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Sustainable Beekeeping, from the south of the world

ABSTRACT BOOK

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Got your hives exposed to pesticides? What are your rights

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It is well known that both pesticide residues and bees move freely in the environment, and sometimes they come across in higher or lower degrees. Depending on the level of exposure, these residues may generate bee die-offs, reducing the health and performance of the colonies or contaminating beekeeping products, not being able to sell them. In any case, beekeepers suffer the unexpected collateral damage of the activities of neighbour (or less neighbour) citizens. In many countries, the precautionary principle and polluter-payer approaches apply to the authorisation and use of pesticides. In the case of environmental contamination revealed by bees or beekeeping products, finding the individual that caused the contamination may be complicated. Furthermore, the pesticide authorisation process envisages to evaluate the environmental risk of exposure to one pesticide applied to one field. In real conditions, this is barely the case, and bees and humans are exposed to the summary of the different pesticides applied in our environment's many fields and surroundings. As a result, the level of exposure could be increased and mixed with other products. As a result of this reality, beekeepers may either lose their colonies or the marketing capacity of their products, which can see their content in pollutants go above Maximum Residue Levels established by authorities to preserve food safety. What can beekeepers do, then? What is the procedure to be compensated for these collateral damages? Can they be compensated for these collateral damages? The answer to this question is neither straightforward nor a one-solution-fit-all case. We present here a general approach, principles and action recommendations that beekeepers in each region must tailor to their situation.

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General beekeeping practices and main stressors identified by beekeepers in the Mediterranean

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Beekeeping is an ecologically and economically important activity in the Mediterranean that is increasingly under threat from a combination of factors. In the MEDIBEES (Monitoring the Mediterranean honey bee subspecies and their resilience to climate change for the improvement of sustainable agro-ecosystems) PRIMA project we aim to identify honey bees that show resilience to stressors associated with climate change. An important first step in our work was to establish baseline data of practices in the region through the administering of a questionnaire on the beekeeping practices. Over 1022 responses were received from beekeepers in Algeria, Egypt, Jordan, Italy, Lebanon, Malta, Spain, Portugal and Turkey.

Beekeeping was overwhelmingly male dominated (ratio 9:1) and practiced largely by the middle-aged (mainly between 40-50 years). The majority of beekeepers reported having 10-50 boxes with the exceptions of Algeria and Jordan where the majority reported keeping more than 100 hive boxes. Across the Mediterranean the Langstroth hive box was most commonly used. Despite the perception of migratory beekeeping being frequently practiced, only Lebanon and Turkey reported significant levels of transhumance (>50.0 and 70.0% of beekeepers respectively). 51.2% of beekeepers reported practicing queen rearing with the majority of these (51.4%) reporting re-queening their colonies every 2 years. Interestingly, the majority of all beekeepers agreed with the statement that their native honey bee is endangered where pesticide use, lack of adequate forage and parasite infestations such as the Varroa mite were repeatedly cited as causing the greatest losses to honey bees in general. Climate change and urbanisation were also linked with colony losses by causing habitat loss. Supplementary feeding was reported to be an integral part of beekeeping in this region, with beekeepers reporting using between 0-5kg, closely followed by 6-10 kg of additional sugars.

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