# FIBKA EDUCATION

Version 1.2 Nov 2023

# FIBKA EDUCATION

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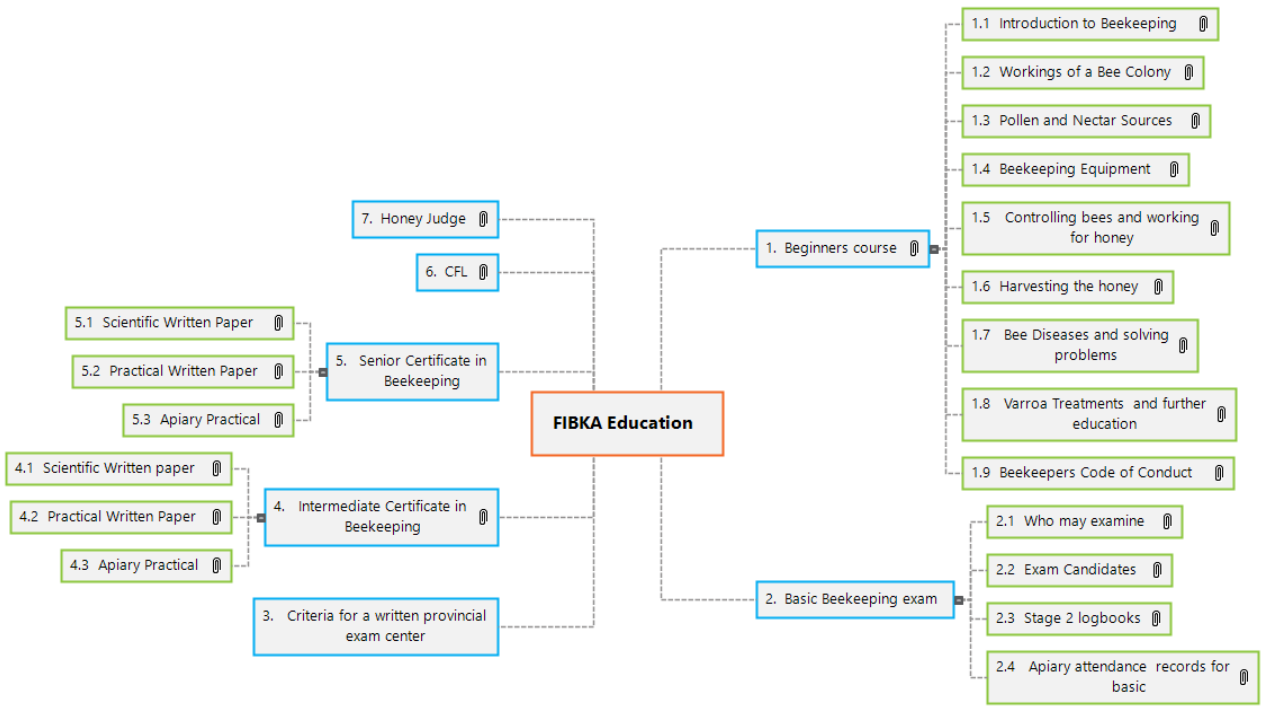

# 1 BEGINNERS COURSE

Beginners' lectures should be delivered by qualified beekeepers at the association level in line with the FIBKA syllabus. A series of eight lectures should be delivered under the guidelines (1.1 - 1.8). A FIBKA certificate of attendance shall be awarded to those who complete the lectures delivered by a FIBKA affiliated associaiton.

## 1.1 INTRODUCTION TO BEEKEEPING

This lecture should give a general overview of a year in beekeeping from August, through the year to the following August when the honey is taken off. All aspects should be mentioned month by month, the beekeepers' activities in your area in the form of a light overview to interest the beginners. The lecture should be light and engaging as an overview to the years' work.

## 1.2 WORKINGS OF A BEE COLONY

Siting of an apiary and FIBKA beekeepers code of practice should be included. Workings of a bee colony should include the occupants of the hive, queen, worker and drone and how to identify each. The life cycle of all three casts and the "bee maths" required to maintain your colony. Give an elementary account of production of queens, workers and drones in the honeybee colony, the lifecycle of all three, the jobs done at the various stages of development from egg to larvae to bee. Tie it in to the requirement to understand the maths, the range covered by bees when it comes to moving bees and getting queens mated.

At the end of the lecture the beginner should have a knowledge of:

- the periods spent by each caste in the four stages of its life cycle (egg, larva, pupa, adult)
- an elementary description of the function of the members of each caste in the colony
- aware of the existence of laying workers and drone laying queens
- have an appreciation of wax production by the worker bee and the use of this wax by the bee!

## 1.3 POLLEN AND NECTAR SOURCES

This lecture should cover the collection of nectar, pollen, propolis and water by the colony and the uses for each. Give a simple definition of nectar and describe how it is collected and brought back to the hive. Name the main local flora from which honeybees gather pollen and nectar. Give a simple description how nectar is converted into honey. Be aware of the use of nectar and honey in the life of the colony. Be aware of the collection of water and its uses in the colony. Be able to give a simple description of the collection of pollen and its importance in the life of the colony. Be able to describe the origins, collection, and use of propolis in the honeybee colony. The value to farms and others in pollination services.

## 1.4 BEEKEEPING EQUIPMENT

Identify and name the parts of a modern beehive. Be aware of the concept of the bee space and its significance in the modern hive. Explain why we use wax foundation where both wired, and none wired are used. Explain the difference between Manley and Hoffmann frames and the reason for their use. Explain the floor, brood box , queen excluder, super. Explain what a smoker and hive tool are used for. Explain the bee suits and gloves that can be used.  Markers and queen cages. Uncapping tools and types of extractors, strainer etc

## 1.5 CONTROLLING BEES AND WORKING FOR HONEY

Siting of an apiary, refer again to the FIBKA beekeeper's Code of Conduct, use of the queen excluder, smoker from how to light it, to safety precautions and the use of smoke in handling bees. Explain the supers and where they are used. Clipping and marking queens, a method of swarm control, preparing syrup, how and when to feed. The use of syrup vs fondant.

## 1.6 HARVESTING THE HONEY

Explain the use of queen excluder, clearer boards, bringing home the honey, uncapping, extracting bottling. Use of uncapping tool and extractor. Cleanliness of the food product, strainers, labels etc.

Apiary hygiene and traceability of honey. Storing supers, dealing with wax moth and mice. Harvesting other hive produces and a brief overview of what they can be used for.

## 1.7 BEE DISEASES AND SOLVING PROBLEMS

Basic introduction to the varroa mite and the associated problems it can cause within a colony.

Identify healthy brood and then what unhealthy brood looks like in relation to;

- AFB, how to identify and what action needs to be taken.
- EFB, how to identify and what action needs to be taken
- Chalkbrood
- Nosema
- Laying workers
- Drone laying queens

## 1.8 VARROA TREATMENTS AND FURTHER EDUCATION

Life cycle of the varroa mite and a basic introduction of the approved licenced medications currently available in the Republic of Ireland. Responsibility to use the medications as approved under the SPC of the animal medicines board. Open the floor to questions on how to join the local association, apiary demonstrations and any other activities your association makes available to its members. Beekeepers should be advised to source their bees locally and not to import them. Please note only FIBKA association members should be at the association apiary and all demonstrations /handling of bees should be for current years members only.

## 1.9 BEEKEEPERS CODE OF CONDUCT

BEEKEEPERS CODE OF CONDUCT

All Beekeepers should be aware of the beekeeper's code of conduct and make every effort to adhere to the guidelines.

1. To site my hives and apiaries away from places frequented by the public where they are likely to cause nuisance to neighbours or those in the vicinity and to ensure that the public cannot easily access them.
2. To ensure that my apiary sites are stock proof and not close to areas where Bloodstock are worked, trained, or exercised.
3. To ensure as far as possible that my bees are of docile temperament and to work towards this by eliminating bees that show undesirable characteristics and to take all reasonable steps to control swarming.
4. To manipulate my bees in a responsible manner and in suitable weather conditions, especially in urban areas so that no nuisance is caused to neighbours or those in the vicinity and especially at the time of removing the honey crop.
5. To ensure that the honey crop is removed in a responsible manner, extracted and stored in suitable containers free from all contaminants especially moisture, odours, and chemicals.
6. To present honey for sale in a proper clean container free from all debris and labelled in accordance with current legal requirements
7. To participate as an active member of my Local Association where I can acquire the skills and knowledge to become a competent and responsible beekeeper and to encourage other beekeepers to do likewise.
8. To strive to always ensure good neighbourly relations
9. To keep bees suitable for my area.
10. Not to interfere in other beekeepers' apiaries, not to put hives close to other beekeepers without prior agreement.
11. To ensure that all notifiable diseases are reported, and correct appropriate action is taken to deal with the problem.
12. Keep varroa levels under control and maintain colonies in healthy condition.

# 2 BASIC BEEKEEPING EXAM

Application forms for this exam shall be submitted to FIBKA by 28 February in the year the candidate wishes to undertake the examination. Examination candidates should print off a copy of the various record forms in this guide and maintain their own records in a folder.

## 2.1 WHO MAY EXAMINE

The examiner for the Basic Beekeeping exam may be an association member who holds a full intermediate certificate from FIBKA. If such a qualification is not within the association the association shall source the person from an adjoining association. All costs shall be covered by the association. The practical aspect of this may take part in the association apiary once the candidate's paperwork has been approved by FIBKA. FIBKA will set a fee per candidate for processing the examination, the balance of the additional cost shall be set by the association running the examination.

## 2.2 EXAM CANDIDATES

The candidate shall have kept their own bees for a minimum of 12 months and shall complete the following.

- Record a short (edited) video of themselves clipping and marking their own queen (no longer than 2 minutes).
- Attend 8 demonstrations at your association apiary. Each date and time must be signed off by the association's apiary manager or association secretary as appropriate. It is up to the candidate to keep their own record and ensure the paperwork is in order. See form 1
- A copy of your hive record extending over a minimum of 12 months.
- Attend a bee disease workshop at the association level. A letter signed by either the association apiary manager or association secretary will suffice.
- Take a sample of honeybees from your hive and send them for diagnostics to the authorized laboratory for testing. A copy of the report from the authorized laboratory addressed to the candidate will suffice. If completed by video, it should not exceed 3 min total.

- A copy of your animal medicine record for applying varroa treatment authorized for use in the Republic of Ireland.
- Light a smoker taking the safety precautions into consideration (3 min video). Disposal of smoker contents needs to be properly addressed.
- Assemble a frame with wire and wax suitable for extraction. 3 minute edited video of the work shall suffice.

All proof to be submitted at the time of application on their own private YouTube channel. The list below may be submitted by video taken on a phone or alternative media recording. It should be short and concise.

Paperwork/video work uploaded to candidates' private YouTube channel or alternative. Accessible links to be submitted on the application form. The paperwork needs to be legible.

**Inspection at the hive**

- The candidate will be required to go through a colony as directed by the examiner.
- Give an account of your method of swarm control.
- Give an account of what conditions could put a queen off lay and how the beekeeper can check for the presence of a queen in a colony.
- List 5 nectar and pollen-producing plants/shrubs or trees in your area.
- Identify 4 different things honeybees forage for.
- Have adequate knowledge of the licensed treatments for varroa in the Republic of Ireland, the time to apply them, the duration of treatment, the withdrawal period and records that need to be kept.

## 2.3 STAGE 2 LOGBOOKS

Those who have completed stage 2 log book shall be awarded a Basic Certificate. No further logbooks shall be distributed. Those who already have started the stage 2 logbook may complete it by the end of 2024 at the latest. From 1 Jan 2025, any new framework logbooks in circulation shall be classed as obsolete.

# FIBKA EDUCATION FORM 1

## 2.4 APIARY ATTENDANCE RECORDS FOR BASIC EXAMINATION

**Apiary attendance for basic certificate form**

**Name of Candidate**

**FIBKA Membership Number**

| Date | Apiary Location | Demonstrator name | Demonstrator Qualification | Signature of Apiary Manager |
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**Disease Workshop**

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**Diseases found on the day at the disease workshop**

# 3 CRITERIA FOR A WRITTEN PROVINCIAL EXAM CENTER

Associations with more than ten examination candidates may apply to FIBKA Education Board for a provincial examination Centre. Those candidates may be spread across intermediate and senior to make up the numbers. The association applying for the examination centre will have to organize a venue and invigilator approved by the Education Board. 20% of the overall fee for that paper shall be returned by FIBKA to the association accommodating the venue to cover the cost of venue hire, invigilator etc provided the association are willing to accommodate other FIBKA associations members at their examination venue. Examination venue application form shall be available from the FIBKA Secretary and shall be submitted with a full list of applicants along the name of the proposed invigilator prior to the **20 January** in the year of the examination. FIBKA may add additional candidates to that exam centre. Candidates should be prepared to travel in the event the associations application is not approved by the education panel. Provincial examination centre application forms shall be available from the FIBKA Secretary and shall be submitted with a full list of applicants along the name of the proposed invigilator.

# 4 INTERMEDIATE CERTIFICATE IN BEEKEEPING

This exam consists of three parts Scientific written paper, practical written paper, and the apiary practical. Once all three exams are complete with a pass in all three parts an Intermediate Certificate in Beekeeping shall be awarded. The results only are issued on completion of individual parts. Candidates must hold a preliminary or basic certificate or a completed stage 2 logbook.

## 4.1 CRITERIA FOR SITTING INTERMEDATE EXAMS

Beekeepers who have just commenced their journey in beekeeping and completed the 8 FIBKA lectures at association level and were issued with the FIBKA certificate of attendance are encouraged to study for the intermediate scientific and practical papers while engaging with apiary demonstrations as arranged by their association. There are no restrictions (apart from the 8 beginners lectures) on sitting the two written papers. Those candidates who do not hold the criteria for the intermediate apiary practical shall complete the Basic Beekeeping examination, prior to their application being accepted for Intermediate apiary Practical. Candidates shall print off the

worksheet forms provided in this guide to gather evidence of their practical experience and maintain their own records in a folder. Participating in association practical demonstrations/workshops/honey shows should commence the first year of this intermediate cycle so the candidates have the practical experience under their belts by the time they are eligible for the apiary practical examination.

## 4.2 SCIENTIFIC WRITTEN PAPER

**Although the following is a comprehensive outline of the syllabus, the student is also expected to be up to date with modern ideas on the honeybee, particularly where these ideas are dealt with in newer textbooks or in lectures that (s)he has attended.**

**Natural History of the Honey Bee**

The student will be able to;

- describe the stages in the life cycle of the three castes and the average number of days for each stage of metamorphosis,
- describe the function of each caste in the life of the colony,
- give an elementary description of parthenogenesis in the honeybee,
- give a simple description of sexual reproduction in the honeybee, the aerial mating of the queen and the drone, and the multiple mating of the queen,
- give a simple description of the communication dances of the honeybee workers,
- give a simple description of queen substance and its influence on the production of queen-cells,
- give a simple description of food sharing in the colony,

**Nectar and Honey**

The student will be able to give:

- an elementary account of the composition of nectar and its variations,
- an elementary account of the conversion of nectar to honey, including chemical changes of the basic sugars and the storage of honey by the bee, chemical equations are not necessary,
- the approximate percentages of the major constituents of a honey of average composition,
- an elementary description of the process of granulation of honey,
- an elementary description of the process of fermentation in honey,
- an elementary account of the importance of pollen in the nutrition of the honeybee.

- an account of the way nectar is collected and conveyed back to the colony and its conversion to honey,
- an account of the use of nectar, honey and water by the honeybee colony,
- an account of how pollen is collected, carried and stored,
- an account of the collection and use of propolis by the honeybee.

**External Anatomy and Internal Biology**

- an elementary description of the structure and segmentation of the exoskeleton,
- a detailed description of the external structure of the queen, worker and drone honeybee,
- an elementary description of structure and an elementary appreciation of the function of the appendages of the honeybee worker (the mouthparts, the antennae, the legs, the wings and the sting),
- an elementary description of the general structure and function in the adult worker bee of the alimentary canal and the digestion of sugars and pollen,
- the excretory system, including the function of the Malpighian tubules,
- the respiratory system and the interchange of oxygen and carbon dioxide,
- the exocrine glands of all three castes, but only the hypopharyngeal, mandibular glands,
- salivary glands, wax glands and Nasonov glands.
- the circulatory system, including the heart, dorsal and ventral diaphragms.

Simple labelled diagrams of all the above are required.

**Honeybee Forage, Plants and Pollination**

The student will be able to give:

- an elementary account of the process of pollination of a flowering plant using labelled diagrams,
- an elementary account of the process of fertilisation of a flowering plant using labelled diagrams.

**Diseases, Pests and Pathogens**

The student will be able to give:

- an account of the signs of Varroosis, how it spreads, methods of detection, monitoring and

treatment,

- an account of the signs of Small Hive Beetle infestation, how it spreads, methods of detection, monitoring and treatment,
- an account of the diagnosis of American Foul Brood (AFB) and European Foul Brood (EFB) and a tabulation of the differences between the signs of these two diseases,
- an account of the ways in which foul brood infections can spread from colony to colony,
- an account of the action necessary to take when AFB or EFB is found, including treatments and sterilisation of equipment,
- an account of the major provisions of the statutory regulations relating to Foul Brood, and their implementation in the Republic of Ireland,
- an account of the signs of, and the recommended treatment for adult bee diseases Nosema and Acarine,
- an account of how you would diagnose Nosema and Acarine using microscopes,
- an account of the signs and treatment of chalkbrood disease,
- an account of the signs of, and the recommended treatment for adult bee diseases,
- an account of colony starvation and possible remedial actions,
- describe the Bailey frame change,
- describe the Shook swarm,
- an alternative method of changing out all the brood frame yearly in a brood nest and the advantage to both the beekeeper and the honeybees,
- an account of the expert services available to the beekeeper.

Note recommended answers on diseases should include causative agents, signs, symptoms, effect on colony, spread and treatment/prevention.

**Honeybee Products and Their Preparation for Show and for Sale**

The student will be able to:

- give the approximate composition of an average honey,
- give an account of the properties of honey including specific gravity, viscosity, hygroscopicity and reactions to heat,
- give a description of the main constituents and physical properties of beeswax,
- give an account of the uses for, and marketing of beeswax,
- give an account of the use of other bee products such as pollen, royal jelly, venom and

propolis,

- give an account of the preparation of bee products for the show bench.

Note this syllabus is indicative not exhaustive (look on both scientific and practical for completeness)

## 4.3 PRACTICAL WRITTEN PAPER

Syllabus of Examination for Proficiency in Apiculture: Intermediate Examination Practical paper

Although the following is a comprehensive outline of the syllabus, the student is also expected to be up to date with modern ideas on the honeybee, particularly where these ideas are dealt with in newer textbooks or in lectures that (s)he has attended.

**Natural History of the Honeybee**

The student will be able to:

- describe the function of each caste in the life of the colony,
- detect a drone laying queen and give a simple description of the causes for this type of queen failure,
- detect laying workers and give an elementary description of the circumstances which allows them to occur in a colony,
- give a simple description of the work of the worker honeybees including comb building and repair, feeding the brood and queen, defence, ventilation, and temperature control,
- give a simple description of the annual population cycle of the honeybee colony using a graph, describe the influence of the local flora and weather on the variation in the size of the population of the colony,
- give a simple description of queen substance and its influence on the production of queen cells,
- give a simple description of food sharing in the colony.

**Nectar and Honey**

The student will be able to give:

- an account of the way nectar is collected and conveyed back to the colony and its conversion to honey,

- an account of the use of nectar, honey, and water by the honeybee colony,
- an account of how pollen is collected, carried, and stored, an account of the collection and use of propolis by the honeybee.

**Honeybee Forage, Plants and Pollination**

The student will be able to give:

- an account of the main nectar and pollen producing plants of Ireland and their flowering periods,
- an account of the honeybee as a pollinating insect and of its usefulness to farmers and growers

**Diseases, Pests and Pathogens**

The student will be able to give:

- an account of the signs of Varroosis, how it spreads, methods of detection, monitoring, and treatment,
- an account of the signs of Small Hive Beetle infestation, how it spreads, methods of detection, monitoring and treatment,
- an account of the diagnosis of American Foul Brood (AFB) and European Foul Brood (EFB) and a tabulation of the differences between the signs of these two diseases,
- an account of the ways in which foul brood infections can spread from colony to colony, an account of the action necessary to take when AFB or EFB is found, including treatments and sterilisation of equipment,
- an account of the major provisions of the statutory regulations relating to Foul Brood, and their implementation in Ireland,
- an account of the signs and treatment of chalkbrood disease,
- an account of the signs of, and the recommended treatment for adult bee diseases Nosema and Acarine,
- describe how to diagnose Nosema and Acarine with your own equipment,
- an account of colony starvation and possible remedial actions,
- describe the Bailey frame change,
- describe the Shook swarm,

- an account of the expert services available to the beekeeper,

Note recommended answers on diseases should include causative agents, signs, symptoms, effect on colony, spread and treatment/prevention.

**Apiary and Honeybee Management**

The student will able to:

- describe one of the various types of hive at present in use in Ireland,
- describe the various frames used in a hive with which the student is familiar,
- define and describe the concept of the “bee space”,
- describe the purpose of wax foundation within the moveable frame hive,
- describe the various common methods of maintaining the spacing of frames in hives and give the measurements of two recognised spacings,
- give a detailed account of how to commence beekeeping, including the acquisition of bees, sources of equipment, costs, and any precautions necessary when acquiring bees or equipment,
- describe the criteria to be observed when moving colonies of bees from one place to another (including optimum distance, vibration, temperature, ventilation, water supply),
- describe the factors to be considered when setting up an apiary,
- give an account of the year’s work in the apiary,
- describe the principles of feeding a colony of honeybees,
- describe the most common types of feeders in use,
- describe the principles of supering,
- describe the importance of supering as a factor in swarm control,
- give an account of the use of the queen excluder and describe the types in common use,
- give a detailed account of the artificial swarm as a method of swarm control and prevention,
- describe a method of taking and hiving a swarm,
- describe in detail a method of making nuclei,
- give an account of the various uses to which nuclei can be put,
- give an account of a method of uniting colonies,
- give an account of the methods of dealing with laying workers,
- describe a simple method of rearing a replacement queen,
- describe the symptoms of queen-lessness and how this may be confirmed,
- describe a method of queen introduction and the precautions to be taken,

- describe the problem of robbing and methods used to avoid it, or to terminate it once it has started,
- describe a method of clearing of bees from supers,
- describe how to prepare colonies for the winter period,
- describe the damage to colonies caused by mice and how to exclude them from the hives in winter,
- describe how to provide a suitable water supply for bees within the apiary,
- describe the principles of honey extractors, both tangential and radial,
- describe methods of storing comb with reference to prevention of wax moth damage,
- describe wax moth damage to stored comb,
- describe small scale methods of recovering beeswax from both comb and cappings,
- describe of method of changing out the brood nest frames on a yearly basis and the benefit to both the bees and the beekeeper.

**Honeybee Products and Their Preparation for Show and for Sale**

The student will be able to:

- give an account of the main requirements of the statutory regulations affecting the handling, preparation for sale, composition, and labelling of honey products,
- give an account of a method used to de-cap honeycombs, and of separating the capping's from the honey,
- give an account of the extraction of honey, including heather honey, from combs and the various types of extractors used, give an account of the straining and settling of honey after extraction,
- give an account of the storage of honey including the underlying principles of storage,
- give an account of the preparation and bottling of extracted honey for sale,
- give an account of the preparation of sections and cut comb honey for sale,
- give an account of the bottling of chunk honey for sale,
- give an account of the methods of recovering beeswax,
- give an account of the uses for beeswax,
- give an account of the uses of other bee products such as pollen, royal jelly, venom and propolis,

- give an account of the preparation of honey for the show bench,
- give an account of the preparation of beeswax for the show bench.

**Note this syllabus is indicative not exhaustive (look on both scientific and practical for completeness)**

## 4.4 APIARY PRACTICAL

**Intermediate Apiary Practical Exam**

Present his/her apiary, (customarily expected to contain at least three strong fully functional hives), and the records maintained over at least three years, to the examiners for inspection**.** Candidates must hold FIBKA basic certificate or preliminary certificate along with both intermediate written exams (scientific and practical) to be eligible to apply**.** Time allocation for the apiary practical element of this should not exceed 30 min per candidate. The paperwork needs to be legible. Application forms for shall be submitted before 28 February in the year of the intended examination. **The FIBKA appointed examiners reserve the right to immediately cancel the exam if the colonies are not deemed strong enough. Failure of a candidate to make themselves available on the date given to them by the examiners may result in the forfeit of the examination fee.**

**The candidate shall submit the following at the time of application for the exam.**

- Present showing cards from a minimum of 5 different classes (eg run honey, wax, comb, soft set /granulated etc) from honey shows open to all FIBKA associations having a minimum of 100 entries.
- Demonstrate for a minimum of 8 demonstrations on 8 different occasions at the association apiary. The demonstrator should have no more than 2 participants at the hive for the demonstrations to be counted, to create a learning environment. The form below should be used. See form 2.
- A copy of 3 full hive records over 3 years shall be submitted. All records shall be legible.
- Copy of animal medicine record for last 3 years.
- The candidate shall have demonstrated a minimum of 2 bee disease workshops on 2 different occasions on at the association level. The demonstrator should have no more than 2 participants at the hive for the demonstrations to be counted, to create a learning environment. The candidates shall be able to identify chalkbrood, sac brood, parasitic mite syndrome, deformed wing, wax moth, EFB and AFB at a minimum. See form3.
- Take a sample of 30 honeybees from the entrance and test for Acarine & Nosema with the use of microscopes. Video the process. Video should be clear, accurate and concise not to exceed 8 min.

- Attend two additional practical workshops run at association level. The workshop may be anything relating to bees, beekeeping, honey showing etc as deemed appropriate by the association. See form 3

**Section A. Select One of the following topics below. All work shall be clear and concise. Candidates will be penalised for exceeding the time limit. Create an 8 min (maximum time) video/ recorded PowerPoint presentation on;**

- The 2 different species of wax moth, the damage they can do and your method of storing supers and comb to prevent that damage.
- Shook swarming a colony.
- A method of changing out all brood combs in the brood nest annually.
- Applying a licenced varroa control to a colony.

**Section B. Select One of the following topics below. All work shall be clear and concise. Candidates will be penalised for exceeding the time limit. Create an 8 min (maximum time) video/ recorded PowerPoint presentation on;**

- Clearing bees from supers.
- Supering bees.
- Extracting and jarring honey.
- Wax recovery.

**Section C. Select One of the following topics below. All work shall be clear and concise. Candidates will be penalised for exceeding the time limit. Create an 8 min (maximum time) video/ recorded PowerPoint presentation on;**

- A method of producing a replacement queen and the precautions to be taken when introducing that queen to a new colony.
- Methods of spring management.
- Preparing colonies for winter.
- Feeding honeybees, feeders, amounts of feed and timing of feeding.

- The year's work in the apiary and how this is dependent on the annual colony cycle and the timing of local forage.

**Section D. Select One of the following topics below. All work shall be clear and concise. Candidates will be penalised for exceeding the time limit. Create an 8 min (maximum time) video/ recorded PowerPoint presentation on;**

- Your method of swarm control
- Taking a swarm
- Making nuclei
- Setting up an out apiary

**All work in the above section shall be saved on a personal YouTube channel and remain there until the examiners have completed their assessment.**

**Practical at the hive**

- Manipulate the colony as instructed by the examiner on the day.
- Have additional equipment available for inspection.

**Examiners shall be appointed by FIBKA. Each examiner shall hold a minimum of senior certificate. Examiners generally cover several candidates in an area on the day. Candidates need to make themselves available when the examiners are in their area. Failure to do so may result in forfeit of the examination fee.**

# FIBKA EDUCATION FORM 2

## 4.5 FIBKA EDUCATION FORM 2

**Apiary Attendance for Intermediate Apiary Practical Record**

**Name of Candidate**

**FIBKA Membership Number**

| Date | Apiary Location | Participant name 1 | Participant Name 2 | Signature of Apiary Manager |
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# FIBKA EDUCATION FORM 3

## 4.6 FIBKA EDUCATION FORM 3

**Demonstrate a minimum of 2 Disease workshops at association level.**

**Name of Intermediate Candidate**

**FIBKA Membership Number**

| Date | Apiary Location | Participant no1 | Participant No2 | Signature of Apiary Manager |
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# FIBKA EDUCATION FORM 4

## 4.7 FIBKA EDUCATION FORM 4

**Attendance at any two additional Practical Workshops Run at Association Level.**

**Name of Candidate**

**FIBKA Membership Number**

| Date | Location | Topic of Workshop | Person Delivering workshop | Signature of Secretary or Association Chairperson |
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# 5 SENIOR CERTIFICATE IN BEEKEEPING

This exam system shall consist of three examinations, scientific written, practical written and apiary practical. Candidates are encouraged to commence the requirements for the apiary practical as soon as the Intermediate Beekeeping Certificate is awarded, to fulfil the criteria for the apiary practical exam, by the time they have completed the theory examinations. An early start particularly where there are number of people from the same association are in a senior study group is vital to give the association time to see what additional workshops are required for their members, and so they can schedule those additional workshops on top of their normal activities. Forms 5 – 11 need to be completed in the interim prior to the candidate's apiary practical exam application being accepted. All recordings shall be stored on the candidates private YouTube channel or similar technology, remain there until the examination is complete and the candidate shall make the links available in the apiary application form to the examiners. Candidates shall print off the worksheet forms provided in this guide to gather evidence of their practical experience and maintain their own records in a folder. Participating in association practical demonstrations/workshops/honey shows should commence the first year of this senior cycle so the candidates have the practical experience under their belts by the time they are eligible for the apiary practical examination.

## 5.1 SCIENTIFIC WRITTEN PAPER

Syllabus of Examination for Proficiency in Apiculture: Senior Scientific written Syllabus for Examination

Although the following is a comprehensive outline of the syllabus, the student is also expected to be up to date with modern research on the honeybee, particularly where this research is dealt with in newer textbooks or in lectures that (s)he has attended.
Note this syllabus is indicative not exhaustive (look on both scientific and practical for completeness)

**Natural History**

The student will be able to:

- give a detailed account of sex determination in the honeybee,
- give a detailed account of the effect of feeding on caste determination in females of

the honeybee,

- give an outline account of the discussion regarding the differences between royal jelly and brood food,
- give a detailed account of the production of swarm, supersedure and emergency queen,
- cells and the influence of “queen substance” on the production of these cells,
- describe the signs and the causes of a “drone laying queen” in a colony,
- describe the signs of laying workers in a colony and give an account of the circumstance in which they are produced, and the pheromones involved,
- give an outline account of the physiological differences between laying and normal workers,
- illustrate and describe the structure of the egg of the honeybee,
- illustrate and describe the development of the embryo within the egg and the hatching of the larva,
- illustrate and describe the external and internal anatomy of the honeybee larva,
- give a detailed account of the metamorphosis of the honeybee larva,
- give an outline account of ecdysis (moulting),
- give an outline account of larval defecation and cocoon spinning,
- illustrate and describe the external anatomy of the pro-pupa and its change to the pupa,
- give an outline account of the change from pupa to imago,
- give an outline account of the structure and main constituents of the cuticle,
- give an outline account of the invagination of the cuticle within the body of the honeybee to form linings such as those of the gut and trachea,
- give a detailed description of the external anatomy of all castes of the honeybee and tabulate the differences between them,
- give a detailed account of the function of all the appendages of the honeybee such as wings, legs, antennae, sting, mouth parts and hairs,
- give a detailed account of the life histories of one selected species of each of the following: solitary bee, social bee (other than Apis mellifera), solitary wasp, social wasp, found in Ireland.

**Internal Honeybee Biology and Anatomy**

The student will be able to describe in detail and illustrate:

- the alimentary canal, including digestion, assimilation, and the production of enzymes,
- the excretory system, and substances excreted,
- the respiratory system, including muscular ventilation of the main trunks and diffusion of oxygen and carbon dioxide,
- the circulatory system, including the heart, dorsal and ventral diaphragms,
- the composition and function of the blood of the honeybee,
- the exocrine glands and their functions, particularly the hypopharyngeal glands and changes in their function, the mandibular glands and their secretions, the wax glands,
- wax production, the Nasonov gland and sting glands,
- the nervous system including the sense receptors,
- the fat body including its storage of metabolites,
- the reproductive system of queen and drone.

The student will be able to give an outline account of:

- glycolysis and energy production,
- the muscular functions in relation to respiration and flight,
- the endocrine glands,
- sperm and egg production.

**Genetics and Evolution**

The student will be able to give an outline account of the various races and strains of Apis mellifera commonly found in Europe and will be able to give a description of their appearance and behavioural characteristics and the evolution of the honeybee as a social insect.
The student will be familiar with Mendelian genetics, chromosomes, meiosis and mitosis, inheritance in the honeybee, the genetic basis of sex determination including parthenogenesis and dominant/recessive alleles.

**Bee Behaviour**

The student will be able to give a detailed account of:

- the function and behaviour of the worker honeybee throughout its life including types of work done, duration of work periods under normal circumstances and variations in behaviour due to seasonal changes and the state of the colony,
- the mating behaviour of the honeybee queen and drone including an account of the pheromones involved,
- the queen honeybee's egg laying behaviour including the variation of numbers laid with changing circumstances and time of year,
- the seasonal variation in the population size of a honeybee colony and an explanation of such variations,
- the organisation of the honeybee colony,
- the methods of communication used by the honeybee including food sharing, dancing, scenting and vibration, the behaviour of the foraging bee and its work methods in the field, including orientation, the behaviour of worker bees towards intruders and the theories advanced to describe the means by which colonies recognise intruders,
- the collection of nectar and water and their use by the colony,
- the inter relationship of nectar, honey and water in the honeybee colony,
- the conversion of nectar to honey including the inversion of sucrose in, and the evaporation of water from nectar and the role of the honeybee in accomplishing these changes,
- the collection and storage of pollen by the honeybee colony,
- the collection and use of propolis by the honeybee colony,
- the conditions leading to swarming,
- the conditions leading to supersedure,
- the behaviour of swarms and the method of selection by the swarm of a site for a new home,
- the initiation of comb building and of the construction of comb,
- the colony in winter, with special reference to ventilation, humidity and temperature control.

**Honeybee Forage Plants and Pollination**

The student will be able to give:

- a list of the major nectar and pollen producing flowers of Ireland and their flowering periods,

- a detailed account of the wild and cultivated nectar and pollen producing flowers of his own locality,
- a list of floral sources of undesirable nectar and a brief description of the characteristics of these nectars,
- an illustrated description of the floral structure and mechanisms of the following nectar and pollen producing flowers: clover, apple, mustard, ling, lime and dandelion,
- an illustrated description of extra floral nectaries,
- an illustrated description of the shape, structure and colour of pollen grains with reference to their diversity of shape and size as an aid to identification,
- an outline account of the process of pollination and fertilisation of flowering plants,
- an outline account of the factors affecting nectar secretion and variations in its composition in different flower species and differing weather conditions,
- an outline account of the main constituents of honeydew and its origins.

**Disease, Pests and Poisoning**

The student will be able to give:

- a detailed account of viruses and their detection,
- a detailed account of the life cycle of the Varroa mite, its detection and treatment,
- a detailed account of the life cycle of the Small Hive Beetle and Asian Hornet, its detection and treatment,
- a detailed account of the signs and symptoms of American Foul Brood (AFB) and European Foul Brood (EFB),
- a detailed account of the development of AFB and EFB within the colony,
- an outline account of the life cycle of the causative organisms of AFB and EFB and its development within the larva,
- a detailed account of the ways in which AFB and EFB are spread,
- a detailed account of the statutory requirements relating to honeybee pests and diseases and their implementation in Ireland,
- a detailed account of the treatment of AFB and EFB including methods of destruction of colonies and sterilisation of equipment,
- a detailed account of diagnosing EFB and AFB in your apiary with the use of lateral flow devices and microscopes,
- a detailed account of how to diagnose Acarine and Nosema in the apiary,

- a detailed account of diagnosing Acarine and Nosema for association members
- an outline account of the signs and symptoms of varroasis and methods of detection, treatment and any subsequent problems that might arise,
- a detailed account of Chalk Brood, Sac Brood and Stone Brood; their causes, signs and symptoms and recommended treatment.
- a detailed account of the signs and symptoms (if any) of all adult honeybee diseases found in Ireland,
- an outline account of the life cycle of the causative organisms of adult honeybee diseases,
- a detailed account of the various treatments for adult bee diseases,
- a detailed account of the laboratory diagnosis of Acarine, Nosema, Lotmaria and Amoeba disease,
- an outline account of the life cycle of braula coeca and its effect upon the colony,
- an outline account of the signs and symptoms of poisoning by natural substances, pesticides and herbicides,
- a list of crops most likely to be sprayed thereby causing damage to honeybee colonies examples of methods of spraying and the sprays which are likely to be least detrimental to honeybee colonies, a detailed account of the methods which can be used by the beekeeper to diminish the problem of spray poisoning,
- an account of the action to be taken when spray damage is suspected,
- give a detailed account of wax moth damage and of the life cycle of both Lesser and Greater Wax Moths (Achroia Grisella and Galleria Mellonella).

**Honeybee Products**

The student will be able to:

- give a detailed account of fermentation in honey, approximate results which would be obtained from an analysis of a typical sample of honey and an outline account of the range of variations of the main constituents,
- give a detailed account of the properties of honey including specific gravity, viscosity hygroscopicity and reactions to heat.

## 5.2 PRACTICAL WRITTEN PAPER

Syllabus of Examination for Proficiency in Apiculture: Senior Practical written Syllabus for Examination.

Although the following is a comprehensive outline of the syllabus, the student is also expected to be up to date with modern research on the honeybee, particularly where research is dealt with in newer textbooks or in lectures that (s)he has attended.

Note this syllabus is indicative not exhaustive (look on both scientific and practical for completeness).

**Natural History**

The student will be able to:

- describe the signs and the causes of a “drone laying queen” in a colony,
- describe the signs of laying workers in a colony and give an account of the circumstance in which they are produced, and the pheromones involved.

**Bee Behaviour**

The student will be able to give a detailed account of:

- the conditions leading to swarming,
- the conditions leading to supersedure,

The student will be able to give;

- an illustrated description of the shape, structure and colour of pollen grains with reference to their diversity of shape and size as an aid to identification,
- a detailed account of the use of honeybees in orchards and fields of seed crops with reference to honeybee behaviour.

**Disease, Pests and Poisoning**

The student will be able to give:

- a detailed account of viruses and their detection,
- a detailed account of the life cycle of the Varroa mite, its detection and treatment,
- a detailed account of the life cycle of the Small Hive Beetle and Asian Hornet, its detection and treatment,

- a detailed account of the signs and symptoms of American Foul Brood (AFB) and European Foul Brood (EFB), including the diagnosis of the diseases in conjunction with the use of the lateral flow device and compound microscope,
- a detailed account of the development of AFB and EFB within the colony, an outline account of the life cycle of the causative organisms of AFB and EFB and the development within the larva,
- a detailed account of the ways in which AFB and EFB are spread,
- a detailed account of the statutory requirements relating to honeybee pests and diseases and their implementation in Ireland,
- a detailed account of the treatment of AFB and EFB including methods of destruction of colonies and sterilisation of equipment,
- a detailed of account of diagnosing AFB and EFB with microscopes
- an outline account of the signs and symptoms of varroosis and methods of detection, treatment and any subsequent problems that might arise,
- an account of Lotmaria and Crithidia,
- a detailed account Chalk Brood, Sac Brood and Stone Brood; their causes, signs and symptoms and recommended treatment,
- a detailed account of the signs and symptoms (if any) of all adult honeybee diseases found in Ireland,
- an outline account of the life cycle of the causative organisms of adult honeybee diseases,
- a detailed account of the various treatments for adult bee diseases,
- a detailed account of the laboratory diagnosis of Acarine, Nosema and Amoeba disease,
- a detailed account of diagnosing Acarine and Nosema with microscopes at association level,
- an outline account of the life cycle of braula coeca and its effect upon the colony,
- an outline account of the signs and symptoms of poisoning by natural substances, pesticides, and herbicides,
- a list of crops most likely to be sprayed thereby causing damage to honeybee colonies, examples of methods of spraying and the sprays which are likely to be least detrimental to honeybee colonies,
- a detailed account of the methods which can be used by the beekeeper to diminish the problem of spray poisoning, an account of the action to be taken when spray damage is suspected.

**Historical Aspects of Beekeeping**

The student will be able to give;

- a detailed account of: the history of beekeeping in Ireland and of leading contributors to the knowledge of honeybees and of beekeeping practices,
- beekeeping methods of the past and modern developments from these the evolution of the moveable from hives in Ireland and their frames and components,
- the discoveries of some the more famous beekeepers outside of Ireland such as Bro Adam, Huber, von Frisch, Langstroth etc.

**Apiary and Honeybee Management**

The student will be able to:

- give a description of the various hives in use in Ireland,
- give the main features in their construction and the principles which govern their design,
- describe and give the measurements of various types of frames used in Ireland today,
- define and describe the concept of “the bee space”,
- give a detailed account of the use of wax foundation and its manufacture both commercially and by home production,
- describe methods of fitting frames with wax foundation including wiring and embedding, give a detailed account of the various methods of spacing frames in hives,
- give the usual dimensions for the spacing of frames, and the advantages and disadvantages of varying the spacing,
- give a detailed account of how to begin beekeeping, including the acquisition of bees, sources of equipment and costs, and any precautions necessary particularly in suburban areas,
- give a detailed account of good apiary work practice and any precautions that must be taken in accordance with the Health and Safety Act, give a detailed account of the setting up and management throughout the season of an observation hive and the various uses to which observation hives can be put,
- describe in detail the factors to be considered in the layout of colonies in both home apiaries and out apiaries,
- describe in detail the criteria used in the selection of out-apiaries,
- give a detailed account of drifting of honeybees, the dangers caused and methods of apiary layout to minimise this problem,

- give a detailed account of the year's work in the apiary and describe how this is dependent upon the annual colony cycle and the timing of local bee forage,
- give a detailed account of the principals involved in feeding bees, including types of feeder, amounts of food, types of food and timing of feeding,
- give a detailed account of the nutritional value of honey and of pollen to the honeybee colony,
- give an outline account of the use of pollen substitutes,
- give a detailed account of the principles of supering honeybee colonies, and the relationship of supering to swarm control, give a detailed account of the use of the queen excluder and the types in general use,
- give a detailed account of the various methods of swarm control used in Ireland in both small- and large-scale beekeeping enterprises,
- give a detailed account of methods of taking and hiving swarms of honeybees,
- give a detailed account of methods of making nuclei and the various uses to which nuclei can be put,
- give a detailed account of how swarms and nuclei are built up into colonies for honey production,
- give a detailed account of the various methods of uniting colonies of honeybees, of the underlying principles of these methods and the precautions to be taken,
- give a detailed account of the various methods of queen rearing,
- give the principles of the selection of breeder queens,
- give an outline account of the methods of instrumental insemination of queen honeybees and the use of the technique in honeybee breeding,
- give a detailed account of the methods of queen introduction; the principles, underlying the processes involved; the precautions to be taken; and the attendants, difficulties in relation to different strains of bee and the colony condition,
- give a detailed account of robbing in its various forms, its prevention, dangers, and methods of termination once it has started,
- give a detailed account of spring management of colonies,
- give a detailed account of the benefits and mechanism for changing out the wax and frames in a complete brood nest on a yearly basis and the benefit of the practice to both bees and beekeeper,
- give a detailed account of the assessment of the quality of a colony for honey production,
- give a detailed account of the methods of marking queens and the value of the practice,

- give a detailed account of the methods of clipping queens and the value of the practice,
- give a detailed account of summer management including the control and prevention of swarming,
- give a detailed account of the management needed to cope with different districts, weather conditions and the timing of flowering of forage plants,
- give a detailed account of the management of colonies for the production of comb honey, sections, cut comb and heather honey,
- give a detailed account of methods of moving colonies and the difficulties and dangers involved,
- give a detailed account of the management of colonies used for migratory beekeeping for both honey production and pollination services,
- give a detailed account of the various methods used to “clear” bees from supers,
- give a detailed account of the preparation of colonies for the winter period and the principles underlying the preparations,
- give a detailed account of methods of excluding mice from colonies and of the damage they can cause,
- give a detailed account of woodpecker damage to hives and methods of prevention,
- give a detailed account of wax moth damage and of the life cycle of both Lesser and Greater Wax Moths (Achroia Grisella and Galleria Mellonella),
- give a detailed account of the proper storage of comb and methods of preventing wax moth damage.

**Honeybee Products**

The student will be able to:

- give a detailed account of the main requirements of the statutory regulations affecting handling, preparation for sale, composition, labelling, and weight of honey products,
- give a detailed account of the various methods used to uncap honeycombs, and of separating the cappings from the honey,
- give a detailed account of the extraction of honey, including heather honey, from comb and the various types of extractors used,
- give a detailed account of the straining and settling of honey after extraction,
- give a detailed account of the storage of honey including the underlying principles of storage,

- give a detailed account of the preparation and bottling of extracted honey (liquid, creamed or granulated) for sale,
- give a detailed account of sieving, straining and filtration of honey for sale,
- give a detailed account of the preparation of sections and cut comb honey for sale,
- give a detailed account of the bottling of chunk honey for sale,
- give a detailed account of the process of granulation in honey including its cause, initiation, speed, texture and size of the crystal,
- give a detailed account of fermentation in honey, approximate results which would be obtained from an analysis of a typical sample of honey and an outline account of the range of variations of the main constituents,
- give a detailed account of the properties of honey including specific gravity, viscosity, hygroscopicity and reactions to heat,
- give a detailed account of the methods of recovering beeswax, a description of the main constituents and physical properties of beeswax,
- give a detailed account of the uses for, and marketing of, beeswax,
- give a detailed account of the use of other bee products such as pollen, royal jelly, venom, and propolis,
- give a detailed account of the preparation of bee products for the show bench.

## 5.3 APIARY PRACTICAL

**Senior Apiary Practical**

The candidate shall present his/her apiary, or apiaries and the records maintained over at least five years, to the examiners for inspection (a minimum of five full stocks of honeybees for 3 years will be required). Candidates must hold a full Intermediate Certificate in Beekeeping from FIBKA along with both Senior Scientific and Senior Practical written papers completed to be eligible to apply. Forms 5-11 should be started as soon as the Intermediate Beekeeping Certificate is awarded to ensure the candidate is eligible for the apiary practical when the time comes. **The FIBKA appointed examiners reserve the right to immediately cancel the exam if the colonies are not deemed strong enough. Failure of a candidate to make themselves available on the date given to them by the examiners**

**may result in the forfeit of the examination fee. Application forms shall be submitted to FIBKA prior to 28 February in the year of the intended examination.**

**The candidate shall have the following completed prior to applying for the exam.**

- **Present prize cards.** (1st, 2nd or 3rd) in 5 different classes at honey shows with over 100 entries in the shows open to all FIBKA associations since completing your intermediate certificate **and** proof of either stewarding with a FIBKA honey judge at 3 different honey shows or running a honey show as show secretary. See **form 5.**

- **Demonstrated at local level.** Have demonstrated to beginners/intermediates at your association apiary on at least 8 occasions since attaining your intermediate beekeeping certificate. The form below shall be used. See **form 6.**

- **Design, plan and run an apiary demonstration** to supervise the intermediate beekeepers at your association apiary. The form below shall be used. See **form 7**.

- **Disease workshop.** Run a disease workshop at the association level (disease workshops shall be designed with low numbers, no more than 2 learners per demonstrator, (to create a learning environment). The form below shall be used. See **form 8.**

- **Wax Workshop.** Run a wax processing /candle making workshop at association level or produce a 20 min(max)instructional video lecture on rendering down wax for either resale or to convert it to another hive commodity. Form below shall be used for workshop **Form 9.**

- **Run a workshop on** the use of microscopes to diagnose Acarine, Nosema, AFB and EFB at association level. The use of Lateral flow device shall be demonstrated. Form below shall be used for workshop. See **form 10.**

- **Practical Workshops at Association Level**. Run an additional workshop at the association level of your choosing in agreement with the association's requirements. Form below shall be used for workshop. See **form 11.**

- **Hive Records** for the last 3 years for the 5 strong colonies to be used for the exam in the candidate's own apiary.

- **Animal Medicine Record** for the last 3 years for the 5 colonies to be used for the exam in the candidate's own apiary.

**Honey House. This section is compulsory, and candidates must attain 70% in this section to pass.**

- Have spare equipment available for inspection.
- Have combs not in use available for inspection and demonstrate methods and place of storage. Show how combs are stored to keep them free of vermin, dust, dirt, and absorption of contaminants, e.g., no storage in a garage near paint, oils, or solvents.
- Show how wax foundation is stored to keep it fresh and free of contaminants.
- Have samples of their honey/hive products properly labelled and available for sale.
- Have vermin control in place.
- Water supply used for processing equipment should comply with potable quality. Those on private water schemes and wells should have the water tested in the current year.
- Where the honey processing building is used, show how it can be wiped clean, covered light bulbs, equipment cleaned, potable water supply, vermin control, and honey stored while awaiting processing.
- Show how the cleaned extractor, settling tanks, buckets and associated equipment is stored when processing is complete, e.g. dust covers and outlet valves bagged over (sandwich bag) in the format of a video lecture 10 min.
- Where a domestic kitchen is used for processing, show how it might be prepared beforehand, e.g. surface cleaning, removing possible contaminants, laundry, pets etc. A 20min video lecture will suffice.

**Prepare a 20 min (max) video lecture on one of the following.** [This should be sharp concise and to the point]

- Your method of Queen rearing.
- Identifying Diseases at the hive.
- Preparing an exhibit for showing at the National Honey Show.

**In the apiary**

**Practical at the hive**

- Manipulate the colonies as instructed by the examiner on the day.
- Have additional equipment available for inspection.

# FIBKA EDUCATION FORM 5

## 5.4 FIBKA EUCATION FORM 5

**Proof of stewarding at 3 different honey shows with FIBKA judges where there are more than 100 entries per show and the show is open to all FIBKA associations Form 5.**

**Candidate name**

**FIBKA Membership Number**

| Date | Show | number of entries | Signature of FIBKA honey Judge | Signature of Honey Show Secretary |
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| Record of Honey show Secretary for a show in excess of 100 entries , open to all FIBKA associations | | | | |
| Date | Show | Number of entries | Number of classes | Signature of FIBKA Honey Judge/s |

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# FIBKA EDUCATION FORM 6

## 5.5 FIBKA EDUCATION FORM 6

**Demonstrate at association level on at Least 8 occasions since attaining Intermediate Certificate in Beekeeping. Form 6**

**Name of Candidate**

**FIBKA Membership Number**

**Date of full Intermediate Certificate**

| Date | Location | Participant 1 | Participant 2 | Signature of Secretary or Association Chairperson/ Apiary manager |
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# FIBKA EDUCATION FORM 7

## 5.6 FIBKA EDUCATION FORM 7

**Design, plan and run an apiary demonstration to supervise the intermediate beekeepers at your association apiary.**

**Name of Candidate**

**FIBKA Membership Number**

| Date | Location | Number of Beekeepers present | Topic of Apiary Demonstration | Signature of Secretary/Chairperson/ Apiary Manager |
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# FIBKA EDUCATION FORM 8

## 5.7 FIBKA EDUCATION FORM 8

**Plan and Run a Disease Workshop at Association Level.**

**Name of Candidate**

**FIBKA Membership Number**

| Date | Location | Number of Beekeepers present | Issues dealt with at Disease workshop | Signature of Secretary/Chairperson/ Apiary Manager |
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# FIBKA EDUCATION FORMS 9

## 5.8 FIBKA EDUCATION FORM 9

**Run a Wax Workshop at Association Level**

**Candidate Name**

**FIBKA Membership Number**

| Date | Location | Number of Beekeepers present | Topics covered at Wax Workshop | Signature of Secretary/Chairperson/ Apiary Manager |
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# FIBKA EDUCATION FORM 10

## 5.9 FIBKA EDUCATION FORM 10

**Candidate Name**

**FIBKA Membership Number**

**Run a microscopy Workshop at Association Level Form 10**

| Date | Location | Number of Beekeepers present | Topics covered at Microscopy Workshop | Signature of Secretary/Chairperson/ Apiary Manager |
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# FIBKA EDUCATION FORM 11

## 5.10 FIBKA EDUCATION FORM 11

**Run An additional Workshop at Association Level as required by the Association.**

**Name of Candidate**

**FIBKA Membership Number**

| Date | Location | Number of Beekeepers present | Topics covered at Additional Workshop | Signature of Secretary/Chairperson/ Apiary Manager |
|---|---|---|---|---|
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# 6 CFL

Candidates must hold a senior certificate from FIBKA and be a current member of a FIBKA association. On the application form, the candidate will submit one practical topic acceptable to an association that can be delivered in 30 min. If the Education Panel accept that topic the candidate will then be asked to fully develop 3 lectures, the two other topics will be decided from a list the Education Panel have drawn up. Applications for this examination shall be submitted to FIBKA before 28 February in the year of the intended examination.

The structure of the exam. There will be 3 examiners and the structure shall remain as it previously was with the same marking system. The candidates will have to prepare 3 lectures. From those three lectures, a synopsis of five to 10 minutes will be submitted in video format on each to the education panel for viewing to ensure it is acceptable to an association audience 6 weeks prior to the examination taking place. The Presentations will be done on PowerPoint and there is now a function within PowerPoint where they can record that synopsis.
Recording should be put on your own private YouTube channel and remain there until the examination process is complete.

# 7 HONEY JUDGE

Honey Judge Certificates

Requirements to enter Honey Judge Apprenticeship/Education system.

- A completed Application Form and fee shall have been received by the Education Officer by the February 28 of the year in which the candidate wishes to apply to enter the examination process leading to Honey Judge Certificate.
- The examination process is open to those who hold the Intermediate certificate as a minimum.
- The Candidate must produce written evidence of being a successful exhibitor and must give a list of shows on an excel spread sheet, with full details of classes, number of entries in the classes , total number of entries in the show, in which he or she has won prizes; the candidate must have obtained a minimum of 200 points at honey shows (with a minimum of 100 entries in the show and open to all FIBKA associations) in a wide variety of open classes at County or National level (the points to be calculated as follows: 1st, 2nd and 3rd prizes = 6,

5 and 4 points respectively; V.H.C., H.C. and Commended = 3, 2 and 1 point respectively. A weighting will be given to cards in classes with higher entries).

- Evidence must also be submitted that the Candidate has served as a judge's steward a minimum of four times under FIBKA show judges at County or National shows, including at least one occasion at the Irish National Honey Show. All shows shall have a minimum of 100 entries and be open to all FIBKA associations.
- If all of the above conditions are met and the Application form is in order then the candidate is issued with a **Record book**. This outlines the extra requirements and time schedule that is to be followed before the Final assessment can be undertaken. A further 800 points are required once the apprenticeship judging book has been issued to be completed within five years**. Forms 12 and 13** have been included to help candidates applying for the record book maintain their records in one place.
- The final examination is a combined oral and practical test by two honey judges and is normally held during the week of the national honey show and will last for approximately two hours. A successful Candidate shall be known as a FIBKA Honey Judge.

**The Final Examination**

When **all of** the conditions as set out in the **Record book** are met the candidate will be allowed to sit the final examination. The application form for this exam shall be submitted prior to 28 February of the year of the intended examination. 3 hard copies of the list of all prize cards on an excel form along with a copy of the prize cards adding up to a minimum of 1000 points must be with the Education Panel in good time and no later than 28 February, (all cards must be from shows with more than 100 entries and open to all FIBKA associations). Where there are less than 100 entries in a show/or that show was not open to all FIBKA associations neither the cards nor the stewarding shall count for the purpose of the examination. The Candidate shall bring everything to the Examination necessary to allow the proper adjudication of any class in the show. Not less than five classes from a variety of classes shall be provided by the Examiners for the Candidate's consideration. The Candidate shall judge these samples, identifying the first, second and third in order of merit.

**The Examiners**

The Final Examination shall be conducted by two Examiners who will consider:

- The Candidate's approach to judging (equipment, study of schedule etc.)
- Examination and comments by the Candidate on the samples provided by the Examiners.

- Judging by the Candidate of classes selected by the Examiners from the show benches (Test of method, orderliness and decision).
- General questioning of the Candidates on any part of the syllabus.
- The Candidate must pass in each of these sections to be awarded a certificate.

**Syllabus**

Equipment

The Candidate shall provide him/herself with the following equipment:

- a set of standard grading glasses;
- a hand towel (linen)
- a section template or 6 inch rule;
- a tape measure at least 72 inches long, for measuring the size of the base of displays;
- a knife, similar to a honey extracting knife or carving knife for cutting the cakes;
- a pocket magnifying glass;
- a note book, pencil and ball pen;
- a torch (with spare bulb and batteries);
- a minimum of six glasses and honey tasting rods and two honey jars or tumblers;
- a white coat and white hat;
- a corkscrew;
- a penknife;
- scissors;
- a box of matches for lighting candles;
- a damp cloth in a plastic bag for wiping sticky hands;
- an apple, dry biscuit or other suitable means of refreshing the palate;
- tissues;
- the show schedule;
- a set of scales to check weights when a particular weight is specified in the show schedule.

**The Show Secretary**

He/she shall indicate where a supply of water may be obtained. The show Secretary shall give details of duplicate entries where applicable.

**General Information**

The Candidate shall be required to:

- give an account of the composition of nectar and its variations;
- give an account of the conversion of nectar to honey, including chemical changes of the basic sugars and the storage of honey by the bee;
- give the approximate percentages of the major constituents of a honey of average composition;
- describe and discuss the variations of honey deriving from plant, soil and climatic differences;
- give the definitions of viscosity, density and specific gravity;
- give an account of the production of beeswax by the honeybee and the conditions,
- nutritional and physical, which are necessary;
- describe and discuss the samples he/she has brought;
- describe the written statements on the samples;
- describe his/her procedure on being invited to act as Judge (including reference to the show schedule and rules);
- demonstrate the use of his/her judging equipment, (grading glasses, tasting rods, etc.);
- describe the various methods of arriving at a decision (points or comparison);
- describe and demonstrate his/her procedure at the show bench and in particular his/her system of sequence of operation, and the "weighting" given to flavour, viscosity, cleanliness, etc.;
- describe and discuss the following:- honeydew; heather honey (thixotropy); natural granulation and soft set honey; (frosting, type of granulation, fermentation).
- describe and discuss the following: – honey cakes and confectionery.
- describe and discuss the following: – beeswax (natural colour, aroma and any adulteration of the beeswax); beeswax candles and models.
- describe and discuss "natural faults" of section honey, cut comb honey and combs suitable for extraction (wax moths, Braula);
- describe possible faking. e.g. loose cappings put on open cells, overheating or "cooking" of honey in preparation of samples of honey for the show bench, caramelising of honey, bleaching wax.
- show an appreciation of the necessity of good food handling hygiene by Judges, Stewards and Exhibitors, Honey show Schedule and Rules.

**The Candidate shall be aware of:**

- the contents of the BBKA Booklet “A Guide for Judges and Exhibitors of Honey and Bee Produce”;
- the contents of “Honey Show Classes” A guide for competitors, organisers and judges by John Goodwin. Note, while aroma and taste are mentioned in the judging section, the Irish judges use the W.Herrod-Hempsall method for final judging, clarity, aroma, viscosity and taste once the jars are brought to the table for the final evaluation;
- the implications of studying the show schedule and show rules before he/she commences judging the honey and bee products at the show, particularly with reference to the type of jar, weights, sizes, numbers, area of exhibits for display;
- the necessity to use standard colour grading glasses;
- the rules concerning multiple entries where these are permitted;
- the general rules concerning the award of challenge cups, trophies and special awards.

**Legal Requirements**

The Candidate shall:

- be aware of the current legal requirements for the labelling of jars of honey. Where labels are required to be put on jars of honey e.g. commercial classes and some gift classes, the labels shall be in accordance with the latest legal requirements;
- give an account of the regulations governing the preparation of honey for sale including the suitability of the premises and equipment.

**Liquid, Granulated, Soft Set, Heather Honey & Composite Classes**

The Candidate shall be aware of:

- the different types of honey;
- the correct use of standard honey grading glasses;
- the difference between naturally granulated honey and soft set honey and the requirements for the honey to have dry tops with no scum and that fine granulation is preferred to coarse;
- the difference between ling heather honey and bell heather honey;
- the requirement for all exhibits to be scrupulously clean, and to downgrade or disqualify as necessary;
- the advisability of using the comparative system of judging, except in the composite, cakes

and honey sweetmeats classes where a points system may be preferred.

**Comb Suitable for Extraction, Cut Comb and Sections**

The Candidate shall be aware of the need for:

- cleanliness in all comb honey, especially in cut comb and sections where there will be
- no signs of Braula or Wax Moth;
- no granulation or fermentation in all comb honey;
- complete cleanliness of the woodwork of comb honey, the woodwork of sections and
- the plastic container of cut comb honey;
- checking that sugar syrup feeding has not been used to complete the filling of combs.
- If detected the exhibit shall be disqualified.

**Mead**

The Candidate shall be aware of:

- the details in the show schedule concerning the type of bottle and cork, and the permitted ingredients used in the preparation of mead;
- the differences between dry mead and sweet mead;
- the mead being clear with virtually no sediment in the bottom of the bottle and no secondary fermentation;
- other “meads” such as melomel, metheglin, cyser and pyment.
- The alternative methods of judging mead classes.

**Wax**

The Candidate shall be aware that:

- the weight will be in accordance with the show schedule;
- the wax may be polished or unpolished;
- adulteration or bleaching will be heavily down-graded; if the Exhibitor uses wooden show cases that the aroma of the wax may be affected by the aroma of the wooden show case and to downgrade as necessary,
- the top of the wax will have an even flat surface, achieved by cooling at the correct temperature;
- the wax will be perfectly clean and that there shall be no foreign bodies and to downgrade or disqualify as necessary.

**Candles**

The Candidates shall be aware that:

- the candles will be made of pure beeswax and be prepared, moulded, poured, dipped or rolled in accordance with the show schedule;
- the judge will light one candle to check the candle's burning, indicating the correct sizing of the wick.
- there shall be no smoke when the candle is burning.
- the importance of wick size and the effect that a wrong size wick may have.

**Displays**

The Candidate shall be aware that:

- this is the class in any honey show that is the least defined and that he/she will check very carefully the details in the show schedule;
- he/she will check all items for cleanliness, purity, aroma and flavour, and the mead, beeswax, honey and comb honey as detailed in the sections on these items.
- there are particular methods of judging that may have to be employed in this class, such as a points system.

**Observation Hives**

The Candidate shall be aware that:

- the welfare of the bees is of paramount importance and if any distress is visible through overcrowding in observation hives this will result in disqualification.
- they will be judged for educational purposes;
- all items in the hive shall be labelled with up-to-date labels placed on the outside of the glass or Perspex of the hive;
- the Queen will be marked;
- water shall be available and not honey or sugar syrup for the bees;
- there must be adequate ventilation built into the observation hive construction;
- the bees shall be allowed to fly if this is permissible;
- the presence of any notifiable disease will disqualify the exhibit.
- Note there are alternative methods of judging the observation hive.

**Honey Cakes and Honey Sweetmeats**

The Candidate shall be aware that:

- the cake and sweetmeats will be in accordance with the show schedule;
- the cake will not have sunk in the middle, and that if fruit is used in the recipe that it shall not have fallen to the bottom;
- the cake will be cut in half with a suitable knife to check texture;
- the cake and sweetmeats shall be tasted for honey flavour and the aroma noted.

**Slides and Photographs**

The Candidate shall be aware that the following points need to be considered when judging

classes of slides and photographs:-

- sharpness of focus of the subject of the photograph,
- composition of the photograph,
- subject of the photograph,
- originality,
- contrast,
- a caption or narrative if applicable,
- sizes of print and mount to be as defined in the Schedule.

# FIBKA EDUCATION FORM 12

## 7.1 FIBKA EDUCATION FORM 12

**Proof of Prize cards**

**Candidate Name**

**FIBKA Membership Number**

**Record of Prize cards to apply for judging book**

**(200 Points)**

**All shows shall have in excess of 100 entries & be open to all FIBKA associations**

| Date | Show | Class | Place | No of entries in class | No of entries in show available from show secretary |
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Proof of Stewarding with FIBKA Honey Judges at a minimum of 4 shows with over 100 entries per show , open to all FIBKA association members.

# FIBKA EDUCATION FORM 13

## 7.2 FIBKA EDUCATION FORM 13

**Proof of Stewarding**

**Candidate Name**

**FIBKA Membership Number**

| Date | Show | Honey Judge | No of entries in show | Honey show sec signature |
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# 8 FIBKA APPEALS PROCESS

The appeals Board shall consist of three people, who have been through the education system and hold at a minimum a senior certificate. One representative from the education panel shall also be in attendance. The terms and conditions of an appeal are as follows.

The two grounds on which you can appeal are:

1. **Procedural or Administrative Error** – Where there is evidence that a procedural or administrative error has occurred, that may in turn have had a negative impact on the academic performance of a candidate.

If a procedural or administrative error on the part of FIBKA is known prior to the relevant examination board, then the Board should be informed of the error(s) so that it can be addressed where practicable. Where such an error on the part of FIBKA has been addressed by the relevant examination board, it will not be allowed as grounds for an appeal. The student has a responsibility to inform the FIBKA of any known procedural or administrative errors at the earliest opportunity and failure to do so may result in an appeal under these grounds being disallowed.

2. **Extenuating Circumstances** – circumstances which were not known to the FIBKA at the time of the assessment, or which were submitted sub rosa.

Important Note: Early Disclosure of Extenuating Circumstances

Where an assessment appeal is based on extenuating circumstances (e.g. illness), the appellant should note that, in general, extenuating circumstances must be submitted in a timely manner such that they can form part of the deliberations of the appropriate Education Examination Board meeting. Accordingly, evidence relating to extenuating circumstances will not normally be admitted as grounds for appeal, except where it was not possible to submit this evidence for consideration at the relevant Board meeting. FIBKA reserves the right to seek independent medical opinion. No appeal may be made on intermediate apiary practical, senior apiary practical, microscopy, CFL or honey judge examinations. These are practical examinations where relevant examination material cannot be reviewed after the event.

Cost of an appeal €120.00. Subject to yearly review

**Review of Evaluation of Assessment Performance or Material**

If you believe that an error has been made in the evaluation of your assessment performance or material, then you may request a review of evaluation of assessment performance or material. This type of review involves a recheck of the assessment material by a review examiner to see if the error (as claimed by the student) has occurred. Before requesting this type of review, you must identify the specific error that you believe to have occurred.

There is a fee of €120.00 for this type of review. Price is subject to a yearly review. In the event of a successful review, the fee charged shall be refunded in full.