

# Honeybee Health



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**COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN  
PARLIAMENT AND THE COUNCIL**

**on Honeybee Health**

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## on Honeybee Health

### I. Introduction

The EU honeybee population (*Apis mellifera*) plays an important role in both pollination and the production of honey and other apiculture products. That is why the EU has established certain harmonised rules to protect and maintain the health of bees, while Member States may regulate other aspects of bee keeping and related activities. Bee keepers and their associations are themselves active in other, non-regulated areas such as implementing good bee keeping practices and guidelines. This complex system has worked successfully for decades. Recently, however, an increase in bee mortality has been reported in several countries within and outside the EU.

It is important to protect bee health proactively, taking into account the particularities of beekeeping, the different actors involved, and the principles of proportionality and subsidiarity.

The Animal Health Strategy for the European Union (2007-2013 – "Prevention is better than cure"<sup>1</sup>), was adopted in 2007 and was followed up in 2008 by an Action Plan<sup>2</sup> with specific actions grouped under four pillars:

- Prioritisation of EU intervention;
- A modern EU animal health framework;
- Improving prevention and crisis preparedness; and
- Science, innovation and research.

Partnership and communication with stakeholders are two key principles of the Strategy. Possibilities for non-legislative initiatives to promote a higher level of responsibility for, and awareness of, diseases amongst producers are also being explored.

In the spirit of the Strategy beekeeping organisations concerned about bee health in the EU recently called for more focus on to the issue. In November 2008, the European Parliament also passed a resolution on the situation in the beekeeping sector<sup>3</sup>. This called on the Commission to carry out specific actions and to ensure that those actions were coordinated.

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<sup>1</sup> COM(2007) 539 final, [http://ec.europa.eu/food/animal/diseases/strategy/index\\_en.htm](http://ec.europa.eu/food/animal/diseases/strategy/index_en.htm)

<sup>2</sup> COM(2008) 545 final, [http://ec.europa.eu/food/animal/diseases/strategy/documents\\_en.htm](http://ec.europa.eu/food/animal/diseases/strategy/documents_en.htm)

<sup>3</sup> P6\_TA(2008)0567 – 20 November 2008.

The Commission has already launched a number of initiatives to address the concerns of the beekeeping sector and others are planned.

The objective of this Communication is to **clarify the key issues** related to bee health and **key actions** that the Commission intends to take to address them.

This Communication should serve as a basis for further discussion with the European Parliament, the Council as well as Member State authorities and stakeholders. This should contribute to **identifying possible further actions** needed at EU level.

## **II. The EU beekeeping sector**

Beekeeping is a widely-developed activity in the EU, both at professional (keepers with over 150 hives) and hobby level. There are around 700,000 beekeepers in the EU out of which around 97% are non-professional accounting for around 67% of EU hives. Honey production is estimated to be close to 200.000 tons. Beekeeping is also associated with the production of other products such as wax, royal jelly, propolis, etc.

Bees are also important pollinators together with other insects and organisms.

The factors that need to be considered regarding the sector include the different kinds of beekeeping (professional or hobby, stationary or mobile apiaries, transhumance); the significant differences between bee health and technology when compared to animals such as cattle, poultry, etc; the different regions (climate, traditional/local production); and the distribution of diseases. The specific nature of the bee sector as outlined above generates multiple needs, approaches, views and practices.

## **III. What affects bee health?**

In the past decade several health problems have affected the beekeeping sector in different countries worldwide.

In particular, in recent years, there have been several reports of increased mortality in bees both in the EU and elsewhere. This has caused serious concern all over the world, but scientific studies have not been able to determine the exact cause or the extent of these increased mortalities.

Nevertheless, the health of bees is linked with many factors of a different nature (bacterial, viral, parasitic, etc); availability of appropriate treatments; invasive species; and environmental changes. Other factors to be considered include the use of pesticides in agriculture. At least in order to clarify if and to which extent they may play a role in bee health.

As regards genetically modified organisms (GMOs), although so far no evidence has been found for a link between them and bees' health, the Commission will continue to closely follow any developments in this area.

#### IV. EU animal health framework for bees

##### (1) Existing animal health requirements for the protection of bee health in the EU

The legislation in force<sup>4</sup> provides for animal health certification and requirements for the movements of bees between Member States. These requirements are intended to prevent and control a number of bee diseases, namely American and European foulbrood, small hive beetle and *Tropilaelaps* mite, which can spread via the movement of bees. The small hive beetle (*Aethina tumida*) and the *Tropilaelaps* mite are exotic to the EU. Their notification is thus obligatory, so that Member States may take immediate action in the case of an outbreak.

However, the above requirements do not cover an important bee parasite (*Varroa*) that is present and well established in the EU, because restricting bee movements would not limit the spread of this disease agent, and would be a considerable burden on beekeepers. Other diseases considered endemic in the EU are treated in a similar way. Financial support is given to Member States in order, *inter alia*, to fight *Varroa* (see chapter X).

##### (2) Protection of bee health against exotic diseases

There are animal health requirements for imports from third countries of live bees and bumble bees to avoid introduction into the EU of exotic bee diseases. These have been applied since 2000<sup>5</sup>.

The small hive beetle and the *Tropilaelaps* mite caused major losses to the beekeeping sector of the countries in which they had been introduced, and therefore the EU import rules provide that only queen bees and colonies of bumble bees from biosecure premises can be imported from third countries. These requirements have been put in place in order to reduce the risk of introducing new diseases into the EU.

The fulfilment of these animal health requirements is checked upon entry into the EU in veterinary border inspection posts, where documentary, identity and physical checks are carried out by official veterinarians. These measures guarantee the safety of bee imports while ensuring genetic resources for beekeepers and respecting the needs of pollinators especially in green houses.

##### (3) The Animal Health Strategy and bee health

The Animal Health Strategy is intended to provide a single and clear regulatory framework for animal health. The Commission is currently preparing a proposal for an "**Animal Health Law**" which will over time replace the current basic veterinary legislation of almost 60 Directives and Regulations on animal

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<sup>4</sup> Directive 92/65/EEC laying down animal health requirements governing trade in and imports into the Community of animals, semen, ova and embryos not subject to animal health requirements laid down in specific Community rules referred to in Annex A (I) to Directive 90/425/EEC (OJ L 268, 14.9.1992, p. 52).

<sup>5</sup> Decision 2000/462/EC, OJ L 183, 22.7.2000, p. 18, that has been recently updated by Regulation (EU) No 206/2010. OJ L 73, 20.3.2010, p. 1.

health conditions for trade and import of live animals and their products, disease control measures, identification rules etc. The final proposal is planned for adoption in early 2012. The aim is to simplify existing legislation, and to introduce, a more preventive approach to disease control in line with the new Strategy.

In the framework of the preparatory process for the creation of the new Animal Health Law, and in particular during the consultation phase, bee health was repeatedly mentioned by the veterinary profession and beekeepers as one of the areas which could benefit from further harmonisation of EU animal health legislation.

The Commission is still assessing possible implications for the bee sector. However, it already seems clear that a general Animal Health Law could provide the legal framework for essential elements such as general definitions, and principles for disease control measures and movements, while other elements could be established through delegated or implementing acts. A more frequent use of guidance documents at EU and/or national level, or at the level of the sector concerned, could also be envisaged to address issues for which legislation at EU level would not be appropriate.

(4) A need for appropriate scientific and technical knowledge about bee health.

The problems of the bee-keeping sector and the decline in the bee population all over Europe and the rest of the world are complex and diverse and have raised various concerns, among them the lack of adequate medicines to treat bee diseases.

The 2009 EFSA project entitled "Bee mortality and bee surveillance in Europe"<sup>6</sup> suggests that there are many factors involved in the causes of the decline in the bee population. Among those that have been considered are bee diseases and pests, pesticide poisoning, the impact of genetically modified crops, and stress linked to changes in nutrition and climatic conditions.

As yet, no direct causal link between the increased bee mortalities and specific substances or agents has been established, it is still unclear what should be done to combat it effectively.

In the absence of data and results of monitoring action, it is impossible to understand what the real situation is. As a consequence, it is impossible to take appropriate actions on bee health. It is clear, however, that surveillance plays a major role in this exercise.

The main conclusions of the EFSA Project indicate that the surveillance systems in the EU Member States are, in general, weak. There is a lack of representative data at country level and comparable data regarding colony losses at EU level. There is also a general lack of standardisation and harmonisation at EU level as regards the data collected. No effective

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<sup>6</sup> <http://www.efsa.europa.eu/en/scdocs/doc/27e.pdf>

harmonised control system for bees has been set up to estimate the extent of bee mortalities or to prevent them as much as possible.

The Commission aims to start a pilot surveillance programme by the end of 2011.

(5) EU Reference Laboratory (EURL) for bee health

EU Reference Laboratories (EURLs) are essential tools in the framework of risk management in the field of animal health. Their role has been recognised by relevant EU legislation on official controls<sup>7</sup>, and by vertical Directives on EU measures for the control of certain animal diseases.

Scientifically sound and uniform testing is a fundamental element for reliable disease diagnosis and for the application of the necessary control and eradication measures. EURLs play an important role as regards scientific and technical support in the area of animal health, and to support the activities of the Commission and the Member States in relation to animal disease surveillance, control and eradication (e.g. typing of viruses, monitoring of diseases, development of specific tests). EURLs play an important role in the international arena, in areas such as standardisation of analytical methods.

The evaluation of EU Animal Health Policy<sup>8</sup> highlighted that "laboratory networks on animal health have contributed positively to help achieve the objectives of the Animal Health Policy in safeguarding human and animal health". The Animal Health Strategy for the EU emphasises how important it is to maintain and further improve EU diagnostic capability (for example, funding of laboratory networking).

As part of the Strategy a specific external evaluation of EURLs in the field of animal health and live animals has recently been finalised<sup>9</sup>. One of the recommendations in the evaluation was the setting up of a new EURL for bee health<sup>10</sup>.

Therefore the Commission intends to designate a EURL for bee health which should become operational by April 2011.

This EURL will be tasked with addressing the scientific issues identified in the above-mentioned EFSA report, including establishing the basic conditions for the implementation of effective surveillance programmes. The first task of the EU Reference Laboratory on bee health will be to provide technical support to the pilot surveillance programme mentioned above. Financial support to this laboratory will be ensured within currently available resources.

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<sup>7</sup> Regulation (EC) No 882/2004 of the European Parliament and of the Council of 29 April 2004 on official controls, OJ L 165, 30.4.2004, p. 1.

<sup>8</sup> [http://ec.europa.eu/food/animal/diseases/strategy/final\\_report\\_en.htm](http://ec.europa.eu/food/animal/diseases/strategy/final_report_en.htm)

<sup>9</sup> [http://ec.europa.eu/food/animal/diseases/laboratories/eval\\_com\\_ref\\_labs\\_report\\_112009\\_en.pdf](http://ec.europa.eu/food/animal/diseases/laboratories/eval_com_ref_labs_report_112009_en.pdf)

<sup>10</sup> Currently there is only a EURL for residue testing carrying out tests on honey, but there is no EURL dealing with bee health issues.



(6) Improve knowledge on bee health – the contribution of the Better Training for Safer Food programme

Focus on bee health has been stepped up as part of the Better Training for Safer Food initiative<sup>11</sup>.

During 2010 and 2011 a total of 160 participants from all EU Member States and also from seven non-EU countries learned, or will learn, about all aspects of bee health and beekeeping. The four training courses planned include the EU health requirements on intra EU trade and imports from third countries.

The two courses that have taken place so far have disseminated up-to-date knowledge among 79 government officials to improve their understanding of honeybee health problems. These officials are expected to act as catalysts to improve awareness and cooperation in their countries among competent authorities and concerned groups at national, regional and local levels.

**V. Availability of veterinary medicines for bees**

According to beekeeper associations, there are not enough authorised medicinal products available to treat diseases in bees. This is a general problem occurring where the market for veterinary medicines is small and the expected return on investment for companies is low. The term often used to describe these small markets are "minor uses/minor species" (MUMS). Several actions have been undertaken, in particular by the European Medicine Agency<sup>12 13</sup>.

Specific provisions aimed at promoting innovation and the development of new veterinary medicinal products by small and medium-sized enterprises include administrative and procedural assistance or, as appropriate, fee reductions, fee exemptions or fee deferrals<sup>14</sup>.

The availability of veterinary medicinal products (including those for bees) is also raised in the context of the review of the legal framework for such (MUMS) products.

Stakeholders had the opportunity in the public consultation to express their views on the strengths and weaknesses of the current legal framework and made suggestions for how it could be improved. The responses received will be used by the Commission to draft the impact assessment on the review and, where appropriate, to

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<sup>11</sup> [http://ec.europa.eu/food/training\\_strategy/training/health\\_bees\\_exotic\\_animals\\_en.htm](http://ec.europa.eu/food/training_strategy/training/health_bees_exotic_animals_en.htm)

<sup>12</sup> The European Medicines Agency implemented the Policy for Classification and Incentives for Veterinary medicinal products indicated for Minor Use Minor Species /Limited markets - [http://www.ema.europa.eu/docs/en\\_GB/document\\_library/Regulatory\\_and\\_procedural\\_guideline/2009/10/WC500005157.pdf](http://www.ema.europa.eu/docs/en_GB/document_library/Regulatory_and_procedural_guideline/2009/10/WC500005157.pdf)

<sup>13</sup> The European Medicines Agency organised in December 2009, a workshop to discuss this specific aspect concerning bee health. [http://ec.europa.eu/food/animal/liveanimals/bees/docs/EMA\\_conclusions.pdf](http://ec.europa.eu/food/animal/liveanimals/bees/docs/EMA_conclusions.pdf)

<sup>14</sup> Commission Regulation (EC) No 2049/2005 of 15 December 2005 laying down, pursuant to Regulation (EC) No 726/2004 of the European Parliament and of the Council, rules regarding the payment of fees to, and the receipt of administrative assistance from, the European Medicines Agency by micro, small and medium-sized enterprises (OJ L 329, 15.12.2005, p. 4).

draft proposals to change this legal framework. A legal proposal is scheduled for adoption in 2012.

## **VI. Food safety aspects (residues in honey)**

According to the relevant legislation<sup>15</sup> Member States shall ensure that, where there is no authorised veterinary medicinal product in a Member State for a condition affecting an animal species, measures exist that would allow a veterinarian, by way of exception, to use medicines off-label within strict limits. This procedure is called "the cascade".

For substances used under the cascade system, there are no clear rules on the Maximum Residue Limits (MRLs). This creates legal uncertainty for both producers (beekeepers and veterinarians) and consumers (competent authorities responsible for food safety, and ultimately, the consumer) and may lead to potential disruption of the internal market for honey.

The Commission will adopt rules on MRLs for substances used under the cascade system as well as on offsetting reference points for action. This will facilitate harmonised control of food placed on the market across the EU and will ultimately improve the clarity and certainty of the EU legal framework.

Fully harmonised requirements are in place in the EU as regards veterinary controls for imported live animals and products of animal origin including honey and other apiculture products. These controls are carried out by the competent authorities of the Member States at the EU border inspection posts in order to ensure that the products imported from non-EU countries respect the EU health import conditions, and offer guarantees equivalent to those that apply to EU products.

## **VII. Pesticides**

As regards pesticides, a new European Parliament and Council Regulation (EC)<sup>16</sup> was adopted in 2009 concerning the placing of plant protection products on the market. This new Regulation replaces Council Directive 91/414/EEC. It maintains the provision according to which pesticides can only be approved at EU level if their use has no unacceptable effect on bee health or bees or its use leads to negligible exposure of honeybees<sup>17</sup>.

The effects of pesticides on bees are assessed prior to approval and appropriate risk mitigation measures, if required, are imposed. Where the Commission becomes aware of adverse effects due to the use of pesticides, further risk mitigation measures can be taken. This has been the case for some insecticides, where accidental releases occurred during the sowing of treated seeds.<sup>18</sup>

Furthermore, the Commission is currently revising the data requirements for the submission of pesticide dossiers also to enhance the protection of honeybees.

<sup>15</sup> Article 11 of Directive 2001/82/EC, OJ L 311, 28.11.2001, p. 1.

<sup>16</sup> Regulation (EC) No 1107/2009, OJ L 309, 24.11.2009, p. 1.

<sup>17</sup> See Annex II point 3.8.3 of Regulation 1107/2009.

<sup>18</sup> Commission Directive 2010/21/EU, OJ L 65, 13.3.2010, p. 27.

Stakeholders had the opportunity to express their views on the strengths and weaknesses of the current legal framework and how it could be improved.

### **VIII. Genetically modified organisms (GMOs)**

As regards GMOs, increased bee mortality has been reported all-over the world, however, no difference has been reported between the areas where GMOs are extensively cultivated (like the Americas) compared to those areas in which GMOs are much less common (like in Europe), or even in those EU Member States in which GMO cultivation has been prohibited. This situation does not support the hypothesis that increased bee mortality is related to an increase in the cultivation of GMOs.

EU legislation is very prudent in this regard. Before a genetically modified plant or GMO can be released into the environment and/or cultivated, it needs to be authorised under Directive 2001/18/EC<sup>19</sup> or Regulation (EC) No. 1829/2003<sup>20</sup> following a thorough scientific risk assessment of the EFSA, which includes inter alia, the potential adverse effects of GMOs on bees.

### **IX. Protecting bees by addressing biodiversity loss**

Bee health is also affected by biodiversity loss. One of the main direct causes of biodiversity loss is land-use change and mismanaged intensification on the one hand, and land abandonment on the other hand, as well as the loss of traditional farming and forestry practices, which have often generated species rich habitats. Habitat loss and fragmentation, pollution and pathogens are some of the potential factors behind this trend. Other drivers may be the disruption of pollination timing due to climate change; the spread of invasive insect species out-competing native pollinators; and invasive plants drawing native pollinators away from native plants.

The Commission is promoting research on conservation, restoration and sustainable use of pollinator diversity in agriculture.

There is growing scientific evidence that bees which have access to a mixture of pollen from different plants are healthier than those fed only one type of pollen. Results of a recent study<sup>21</sup> suggest that an environment with sufficient biodiversity to maintain the ecosystem service that is pollination is critical for bee health.

In the context of European agriculture, the Rural Development Programmes offer a range of agri-environmental measures to encourage biodiversity. These include measures relevant to beekeepers, such as providing plants to attract honeybees. Such measures have been proven to generate substantial environmental benefits, particularly in the way they support biodiversity through agriculture, and they are beneficial for honeybees as well, as they limit the risk of insufficient pollination.

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<sup>19</sup> OJ L 106, 17.4.2001, p. 1.

<sup>20</sup> OJ L 268, 18.10.2003, p. 1.

<sup>21</sup> By INRA (Cedric Alaux, François Ducloz, Didier Crauser and Yves Le Conte, 2010 - Biology Letters. published online 20 January 2010 ; doi: 10.1098/rsbl.2009.0986).

The Commission is also preparing a Communication on the EU Biodiversity Strategy to achieve the EU 2020 biodiversity target, which will look at ways of preventing or mitigating the loss of biodiversity by addressing its cause. The implementation of this strategy is expected to have a beneficial effect on bee health.

## **X. Common agricultural policy and bee health**

In addition to the agricultural and environmental measures described above, a series of measures to support the beekeeping sector are set down in Council Regulation (EC) No 1234/2007 establishing a common organisation of agricultural markets and on specific provisions for certain agricultural products (Single CMO Regulation)<sup>22</sup>. These measures may be included in the apiculture programmes drawn up by Member States and if considered eligible the expenditure concerned can be part-financed by the EU. The programmes are undertaken on a tri-annual basis.

Although the main aim of the measures is to improve the efficiency of production and marketing of honey, part of the expenditure is devoted to varroasis prevention and the restocking of hives.

A report has been presented by the Commission to the Council and European Parliament on the application of the measures to improve the conditions for the production and marketing of apiculture products for the period 2008-2010<sup>23</sup>. The report concluded that the mechanism for setting up national programmes has been very beneficial for the beekeeping sector, both from the point of view of the Member States and beekeepers themselves.

In September 2010 the Commission approved the national programmes of the 27 Member States to improve the production and marketing of apiculture products for the period 2011-2013. The EU contribution to the financing of the programmes has increased by almost 25 percent compared to the previous period (2008-2010), from 26 M€ to 32 M€ per year.

## **XI. Research on bee health**

The EU supports research projects in bee health through the 7th Framework Programme (FP7).

In total the EU budget already dedicated to research related to honeybee and other pollinators amounts to approximately 10 millions Euros. The current projects<sup>24</sup> deal with the decline of both wild and domesticated pollinators, including honeybee colonies, in Europe and its potential causes, as well as the development of appropriate diagnostic tools.

In addition, the Commission is supporting the COLOSS<sup>25</sup> COST action that has built up a network of researchers and other stakeholders across Europe to follow the evolution of colony losses and to join forces with participants in national research

<sup>22</sup> OJ L 299, 16.11.2007 p. 1, Article 106 thereof.

<sup>23</sup> COM(2010) 267 final.

<sup>24</sup> Current projects are Bee Doc, Cleanhive and STEP.

<sup>25</sup> <http://www.coloss.org/>

programmes to understand and combat the factors responsible for major colony losses.

## **XII. Communicating on bee health issues**

One of the Commission's key objectives is to improve communication between relevant players, at EU or national, regional or local level and also across policy areas. While this can be done in many ways, it is expected that the recently developed Commission internet page<sup>26</sup> will serve as one of the European focal points for interested parties. It offers sectoral information on a range of activities and legislation relevant to bee health. It also offers links to other animal health, research, pesticide etc. pages as further sources of information. The Commission intends to hold further discussions with stakeholders about how to improve communication activities.

## **XIII. Global link to international activities**

The World Organisation for Animal Health (OIE), the recognised international standard setting organisation for animal health, recently issued a statement on bee health<sup>27</sup> and proposed to the international community "to intensify the research on the causes of the mortality of bees and to better control and fight against the numerous emerging and already known diseases." Bee health also features in its 5<sup>th</sup> Strategic Plan for 2011-2015. In addition it developed disease cards on bee diseases<sup>28</sup>.

The Commission is cooperating closely with OIE with a view to exchanging scientific information concerning bee health and to develop synergies and avoid overlaps with future actions.

## **XIV. Conclusions**

The Commission has already undertaken many actions across several policy areas both to gain a better understanding of the factors that influence bee health and to better tackle the problems already identified. The ongoing actions must be continued and where necessary reinforced, based on an appropriate assessment of the possible risks for animal and human health and, in the wider sense, risks for the environment. The Commission must take into account the relevant socio-economic aspects and the need for the sector to remain competitive on the global market.

The Commission is committed to taking a range of actions, as outlined in this Communication. It is important to understand that such actions can only be successful if all interested stakeholders take part in a constructive and transparent manner.

Therefore, the Commission will initiate discussions in the appropriate fora to obtain extensive feed back on its intentions, and to improve its assessment and management of the bee health situation.

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<sup>26</sup> [http://ec.europa.eu/food/animal/liveanimals/bees/index\\_en.htm](http://ec.europa.eu/food/animal/liveanimals/bees/index_en.htm)

<sup>27</sup> [http://www.oie.int/eng/press/en\\_100428.htm](http://www.oie.int/eng/press/en_100428.htm)

<sup>28</sup> <http://www.oie.int/eng/ressources/BEES-EN.pdf>

It is clear, however, that it will not be enough to take action at European level. Areas in which progress needs to be made include, but are not limited to, better biosecurity and production practices by bee keepers; development of new bees medicines by the industry; or designing improved training programmes for authorities and beekeepers.

Non-governmental organisations and beekeeping industry platforms in particular can play a dual role both to initiate and implement many new actions. In the relatively less regulated areas of bee keeping, it is highly likely that improved guidance from national and international organisations and bee keepers could deliver significant benefits and would be fully within the spirit of proportionality and subsidiarity.

The Commission is interested to hear the opinion of the European Parliament and the Council on the course of actions identified in this Communication.

It is important to understand that such initiatives can only be successful if all the interested stakeholders participate in a constructive and transparent manner. The role of beekeepers and of the competent authorities in the Member States is key to the development of effective action.