



INTERNATIONAL FEDERATION OF BEEKEEPERS' ASSOCIATIONS

POLICY BRIEF



“MYTH BUSTERS” – EVIDENCE-BASED CLARIFICATION IN VETERINARY MEDICINE AND APICULTURE

1. Executive Summary

Issue:

Beekeeping practice worldwide is significantly affected by persistent myths, dogmas, unproven treatments, inappropriate chemical use, commercial misuse of “services”, and so-called “phantomic approaches” that lack scientific or veterinary evidence. These practices undermine bee health, treatment efficacy, residue safety, resistance management, and the credibility of veterinary guidance in apiculture.

EVIDENCE-BASED CLARIFICATION IN VETERINARY MEDICINE AND APICULTURE

EVIDENCE POINT 1 MISUSE AND OVERUSE OF CHEMICAL SUBSTANCES
Misuse and overuse of chemical substances (organic acids, essential oils, veterinary medicinal products, biocides) can reduce treatment efficacy, increase resistance risks, and cause sublethal or lethal harm when dosages, timing, or application methods are inappropriate. Especially disinfection is a mostly misunderstood topic in beekeeping.

EVIDENCE POINT 2 LACK OF REPRODUCIBLE EVIDENCE
Many management dogmas and “alternative” treatments lack reproducible field evidence, controlled studies, or veterinary plausibility, yet continue to spread through anecdotal success stories and confirmation bias.

EVIDENCE POINT 3 CONFLICTING ADVICE, LIMITED CLARITY
Beekeepers often face conflicting advice from advisors, peer networks, commercial actors, and online sources, with limited access to transparent, critically reviewed veterinary clarification.

EVIDENCE GUIDES DECISIONS

SCIENCE • HEALTH | BEE HEALTH • HIVE HEALTH | ECOSYSTEM HEALTH

CRITICAL THINKING | DATA DRIVEN | TRANSPARENCY | INTEGRITY | SUSTAINABLE SOLUTIONS

RESEARCH
DATA
ANALYSIS
PEER REVIEW
BEST PRACTICE

ORGANIC ACIDS
ESSENTIAL OILS
VETERINARY MEDICINAL PRODUCTS
BIOCIDES

Clarifying through evidence.
Improving health.
Supporting life.
Building trust.

Why it matters:

The spread of non-evidence-based practices leads to avoidable colony losses, misuse of veterinary medicinal products and chemicals, false security through ineffective interventions, and erosion of trust between beekeepers, veterinarians, scientists, and authorities.

Key problem:

There is no coordinated international mechanism to systematically identify, evaluate, and publicly clarify myths and unsupported practices in apiculture using veterinary and scientific evidence.

Main recommendations:

- Establish a permanent **Myth Busters Working Framework** under Apimondia
- Identify and prioritize widespread beekeeping myths, dogmas, and misleading commercial practices
- Evaluate therapies, management approaches, and services using transparent evidence criteria
- Develop accessible, science-based clarification documents and guidance
- Strengthen the role of veterinarians as evidence translators in apiculture

Target institution(s):

Apimondia, AWG-GVPA, WOAHA, FAO, national veterinary authorities, veterinary faculties, beekeeper associations, advisory and extension services

2. Background and Context

Status:

Modern apiculture is challenged by parasites, infectious diseases, environmental stressors, and management complexity. In response, beekeepers often turn to simplified explanations, traditional beliefs, “miracle solutions”, anecdotal remedies, or aggressive chemical interventions. Many of these practices persist despite contradictory or absent evidence.

Existing international/national framework:

While veterinary legislation and food safety rules apply to apiculture, practical guidance is often fragmented. Evidence-based veterinary recommendations compete with informal advice, online content, marketing claims, and long-standing dogmas that are rarely critically reassessed.

Relevance to animal health / sustainability / One Health:

Non-evidence-based practices can harm bee welfare, increase residues in hive products, accelerate resistance (e.g. Varroa), and weaken ecosystem services. Evidence-based clarification is therefore essential for sustainable beekeeping, animal health, environmental protection, and One Health outcomes.

3. Problem Statement

What is not functioning effectively?

- Myths, dogmas, and unsupported treatment concepts remain widespread in beekeeping practice.
- Chemical misuse occurs under the assumption of safety, necessity, or “naturalness”.
- Commercial services and products are promoted without veterinary validation.
- Ineffective or imaginary (“phantomic”) approaches distract from proven interventions.

What is missing?

- A structured system to identify and classify beekeeping myths and unproven claims.
- Clear criteria to distinguish evidence-based, promising, uncertain, and disproven practices.
- Veterinary-led clarification accessible to beekeepers and advisors.
- Systematic communication strategies to counter misinformation.
- Integration of evidence appraisal into extension and advisory services.

Who is affected?

Beekeepers, veterinarians, advisory services, regulators, consumers, researchers, and ecosystems relying on pollination.

4. Evidence Base

Evidence point 1: Misuse and overuse of chemical substances (organic acids, essential oils, veterinary medicinal products, biocides) can reduce treatment efficacy, increase resistance risks, and cause sublethal or lethal harm when dosages, timing, or application methods are inappropriate. Especially disinfection is a mostly misunderstood topic in beekeeping.

Evidence point 2: Many management dogmas and “alternative” treatments lack reproducible field evidence, controlled studies, or veterinary plausibility, yet continue to spread through anecdotal success stories and confirmation bias.

Evidence point 3: Beekeepers often face conflicting advice from advisors, peer networks, commercial actors, and online sources, with limited access to transparent, critically reviewed veterinary clarification.

Optional data sources:

Peer-reviewed veterinary and apicultural literature, national treatment guidelines, pharmacovigilance data, COLOSS studies, regulatory assessments

5. Policy Gap Analysis

- ✓ **Structural limitation:** Apiculture lacks a formalized process for evidence appraisal of commonly used practices outside regulated veterinary medicinal products.
- ✓ **Coordination gap:** No international platform systematically addresses myths, misleading narratives, and unsupported commercial claims in apiculture.
- ✓ **Institutional barrier:** Veterinary expertise is underutilized in public communication, myth correction, and beekeeper education.
- ✓ **Underutilized stakeholders:** Veterinarians, veterinary pharmacologists, epidemiologists, diagnostic experts, universities, extension services

6. Recommendations

- I. A **Myth Busters Working Framework** be formally established under Apimondia and AWG-GVPA.
- II. Common beekeeping myths, dogmas, chemical abuses, and phantomic approaches be systematically collected and prioritized.
- III. Practices and claims be evaluated using transparent criteria (biological plausibility, evidence quality, field data, risk assessment).
- IV. Evidence-based clarification documents be published in accessible formats for beekeepers and advisors.
- V. Veterinary professionals be empowered as neutral moderators between science, practice, and policy.
- VI. Training modules on critical evidence evaluation be integrated into beekeeping education and extension services.

7. Implementation Pathway

Lead institution:

Apimondia Working Group “Myth Busters” (in coordination with AWG-GVPA)

Supporting actors:

Veterinary faculties, research institutes, national veterinary authorities, beekeeper associations, advisory services

Short-term actions (0–12 months):

- Expert consultation to define scope and terminology
- Compilation of high-impact myths and questionable practices
- Development of evidence-grading criteria

Medium-term actions (1–3 years):

- Publication of thematic Myth Buster briefs (e.g. Varroa treatments, “natural” remedies, disinfection, management dogmas)
- Integration into advisory and training programs

- Feedback and update cycles based on new evidence

Resource considerations:

Coordination capacity, expert time, communication tools, translation efforts

8. Expected Impact

- **Improved bee health:** Reduced misuse of ineffective or harmful practices
- **Stronger veterinary credibility:** Clear veterinary leadership in evidence interpretation
- **Informed decision-making:** Beekeepers equipped to critically assess claims
- **Policy support:** Better alignment between science, guidance, and regulation
- **Sustainability:** More resilient, transparent, and trustworthy apiculture systems

9. Key Stakeholders

Veterinary authorities and official veterinary services
Veterinary researchers and universities
Beekeepers and beekeeper associations
Advisory and extension services
International organizations and policymakers

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