

BIOSECURITY MEASURES IN BEEKEEPING | NOSEMOSIS

Management of Hives with Clinical Nosemosis

Optimising bee nutrition to support colony survival and reduce nosemosis impact

Plant-based food supplements containing phytochemicals, polyphenols, oils, and extracts give support to colonies during low brood rearing. Time applications based on climate, food availability, and vigour (brood frames, bee coverage, reserves) prevent stress. They compensate for nutritional shortages effectively.



step 1

Promote diverse floral resources throughout the whole season.

A diverse supply of nectar and pollen provides bees with essential nutrients required for immunity, brood development, and colony resilience.

Continuous access to flowering plants from early spring to late autumn helps reduce nutritional stress and supports stronger colonies with improved resistance to pathogens, including *Nosema spp.*



step 2

Ensure access to High quality protein sources.

Pollen is the primary source of proteins, amino acids, lipids, vitamins, and minerals for honey bees. Adequate pollen nutrition supports brood rearing, gland development, immune function, and the production of antimicrobial compounds that help colonies better cope with nosemosis and other stressors.



step 3

Maintain adequate energy supply for colony stability.

Carbohydrates obtained from nectar, honey, or supplemental feeding provide the energy required for thermoregulation, foraging activity, and overwintering survival.

Nutritional shortages can weaken colony performance and increase susceptibility to diseases and environmental stress.



step 4

Support a healthy gut microbiome.

The intestinal microbiota plays an important role in digestion, nutrient absorption, and pathogen defense.

Balanced nutrition and high-quality feed contribute to gut health and may help reduce the negative impact of *Nosema* infections on colony vitality and longevity.



step 5

Monitor colonies regularly for early detection.

Regular monitoring of colony strength, food reserves, and *Nosema* levels enables timely management decisions.

Early detection of nutritional deficiencies and disease pressure allows beekeepers to apply preventive measures before significant colony weakening occurs.



step 6

Apply GBP to reduce stress.

Effective colony management supports nutrition and disease resilience.

Maintaining strong colonies, replacing old combs, reducing unnecessary stress, and ensuring proper hive hygiene contribute to improved colony survival and reduced impact of nosemosis.



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