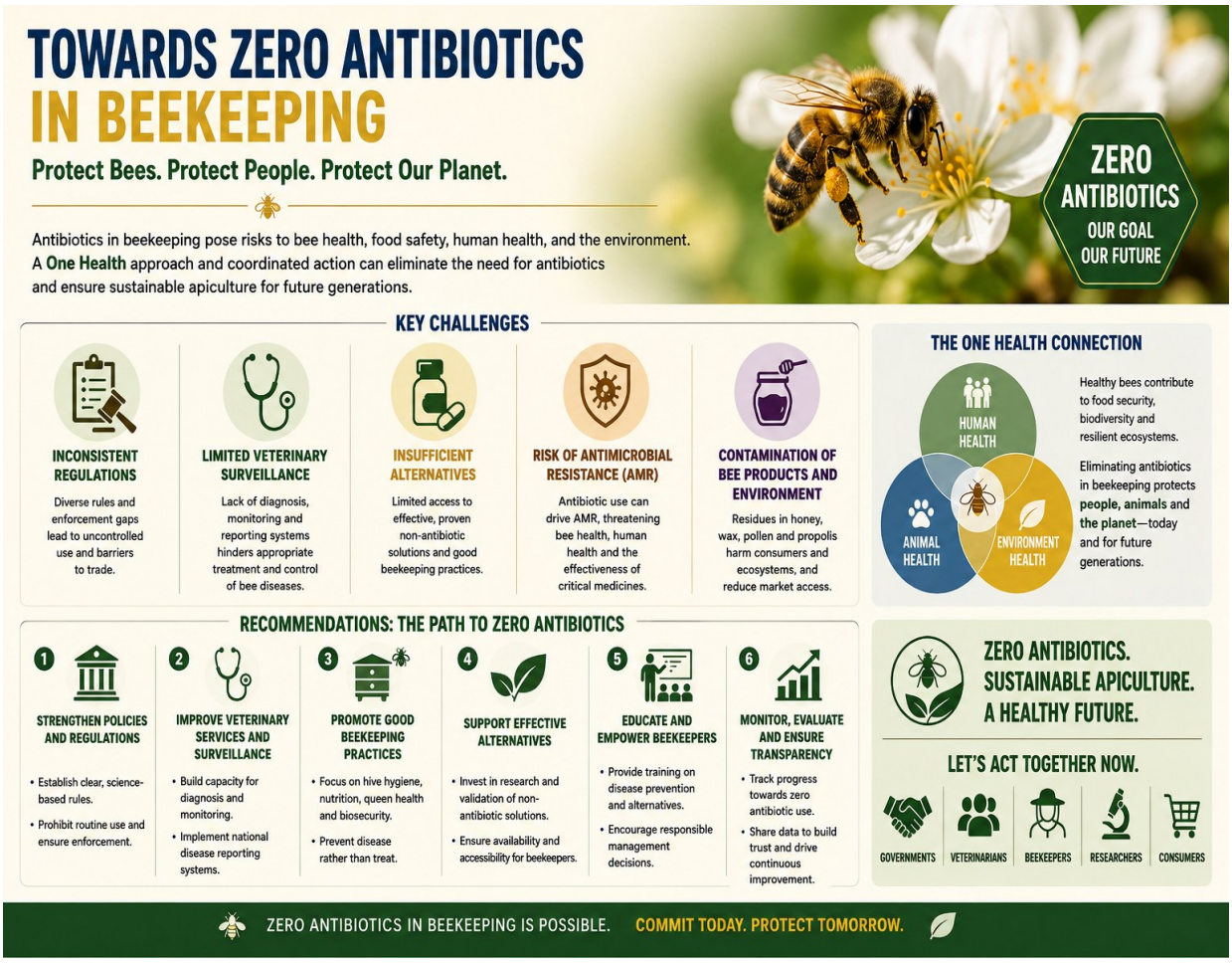
INTERNATIONAL FEDERATION OF BEEKEEPERS' ASSOCIATIONS

POLICY BRIEF

STEWARDSHIP FOR ELIMINATING ANTIBIOTIC USE IN APICULTURE: HOW TO COMBAT ANTIMICROBIAL RESISTANCE AND PROTECT HONEY BEE HEALTH, HONEY BEE WELFARE AND FOOD SAFETY



1. Executive Summary

The use of antibiotics in beekeeping represents a critical issue at the intersection of animal health and welfare, food safety, and environmental sustainability. Inconsistent regulations, limited veterinary surveillance, and insufficient alternative solutions contribute to risks such as antimicrobial resistance (AMR) and contamination of bee products. This policy brief outlines key challenges and proposes actionable recommendations to reach ZERO use of antibiotics and to support sustainable apiculture within the **One Health framework.**

Target Audience

APIMONDIA, WOAH, FAO, WHO and Policy makers, veterinary authorities, food safety agencies, researchers, and international organizations involved in agriculture, public health, and environmental protection.

Key Messages

- Continuing using antibiotics in beekeeping threatens food safety and accelerates antimicrobial resistance and it is an existing bad practice.

- Lack of harmonised international guidelines weakens global AMR control efforts in beekeeping.

- Veterinary supervision and surveillance systems are essential for ensuring that the use of antibiotics is progressively decreasing to ZERO and they need to be implemented in every country around the world. Alternatives are needed to be found and tested.

2. Background / Context

Honey bees play a vital role in global food production and biodiversity through pollination. However, bacterial diseases such as American foulbrood and European foulbrood continue to affect colony health and productivity. In some regions, antibiotics are still used to control these diseases, without a proven efficiency. Also, nosemosis and fungal disease are still treated or prevented with antibiotics!

Antibiotic use results in:

i. Residues in honey and other bee products.
ii. Disruption of the natural microbiota of honeybees.
iii. Emergence and spread of antimicrobial resistance. Antimicrobial resistance is recognized as a major global threat affecting human, animal, and environmental health, requiring coordinated international action. **Antimicrobial resistance already exists in certain pathogens of honey bees.**

2. Problem Statement

Prohibition or regulation of antibiotic use in apiculture varies significantly across countries. Some countries prohibit their use entirely; others allow controlled therapeutic use. This inconsistency leads to:

- Uneven food safety standards;
- Weak monitoring of antimicrobial resistance;
- Increased risks to bee health and ecosystem stability.

Additional challenges include:
- Limited involvement of veterinary professionals in beekeeping.
- Few approved veterinary medicinal products for bees.
- Insufficient development of alternative disease control strategies.

3. Policy Recommendations

3.1. Harmonize Regulatory Frameworks

Develop internationally aligned regulations that prohibit antibiotic use and monitor the decrease of their use to ZERO.

3.2. Strengthen Veterinary Oversight

Ensure that the veterinary services in each country follow the global WOAH recommendations and actively take part in diagnosis and eradication procedures of infected colonies.

3.3. Establish Monitoring and Surveillance Systems

Introduce coordinated systems at national and international levels to monitor:
- Antibiotic residues in bee products.
- Antimicrobial gene resistance in bee pathogens.

3.4. Invest in Research and Innovation

Support development of sustainable alternatives, including:
- Biological and ecological disease control methods.
- Breeding of disease-resistant bee strains.
- Probiotic and microbiome-based approaches.
- Improved diagnostic tools.

3.5. Enhance Education and Awareness,

Develop training programs for beekeepers, veterinarians, and regulatory authorities focusing on:
- Biosecurity practices.
- Disease prevention.

4. Expected Outcomes

Implementation of these recommendations will:

- Reduce the emergence and spread of antimicrobial resistance.
- Improve the safety and quality of bee products.
- Strengthen veterinary involvement in apiculture.

- Support sustainable and resilient beekeeping systems.

5. Implementation Pathway

Lead institution**:** WOAH Terrestrial Animal Health Standards Commission.
Key Leadership & Contact Information (2026):

- President of the Council: Dr. Susana Pombo (Portugal)
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6. Supporting actors:

Apimondia AWG GVPA,
WHO
FAO
National veterinary services

Short-term action (0-6 months): Expert consultation and draft framework.
Medium-term action (1-2 years): Adoption.

Resource considerations: Leverage existing bee disease labs; minimal new funding via partnerships.

7. Expected Impact/ Conclusion

Antibiotic stewardship in apiculture is essential for protecting pollinators, ensuring food safety, and addressing antimicrobial resistance. Coordinated policy action within the One Health framework will contribute to healthier ecosystems, sustainable agriculture, and improved public health outcomes. If not taken seriously we will overlook plenty of Penicillin, Streptomycin, Neomycin, Ampicillin, Fumagillin, Furazolidone, Rifampicin, Pefloxacin, Oxacillin, Clotrimazole, Oxytetracycline, Lincomycin, Sulfamethoxazole, Tylosin, Azithromycin, Novobiocin, Florfenicol, Erythromycin, Tilmicosin, Sulfonamides, Nitrofurans, Chloramphenicol, Nitroimidazoles residues in hive, food, environment. AMR is just a cherry on the cake. It all comes with a high price.

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