



INTERNATIONAL FEDERATION OF BEEKEEPERS' ASSOCIATIONS

POLICY BRIEF



HONEY BEE VETERINARY EDUCATION ADVANCEMENT

1. Executive Summary

Honey bees are classified as essential food-producing animals under WOAHP standards. However, global veterinary curricula lack comprehensive obligatory theoretical and practical training in bee health practices, encompassing clinical applications, pathology, husbandry, welfare, and food safety.

Urgent policy summarizes that 75% of European veterinary schools provide only minimal honey bee health education. It urges WOAHP to urgently and mandatorily integrate honey bee health and husbandry training into global veterinary education to address this critical gap. Furthermore, it invites WOAHP to expand interdisciplinary collaboration in training veterinarians to global "Bee Medicine Awareness" standards, acknowledging its responsibility for protecting pollination, food safety, and One Health.

2. Background and Context

Veterinarians' responsibilities include efforts for ensuring food safety and animal health, and according to WOAHP Terrestrial Code (Ch. 4.15), also setting honey bee disease controls. Curricula emphasize mammals but neglect bees despite their role in global food production via pollination. Existing frameworks like EAEVE competences include apiculture variably; post-graduate courses (e.g., HBVC CertHbV) exist but fail to scale core education.

3. Problem Statement

Inadequate and fragmented veterinary knowledge on honey bee biology, anatomy, pathology, pharmacy, diseases and pests, forensics, food safety, and welfare hinder disease surveillance, antimicrobial stewardship, and welfare compliance. Surveys show 25% of EU vet schools omit honey bee topics entirely, with average core hours under 25 despite rising threats such as *Varroa destructor* and pesticides. Globally, non-vet beekeepers manage bees, risking food chain contamination and biodiversity loss, which affects different species of pollinators, agriculture, and consumers. The imminent spread of exotic pests such as *Tropilaelaps* mites and *Aethina tumida* (small hive beetle), coupled with the ongoing struggle to effectively manage *Varroa destructor*, underscores a pressing vulnerability: the insufficient training of veterinarians in apiculture-specific physiology, pathology, and pharmacology. While bees are vital to ecosystems and agriculture, their health is often overlooked in standard veterinary curricula.

4. Evidence Base

- Europe: 58/77 schools teach bee vet med (75%) but fragmented across modules; northern countries ' schools mainly.
- North America: No undergrad mandates; reliance on continuing ed (e.g., CSU online course).
- Other continents: Sparse data, e.g., Africa focuses on management without vet curricula integration.
- Some countries in Europe and Asia historically have very efficient education systems for *Apis mellifera* species in their veterinary faculties, starting from the beginning of the last century, and that can be a good model for future structure in education.
- WOAHP promotes welfare education but excludes bees specifically.

5. Policy Gap Analysis

WOAH lacks enforceable bee education standards in vet curricula, unlike livestock. Coordination gaps between apiculture bodies (Apimondia) and vet regulators persist; institutional barriers limit bee topics to electives. Underutilized stakeholders include vet schools and national services. EAEVE primarily accredits veterinary education institutions within the European Higher Education Area (EHEA). This necessitates WOAHP prioritizing the development of a global bee health curriculum for bee medicine, including notifiable diseases.

6. Recommendations

- WOAHP to mandate honey bee modules (min. 20 core hours) in global vet curricula, covering biology to welfare.
- Develop WOAHP Day One competences for honey bees, harmonized with EAEVE/AVMA.
- Fund pilot integrations via WOAHP capacity-building
- Establish global monitoring of honeybee vet education compliance.

- Global veterinary curricula should mandate bee health practices for final-year clinical field internships. This training must encompass preventive medicine, including queen bee trading, uncontrolled artificial insemination, and beeswax-borne diseases.
- Expanding postgraduate and continuing education programs for veterinarians.
- Promoting One Health approaches that connect animal health, environmental health, and food security.



HONEY BEE

VETERINARY EDUCATION ADVANCEMENT



HEALTHY BEES. HEALTHY PLANET. HEALTHY FUTURE.

Advancing veterinary knowledge, skills and leadership to protect honey bee health, support beekeepers, and sustain pollination, biodiversity and food security.

OUR GOALS

- INTEGRATE**
honey bee medicine into veterinary education.
- EDUCATE**
veterinarians with advanced knowledge and practical skills.
- IMPROVE**
diagnosis, treatment and management of bee diseases and parasites.
- PROMOTE**
One Health approaches linking animal, human and environmental health.
- SUPPORT**
beekeepers, pollinator conservation and sustainable apiculture.



**BUILDING EXPERTS.
PROTECTING POLLINATORS.
SECURING OUR FUTURE.**

EDUCATION FOCUS AREAS

- HONEY BEE BIOLOGY**
Behavior, nutrition, genetics and colony health
- DISEASES & PARASITES**
Varroa, Nosema, viruses, bacteria, fungi and more
- DIAGNOSTICS**
Sampling, lab techniques, molecular tools
- TREATMENT & MANAGEMENT**
Evidence-based practices and antibiotic stewardship
- APICULTURE & HUSBANDRY**
Colony management, hive products, seasonality
- POLLINATOR HEALTH & ENVIRONMENT**
Pesticides, habitat, climate change impact
- COMMUNICATION & OUTREACH**
Working with beekeepers, industries and communities

HOW WE ADVANCE EDUCATION

- CURRICULUM INTEGRATION**
Embedding bee health in DVM programs
- CONTINUING EDUCATION**
Workshops, webinars and online learning
- CERTIFICATION & SPECIALIZED TRAINING**
Advanced training for veterinarians and students
- RESEARCH & INNOVATION**
Supporting science that improves bee health
- COLLABORATION**
Partnering with beekeepers, universities, industry, government and NGOs

WHY IT MATTERS

- ✓ Honey bees are vital to global food production and ecosystem health.
- ✓ Veterinarians play a key role in preventing disease, ensuring food safety and promoting sustainable beekeeping.
- ✓ Investing in education creates a stronger, healthier future for bees and people.

ONE HEALTH. ONE PLANET. ONE FUTURE.

- HEALTHY ANIMALS
- HEALTHY ENVIRONMENT
- HEALTHY COMMUNITIES

“By advancing honey bee veterinary education today, we ensure pollination, biodiversity and food security for generations to come.”



EDUCATE. EMPOWER. COLLABORATE. ADVANCE. | For the Bees, For the Planet, For the Future.

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