTRY

1. The Candidate shall have gained the SCOTTISH BASIC BEEKEEPING CERTIFICATE or the SCOTTISH JUNIOR BEEKEEPER CERTIFICATE, or an equivalent qualification approved by the SBA Education Committee. The date when this certificate was obtained shall be entered on the application form.
2. The Candidate shall have owned and managed continuously bees for at least five seasons.
3. The appropriate application form and fees shall have been received by the Education Officer prior to the deadlines published in the Scottish Beekeeper Magazine and on the SBA Website.

AWARD OF CERTIFICATE

- Exams shall be completed within a single season
Exceptions will only be made for exceptional circumstances - e.g. illness, weather, unavailability of venue or other criteria identified by the examiners.
A single season is defined as the year from final application date for the practical exams, beginning April to the end of March the following year.
- The SBA reserves the right to fail the candidate for a variety of reasons, including (but not limited to) illegal or unsafe activities, physical or verbal abuse, or actions that may bring the SBA into disrepute.
- Failing any part of the exam requires retaking the whole exam. Retaking only part may be allowed only at the discretion of the SBA education sub-committee (again only for exceptional circumstances).
- All pre-prepared material shall be shown.
- Practical beekeeping exams, shall be completed early enough in the season to ensure colonies aren't too far into their winter plans and still have drones, brood etc.
- The exam will be structured in 4 sections A- Introduction, visit to the candidates extraction ,bottling and storage facility(s) (15%) . B – Apiary visit – Tasks for candidates to demonstrate practical beekeeping competence (40%). C- Oral questions during the apiary visit (25%). D- Oral questions after the hives have been closed (20%)
- The marks sheet is a guide to the awarding of the exam based on suggested topics taken from the syllabus - however examiners may ask questions on any topic from the syllabus at their discretion. (This covers situations where a question is asked off topic and it leads to an issue resulting in a failure, even though it wasn't strictly an item on the marks sheet).

The SBA INTERMEDIATE PRACTICAL CERTIFICATE will be awarded at a Pass (60%), Credit (70%) and Distinction (80%). The award level will be decided by the marks achieved in the minimum % section e.g. if

only a pass % is achieved in one section and credit or distinction % marks are achieved in all other sections, then the overall award will be a Pass.

A pass level (60%) must be obtained in all sections of the examination i.e. less than 60% in any one section will lead to a fail

The candidate shall be informed of the results of the examination in writing within 2 weeks of the completion of the exam. In the case of failure helpful advice on the problem areas shall be provided. If an unsafe practice leading to a failure is observed during the exam, this will not be disclosed to the candidate at that point and that part of the exam shall continue.

SYLLABUS

1.0 General

- 1.1 The assessment will be arranged to the mutual convenience of the Candidate and the Examiners, depending on the weather.
- 1.2 The examination may take two and a half to three and a half hours in total but individual hives will only be open for a short time.
- 1.3 Two Examiners, approved by the SBA Education Committee shall conduct the examination.
- 1.4 If possible, at least two colonies and a nucleus should be available for the examination.
- 1.5 Each examiner shall complete a mark sheet and in the case of mark discrepancies the averaging system outlined in the mark sheets shall be used. One of the examiners shall report the agreed mark to the exam administrator
- 1.6 Normally only the Examiners and the Candidate will be present. Should the Education Committee wish a Trainee Examiner or a member of the Education Committee to be Present as an observer, prior approval of the Candidate will be obtained.
- 1.7 The assessment will ideally take place in the Candidate's apiary during the active months of either May, June or July. The Practical Beekeeping section has been written to reflect the year's work, commencing with winter preparations.
- 1.8 Since the examination will take place in the months stated in 1.7, operations performed outwith these months will require a descriptive or simulative answer.
- 1.9 The Candidate will be expected to provide all equipment for opening and handling colonies and demonstrate proficiency in lighting and using the smoker and performing manipulations at the request of the Examiner.
- 1.10 The Candidate's honey and wax processing equipment, queen rearing equipment and storage facilities for supers, brood boxes not in use and honey should be available for inspection.
- 1.11 Extraction and honey-handling equipment must comply with the current legal requirements for food processing and packing; to include facilities for cleaning, weighing and storing.
- 1.12 The Candidate shall have samples from their own apiary of clear, set and comb honey, also a wax product available for inspection.
- 1.13 Show how extracted supers are stored in weather/vermin proof premises.
- 1.14 Show how they deal with cappings and old combs
- 1.15 Describe how to prepare clear, set and comb honey for the market.
- 1.16 Describe how to produce set honey using seeding, including recommended processing and seeding Temperatures.
- 1.17 Assessor to inspect colony records and medicinal records – *previous and current year for colony records and previous five years for medicinal records.*

2.0 Practical Beekeeping

The Candidate will be able to:

- 2.1 demonstrate their method of opening up a bee hive, removing frames for examination and replacing frames back in the hive. Particular emphasis will be placed on the use of the smoker and hive tool and on the control of the bees.
- 2.2 demonstrate and discuss how to read a colony, pointing out the various stages in worker and drone brood development, honey and pollen stores, and comment on the age and condition of the brood combs.
- 2.3 demonstrate their method(s) of varroa monitoring and discuss treatment throughout the year, also discuss the possibility of reinfestation.
- 2.4 demonstrate the clipping and marking of a queen (may use a drone) and explain the reasons for doing so.
- 2.5 demonstrate the method of checking for brood diseases. Describe how to prepare a colony for the winter, after removal of the honey crop (queenright, varroa/disease, food, weather/vermin proof)
- 2.6 describe a method of determining that there are sufficient winter stores in the hive.
- 2.7 demonstrate taking a sample of bees for the diagnosis of adult diseases. discuss autumn, winter and spring feeding, monitoring, methods of preparing syrup and range of feeder types.
- 2.8 demonstrate their method of checking for swarm preparations.
- 2.9 demonstrate their method of swarm control highlighting its advantages and drawbacks.
- 2.10 demonstrate their method of queen rearing and show an awareness of the possibility of in-breeding. Request to see a record of a breeding calendar.
- 2.11 discuss the treatment and possible severe effects of bee stings.
- 2.12 discuss optimum apiary location, layout to minimise drifting and methods of preventing bees being a nuisance to neighbours and to the public.
- 2.13 explain what to look for during the first spring inspection of a colony.
- 2.14 demonstrate their method of note taking during manipulations.
- 2.15 demonstrate their method of producing nuclei which (i) will remain in the apiary.
(ii) will be moved to an apiary over 5km away.
- 2.16 discuss the need for good personal and apiary hygiene.
- 2.17 discuss the frequency and method of comb renewal.
- 2.18 explain the criteria used to determine when to add honey supers to a colony.
- 2.19 describe how a colony could be prepared for transporting to another site outwith their flying distance and the method of transport.
- 2.20 discuss the problems and possible method of moving a colony for a short distance within an apiary.
- 2.21 explain their methods of swarm prevention (preventing bees from getting to the swarm preparation stage) and swarm control (action when bees have started preparing to swarm).
- 2.22 describe the appearance of natural, emergency and supersedure queen cells, also discuss the relative merits of each.
- 2.23 discuss the merits/demerits of removing spring honey, including oilseed rape.
- 2.24 discuss the possible uses of nuclei.
- 2.25 discuss their frequency and method of queen replacement.

- 2.26 describe the signs in a colony of a drone laying queen or laying workers and explain how they may be dealt with.
- 2.27 discuss timing and methods of removal of honey from a colony.
- 2.28 discuss the preparation of a colony prior to removal to the oilseed rape or heather.
- 2.29 describe their method of honey extraction & preparation of cut comb or sections.
- 2.30 describe their method of uniting colonies, including precautions to be taken.
- 2.31 describe the actions required to deal with a vicious stock of bees.
- 2.32 describe conditions which may induce robbing and explain how to deal with it once Started.
- 2.33 describe the extraction, filtering and storage of honey.
- 2.34 describe their treatment of beeswax cappings and old combs.
- 2.35 describe how to prepare clear, set and comb honey for the market, to include a method of seeding honey, suggesting recommended temperatures to obtain optimum results.
- 2.36 show, using a honey jar/cut comb container/section box, the honey labelling regulations.

3.0 **Oral**

The Candidate will be able to:

- 3.1 explain the statutory regulations regarding certain notifiable bee diseases and Infestations.
- 3.2 describe how diseases and pests can be spread between colonies and precautions which can be taken to reduce the chances of that occurring.
- 3.3 describe the signs of AFB and EFB and the action to take if either are suspected.
- 3.4 distinguish between Varroa and Braula.
- 3.5 discuss the implications of viruses, especially those associated with Varroa.
- 3.6 describe the detection and control of Acarine and Nosema diseases.
- 3.7 describe the recognition and control of Chalk Brood and Sac Brood.
- 3.8 explain what action to take if spray poisoning is suspected.
- 3.9 name the main nectar and pollen producing plants in their area, including the expected flowering times.
- 3.10 name the possible sources of honeydew in their area.
- 3.11 name any sources of undesirable nectar in their area.
- 3.12 discuss the effects of weather conditions on a colony at different times of the year.
- 3.13 explain the different roles that a worker bee performs during her life.
- 3.14 explain the difference between summer and winter bees.

Reading List

The recommended reading list for this exam is shown in the table in the exam section of the SBA website at

https://www.scottishbeekeepers.org.uk/images/education/exams/Reading_guide_list_for_the_SBA_Examinations2021.pdf

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