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Securing bee health and honey quality

Medicines for bees

What the EMEA can do to increase their availability?

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Important specificities of bees

- With impact on bee health and on honey quality
  - Differences between bees and other livestock animals
  - Specificities of beekeeping in relation to other livestock sectors
  - Veterinary specificities of beekeeping which need to be addressed in the EU animal health policy
  - Honey, pollen, royal jelly… are not common food products

Uniqueness of bees

- Colony = Super-organism ≈ Animal
- Non-domesticated animal
- “Environmental” livestock
- Considerations stemming from bee physiology:
  - Health status of the colony depends on behavioural integrity of the individuals who compose it
  - No mechanism of metabolism
- Epidemiological aspects related to bee
  - Subject to a range of enzootic and conditional pathogens
  - Possible re-infestation by natural swarms

Specificities of the beekeeping sector

- In normal conditions, never-ending life cycle of the colonies
- Beekeeping practices
  - Manipulation of hive ≈ surgical operation
  - Artisanal work
  - Trade/Exchange between apiaries
- Importance of knowledge of the beekeeper

Medicines for bees
Illustration of the specificity

- Pathology
  - *Varroa* - problem of availability of medicines
  - Bacterial diseases (spore-forming bacteria) - is it convenient to use antibiotics ?
  - Control of opportunistic diseases - what is the role of medicines ?
- Control of residues in bee products
- Adaptation of EU health policy to beekeeping needs

1. *Varroa* mite

- Emergency situation (No. 1 cause of Mortality)
- Problem : availability of veterinary medicines
  - 11 active substances (± 3 per country)
  - 22 veterinary medicines (± 3.5 per country - none in some EU Member States such as Sweden and Finland)
  - *Varroa* mite developed resistance for 50% of those active substances
  - Veterinary prescription required in many cases
  - Difficult supply of veterinary medicines to beekeepers
  - No convincing options for treatments

1. *Varroa* mite

=> Extension of existing authorisations of anti-varroa medicine to all Member States

- Adaptation the methods of use for different field conditions (hives models, climate ...)

=> Flexibility in conditions for use of medicines (“cascade”)

1. Recognition of the phenomenon of a large-scale resistance
2. Recognition of the importance of two treatments with different active substances
3. Need to have veterinary medicines available for treatments of bee colonies with brood, broodless colonies and swarms
4. Need to recognise the obligation of alternation of active ingredients over the years

=> Encourage development of new active substances - miticides

=> Development of new anti-varroa medicines

2. Bacterial diseases

- Problems with AFB:
  - AFB is latent in a high % of colonies in Europe
  - Inappropriate use of antibiotics: camouflage of the disease
  - No common strategy for combating the agents:
    - Use of antibiotics in some countries
    - Destruction of colonies in other countries
- No eradication strategy, but

  = = => Control Strategy,

  = = => Genetic selection ?

2. Bacterial diseases

=> Allow for the exchange of live bee material in case there are/is :

- no symptoms of bacterial disease
- absence of use of antibiotics

=> support the destruction of colonies displaying clinical signs (a visibly affected cell)

=> Defining and communication of a common strategy for combating the diseases

3. Opportunistic diseases

- Situation :
  - Enzootic and conditional diseases
  - Bees are able to naturally defend themselves (a degree of immunity) except:
    - In case of disturbances:
      - Unfavourable climate
      - Flora (food deficiencies)
      - Presence of pesticides …
    - In case of genetic susceptibility …
  - Difficult diagnostic (complexity) - Few laboratories
  - No or very few medications

3. Opportunistic diseases

=> Establishment of EU specific and simplified procedures

- Focused on disease prevention
- Minimise the risk of residues
  - Favour “natural” active substances

⇒ Improving the disease control

⇒ Training of beekeepers and veterinarians

⇒ Establishment of specialized centres for bee pathology …

⇒ Investigate factors which contribute to the emergence of opportunistic diseases (in case there is an “abnormal" development at large-scale)

=> Improving bee environment (plant diversity)

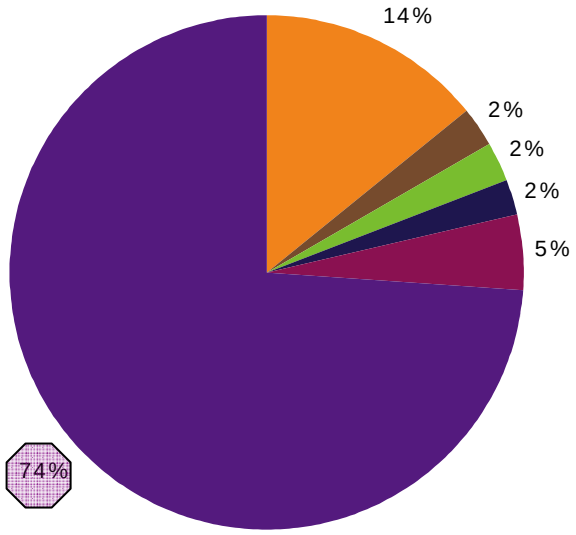
Specificities of the product

- 42 % of honey consumed in the EU is imported from third countries
- Positive image of bee products in Europe
  - "Natural" product
  - "Healthy" product
- Antibiotics:
  - are being used in beekeeping of third countries but are not authorised in the EU
  - Possibility of contamination of the environment (not only from beekeeping, e.g. plant protection)
  - No systematic control of their presence at borders of the EU
  - 1/3 of the sanitary alerts due to “residues of veterinary medicine” on food come from honey and royal jelly (source: EFSA)

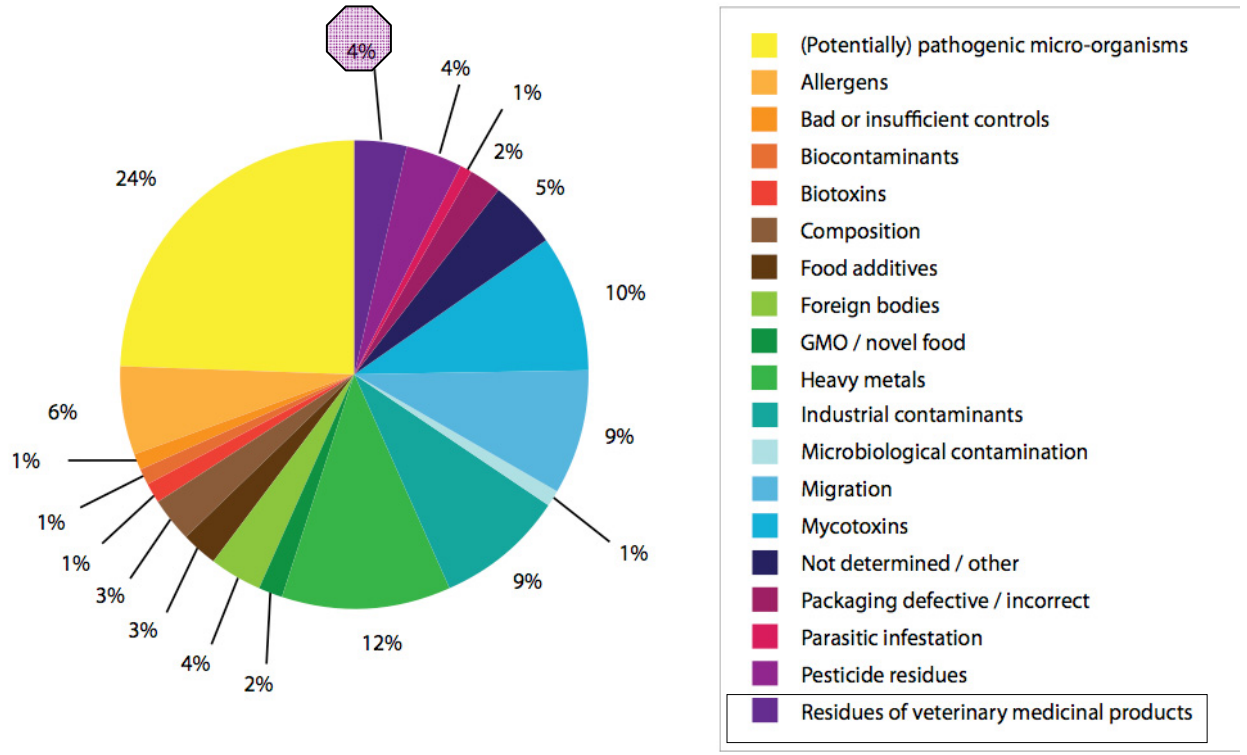
Specificities of the product

- The type of risk for honey and royal jelly is very different from other food.

RAPID ALERT HONEY



2008 – ALERT NOTIFICATIONS BY IDENTIFIED RISK



Specificities of the product

- Necessity to fix a level for the control of residues of antibiotics (and some other substances)
  - to assure trade and protect consumer
  - the level must be sufficiently low to maintain and protect the quality and positive image of bee products
- Analytical cost must be:
  - Low to allow a great number of analyses
  - Adapted to newest technologies, to improve accuracy
- => How to best proceed under the new EU Regulation to act urgently?
  - action points or MRL ?

Specificities of veterinary policy related to bees

- Pathology = clinical signs
  - =>No preventive use of medicines
- Location: the concept of “origin/outbreak centre” is not suitable for beekeeping => “epidemiological unit = apiary”
- The requirement on “prohibition of beehive movements (transhumance)” is not adapted to beekeeping practice
- Active involvement of beekeepers in the bee health policy
- Lack of specialised veterinarians
- Lack of veterinary medicines
- It is complex to identify the causal factor
- …

Bee health policy

⇒ **Objectives:**

- ⇒ Policy based on prevention => Training
  - ⇒ Clear and simple definition of preventive practices and methods
  - ⇒ Take into account the lack of veterinarians who are specialised in bee health
- ⇒ **Emphasis on control** of bee disease (≠ eradication)
  - ⇒ Prevention has also limits and medicines will be needed for the control of bee disease/parasites
  - ⇒ Statistical data (number of colonies?!)
- ⇒ Policy applicable to large territories (+ associations)
- ⇒ Minimise the risk of residues
  - ⇒ Promote “natural” active substances
  - ⇒ Promote a good management of the use of veterinary medicines

Thank you for your attention!!