

HONEYBEE DISEASES, PESTS AND POISONING

The Candidate shall be able to give:-

- 3.1 a detailed account of the field diagnosis of American foul brood (AFB) and European foul brood (EFB), including lateral flow devices and a detailed account of the signs of these two diseases;
- 3.2 an account of the life cycle of the causative organisms of AFB and EFB and their development within the larvae;
- 3.3 a detailed account of the development of AFB and EFB within the colony;
- 3.4 a detailed account of the ways in which AFB and EFB are spread from one colony to another;
- 3.5 a detailed account of the authorised treatment of colonies infected with AFB and EFB including methods of destruction of colonies and the sterilisation of equipment;
- 3.6 the features that aid recognition of the Asian Hornet (*Vespa velutina*) and the notifiable pests, small hive beetle (*Aethina tumida*) and *Tropilaelaps* mites
- 3.7 a detailed account of the statutory requirements relating to notifiable diseases and pests and the implementation of these requirements in the United Kingdom,
- 3.8 an account of the statutory requirements relating to the importation of honeybees;
- 3.9 a description of the life cycle and natural history of *Varroa destructor* including its development within the honeybee colony and its spread to other colonies;
- 3.10 a detailed account of the signs of Varroosis describing methods of detection and ways of monitoring the presence of the varroa mite in honeybee colonies;
- 3.11 a detailed account of methods of treatment and control of Varroosis, including Integrated Pest Management (IPM) and an outline of the consequences of incorrect administration of chemical treatments, together with a way of determining the resistance of varroa to such treatments;
- 3.12 a detailed account of the cause, signs and treatment (if any) of adult bee diseases currently found in the United Kingdom these diseases to include Nosema, Dysentery, Acarine and Amoeba;
- 3.13 a simple account of the structure and function of the alimentary, excretory and respiratory systems of the adult honeybee and of the life cycle of the causative organisms of adult honeybee diseases;
- 3.14 a detailed account of the cause, signs and recommended treatment (if any) of the following brood diseases and conditions:- chalk brood, sacbrood, chilled brood, bald brood, neglected drone brood and stone brood;
- 3.15 a detailed account of the laboratory methods of diagnosis of Acarine, Nosema and Amoeba diseases in worker honeybees;
- 3.16 a detailed description of the fumigation of comb using ethanoic acid (acetic acid), including safety precautions to be taken;
- 3.17 a detailed description of procedures by which a colony can be transferred onto clean comb including any precautions that need to be taken and the circumstances which merit such procedures. These procedures to include shook swarm and Bailey comb change;
- 3.18 a description of the effects of chronic bee paralysis (both syndromes), acute bee paralysis virus, black queen cell virus, sacbrood and deformed wing viruses together with an elementary account of the effects of other viruses affecting honeybees including their association with other bee diseases and pests where applicable;
- 3.19 the scientific names of the causative organisms associated with diseases of honeybees;
- 3.20 an outline account of the life cycle of *Braula coeca*, its effect on the colony and a description of the differences between adult *Braula* and *Varroa*;

- 3.21 an outline account of the signs of poisoning by natural substances, pesticides, herbicides and other chemicals to which honeybees may be exposed;
- 3.22 an account of the ways in which honeybees can become exposed to agricultural and pest control chemicals;
- 3.23 a detailed description of the action to take, and practical measures possible, when prior notification of application of toxic chemicals to crops is given;
- 3.24 an outline description of a spray liaison scheme operated by a beekeeping association;
- 3.25 an account of the action to be taken when spray damage is suspected;
- 3.26 a description of the damage caused to colonies and equipment by mice, woodpeckers and other pests and ways of preventing this;
- 3.27 a detailed account of wax moth damage and the life cycle of both the Lesser and Greater wax moth (*Achroia grisella* and *Galleria mellonella*);
- 3.28 a detailed account of methods of treating or storing comb with particular reference to preventing wax moth damage