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FINAL REPORT OF A MISSION
CARRIED OUT IN
SPAIN
FROM 29 SEPTEMBER TO 03 OCTOBER 2014
IN ORDER TO GATHER INFORMATION ON BEE HEALTH

In response to information provided by the Competent Authority, any factual error noted in the draft report has been corrected; any clarification appears in the form of a footnote.

Executive Summary

This report describes the outcome of a fact-finding mission carried out by the Food and Veterinary Office (FVO) in Spain, from 29 September to 3 October 2014.

The overall objective of the fact-finding mission was to gather information on the current disease situation in honey bees and the state of implementation of EU legislation relating to honey bee health.

The Spanish competent authority has developed a basis for bee health controls that goes beyond EU requirements, in particular for traceability of bees within their territory, and for the control of a main health threat, Varroa. The bee-keeping industry, very important in Spain (with a significant professional sector), is well structured and active in bee health. Official activities over the recent years have further strengthened the organisation and expertise in relation to bee health.

Trade in bumble bees is significant in Spain, experiencing a sustained development. It is under effective official control, but the specificities of the sector are not sufficiently taken into account to develop the standards of controls and health guarantees required to protect bee health.

The mission identified further practical and structural difficulties in the implementation of some EU health requirements for trade and import of bees and bumble bees.

This report contains no recommendations due to the fact-finding nature of the mission.

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ABBREVIATIONS AND DEFINITIONS USED IN THIS REPORT

Abbreviation	Explanation
ADSA	<i>Agrupación de defensa sanitaria apícola</i> – Bee health association
<i>Aethina tumida</i>	Small hive beetle
CCA	Central competent authorities
CA	Competent authorities
DNA	Desoxyribonucleic acid
EU	European Union
FVO	Food and Veterinary Office
IUT	Intra-Union trade
MAGRAMA	<i>Ministerio de Agricultura, Alimentación y medio ambiente</i>
MS	Member State
NRL	National Reference Laboratory
OIE	World organisation for animal health
PCR	Polymerase chain reaction
RCA	Regional Competent Authority
REGA	<i>Registro general de explotaciones ganaderas</i> (National livestock holding database)
TRACES	TRAdE Control and Expert System – EU database used for notification of intra-Union movements and imported animals.
<i>Tropilaelaps</i>	<i>Tropilaelaps</i> spp.

1 INTRODUCTION

This fact-finding mission took place in Spain from 29 September to 3 October 2014 and it was undertaken as part of the planned programme of the Food and Veterinary Office (FVO) for 2014. The mission team comprised two inspectors from the FVO, and was accompanied during the whole mission by a representative of the central competent authority (CCA), *Ministerio de Agricultura, Alimentación y medio ambiente* (MAGRAMA).

2 OBJECTIVES

The objectives of the mission were to:

- Gather information on the state of implementation of European Union (EU) legislation on bee diseases, and possible additional legislation on the same topic;
- Better understand the monitoring, surveillance and control systems in place for bee health;
- Determine possible gaps and difficult areas in existing EU legislation, and scope for possible improvements for better protection of bee health.

The scope of the mission included health control systems and activities in relation to honey bees and bumble bees.

In pursuit of this objective, the following meetings were held and sites visited:

Table 1: list of visits/meetings

Visits/meetings		Nb	Comment
Competent authorities (CA)	Central	1	MAGRAMA
	Regional	2	<i>Cataluña, Andalucía</i>
	Local	3	
Laboratories		1	National Reference laboratory
Honeybees holdings		3	
Bumble bees establishments		2	
Associations		5	

3 LEGAL BASIS

The mission was carried out under the general provisions of EU legislation and, in particular, Article 45 of Regulation (EC) No 882/2004 of the European Parliament and of the Council on official controls performed to ensure the verification of compliance with feed and food law, animal health and animal welfare rules.

4 BACKGROUND

Honey bees (*Apis mellifera*) play an important role in both pollination and the production of honey and other apiculture products. Following the report of an increase in honey bee mortality by several countries both within and outside the EU, the European Commission made a communication to the

European Parliament and the Council¹, outlining its strategy to pro-actively protect bee health.

The EU has established certain harmonised rules to protect and maintain the health of bees, among which are health standards for importation and Intra-Union trade (IUT) in honey bees and bumble bees (*Bombus spp.*), as these latter, bred and traded for pollination, can carry diseases transmissible to the former.

4.1 OVERVIEW OF THE BEE INDUSTRY IN SPAIN

Spain has around 2.5 million bee colonies registered and approximately 26,000 bee-keepers. Spain is the Member State (MS) with the highest number of bee colonies, representing 19% of EU census. Among these, 2.0 million colonies are kept by 5,000 professional bee-keepers.

More than 40% of the colonies are registered in two regions (*Andalucía* and *Extremadura*); another 40% of the colonies are registered in three regions, *Castilla y León*, *Valencia* and *Castilla la Mancha*. The number of registered colonies increased between 2006 and 2011 (around 500,000), and has remained fairly stable since 2011.

Table 2: rounded census of bee colonies and bee-keepers in Spain (2014, source:MAGRAMA)

Region	Nb bee colonies	Nb bee-keepers	% of inactive holdings in national database
<i>Andalucía</i>	585,000	4,070	13%
<i>Extremadura</i>	516,000	1,140	0%
<i>Castilla y León</i>	381,000	4,170	15%
<i>Valencia</i>	375,000	1,930	5%
<i>Castilla la Mancha</i>	162,000	1,830	7%
<i>Aragón</i>	106,000	1,350	4%
<i>Galicia</i>	105,000	3,330	2%
<i>Cataluña</i>	101,000	1,500	15%
<i>Murcia</i>	93,000	490	0%
<i>Asturias</i>	35,000	1,460	35%
<i>Canarias</i>	32,000	1,300	29%
<i>País vasco</i>	26,000	1,520	15%
<i>La Rioja</i>	18,000	280	5%
<i>Navarra</i>	13,000	460	8%
<i>Cantabria</i>	11,000	260	46%
<i>Baleares</i>	10,000	530	24%
<i>Madrid</i>	10,000	250	25%

Spain produces around 30,000 tons of honey and 1.5 tons of wax (2012 data).

A few holdings providing bumble bees for pollination are registered in Spain (five in *Andalucía*,

¹ http://ec.europa.eu/food/archive/animal/liveanimals/bees/docs/honeybee_health_communication_en.pdf

one in *Murcia*). The majority of consignments of bees subject to IUT certification, be it from or to Spain, are of bumble bees. Data for the last two years are as follows:

Table 3: number of Intra-Union trade certificates issued **from** Spain

2013	Breeding	Transhumance
Bees	74	123
Bumble bees	352	0

2014 (up to 15/09)	Breeding	Transhumance
Bees	70	60
Bumble bees	438	0

(source: TRACES)

Table 4: number of Intra-Union trade certificates issued **to** Spain

2013	Breeding	Transhumance
Bees	8	83
Bumble bees	191	122

2014 (up to 15/09)	Breeding	Transhumance
Bees	11	84
Bumble bees	152	96

(source: TRACES)

Transhumance consignments of bees move between Spain and either France or Portugal; France receives also the majority of breeding bee consignments. Consignments of bumble bees to Spain originate in Slovakia, Belgium or the Netherlands, whereas Spain sends bumble bee consignments to 10 MSs (mainly to Portugal, Italy and the Netherlands).

Imports (registered in TRACES database) are limited: in 2014, one consignment of queen bees was imported through a border inspection post in Germany and in 2012 five such consignments were imported through a border inspection post in Spain. All these imports were from Argentina (a country which has never reported incidence of exotic notifiable diseases). In 2014, five consignments of bumble bees were also imported from Mexico (a country with reported presence of *Aethina tumida*).

4.2 ORGANISATION OF THE OFFICIAL CONTROL SYSTEM

The organisation of competent authorities for bee health is described in chapter 2.1 of the country profile for Spain². Import control for bees is described in Chapter 2.3 of the same document.

At central level, within MAGRAMA, the sub-Directorate General for animal health, hygiene and traceability is responsible for animal holding registration and movement controls, sanitary matters, and controls of the primary production. The sub-Directorate General for sanitary agreements and border controls is responsible for controls of imported animals.

Each region (Autonomous Community) is responsible for the control of diseases within its territory.

² http://ec.europa.eu/food/fvo/controlsystems_en.cfm?co_id=ES

5 FINDINGS AND CONCLUSIONS

5.1 REGISTRATION OF OPERATORS, CONTROL OF MOVEMENTS

5.1.1 Registration and identification of holdings

Royal Decree 209/2002 defines national obligations in terms of registration and identification of honeybee holdings. They must be registered by the relevant regional competent authority (RCA) and each of their hives must be identified with the holding registration number.

The registered honeybee holdings are included in the national animal holding registration database, REGA (General Multi-species Register of all livestock Holdings) created by the Royal Decree 479/2004. They are classified according to their size: professional holdings are those with 150 or more colonies, and holdings for self-consumption are those with 15 colonies or less. REGA is used for all production species, and is configured so it shows the restrictions imposed on the holdings when the database is consulted.

Minimal sanitary conditions are set in Royal Decree for these holdings: all infrastructure and equipment must be easy to clean and disinfect. The Decree also includes minimum standards of animal welfare (not complied with in particular when at least 50% of the colonies are dead).

Each keeper must maintain a holding register, issued at regional level. The keeper must register all movements of colonies, sanitary events, and laboratory analyses. This register must be validated, at least, on an annual basis by the RCA. In addition, each keeper must communicate every year (before the 1st of March) a census of the colonies to the RCA.

Royal Decree 209/2002 foresees inspections of honeybee holdings by the CA, but not their frequency. The responsibility of such controls is decided at regional level. Practically, official controls in the regions visited were performed in relation with the approved multi-annual support programme for bee-keeping (to those keepers applying for support). This programme foresees that at least 5% of the applicant have to be checked (2.5% random, 2.5% targeted). These controls include a check on the register and on the identification of colonies (and their numbers). Controls and inspections of associations for bee health are also foreseen in relation to *Varroa* treatments.

Observations:

- Only one location is registered for a bee holding in REGA, whatever the number of locations where they keep apiaries. This location registered is the fiscal address of the keeper. However, when the keeper has non-transhumant apiaries in several regions (in which case a registration must be required in each region). In *Andalucía*, the financial support to bee-keepers is linked to keeping a maximum of 80 colonies in a single location. A bee-keeper explained that for technical reasons it was uncommon to keep more than 100 colonies on a same site. In the regions visited, bee-keepers were not required to register all physical locations of their hives in the registers.
- Census were updated according to the requirements. In *Cataluña*, the RCA sends a reminder of the obligation to update before the deadline. Data in REGA showed very high variations in percentage of apiaries not reporting updates of census (and considered as “inactive holdings”), with regions with less bee-keeping activity tending to comply less with the

update of the census. The figures do not vary much for each region from year to year since 2012 (see table 2).

- In *Cataluña*, the animal health services had a cooperation agreement with rural agents (from another department, of Agriculture), who reported the presence of hives either not identified, or with foreign identification. These cases were managed by a legal level (*Asesoría jurídica*), without involvement of the animal health department.
- At regional level, in *Cataluña*, the service in charge of annual controls shared the results with the service in charge of animal health. The main non-conformities reported (representing between 25 and 30% of the holdings checked) were related to census, non-active or non identified colonies. In *Andalucía*, the results of annual checks were not shared with the animal health services.

5.1.2 *Bumble bee establishments*

There is no specific national norm for registration of bumble bees establishments. However, the Law 8/2003 of animal health requires all animal production holdings to be registered.

Observations:

- The six bumble bees establishments currently registered in REGA are either production holdings or transit holdings. In *Andalucía*, a new transit holding receiving consignments from other MSs was identified, and was in the process of registration.
- The mission team visited an establishment involved in production and trade of bumble bees. It consisted of a confined building. Biosecurity measures were quite comprehensive. All elements of the production cycle occurred indoors, with no contact with the outside. A genetic management plan was also in place, and the producer indicated that no bumble-bee had been introduced into his establishment since 1999. The establishment benefited from the support of a private veterinarian, visiting the establishment on a frequent and regular basis. Production and mortality data were recorded and available, and the veterinarian performed regular controls on these. Feed source was controlled and a feed sterilisation protocol was under development.
- Bumble bees were raised in plastic containers, in which they were sent to the customers. Each container hosted a colony and its nest. From the fertilised queen to the final colony, three plastic containers were used: the first two were re-cycled within the plant, while the third containers, sent to the customers, were not recovered (at the end of the productive season, the bumble-bee colony dies out).
- The other bumble bee establishment visited was a transit storehouse, receiving consignments from a production establishment, storing hundreds of containers for a few days, and despatching them to final users, in Spain or other MSs. The containers, kept in individual cardboard boxes, remained untouched.
- The bumble bees, originally developed for pollination of cultures in greenhouses, are more and more used in open air culture, according to one producer. They are appreciated as they are less susceptible to weather conditions than bees. They are used as an alternative, but also as a complement to pollinating honey bees.

5.1.3 Notification and registration of movements

Bee-keepers intending to practice transhumance to other regions must notify their RCA of their movement programme for the following three months, giving at least one week's notice. This document, validated by the RCA, must be kept in the register and it must follow the colonies. The RCA of origin must inform the RCA of destination of the details of movements.

Observations:

- The pre-notification of transhumance from one region to another was performed as described. The regions visited did not check on this, but the RCA explained that this information could be useful for the regions that have disease control programmes.
- The regions visited did not have any requirements for notification of movements within the region. The RCA in *Cataluña* was developing a system in order to get notification of such movements (municipalities of origin and destination).

5.1.4 Organisation of operators and cooperation with competent authorities

The RCAs in Spain may recognise associations for bee health (*Agrupaciones de defensa sanitaria apícolas*, ADSA). These associations develop sanitary programmes which are initially approved by the CA, and receive financial aid. Organisations representing bee-keepers are also present at regional and national level. These participate in the development of the multi-annual plan for supporting bee-keeping, approved and co-financed by the European Commission.

Observations:

- The CCA gave examples of presence at bee-keepers' events to promote its activities related to the general bee health survey.

5.1.5 Conclusions

The bee-keeping sector is well organised in Spain and is in contact with the CA. The framework for registration of bee holdings and movement across regions is effectively implemented and controlled. This framework gives a good picture of the sector, but would be insufficient for disease control measures, as it does not ensure that the geographical localisation of hives is recorded. A proportionate system for registration of bumble-bee producing and transit holdings is in place.

5.2 BEE DISEASES

5.2.1 Diseases subject to notification and to official control

Council Directive 82/894/EEC has been last transposed by Real Decree 526/2014, which updated the list of diseases subject to notification. In line with the Directive, *Aethina tumida* and *Tropilaelaps* infestations are subject to notification. In addition, it includes rules for notification of all OIE (world organisation for animal health) listed diseases (which also includes for bees: European foulbrood, acaraposis, and varroasis). The CAs must communicate to the CCA with the following frequency:

- immediately in case of first apparition of the disease (or a new strain) at national level, or re-apperition in a zone or compartment, or apparition in a new host, or sudden and unexpected change of the features of the disease;
- on a weekly basis for secondary outbreaks;
- on a bi-annual basis for diseases declared endemic in Spain.

The declarations to the OIE indicate that two diseases (American foulbrood and varroasis) are present, and that acaraposis is suspected. The last outbreak of European foulbrood was reported in 2004. Infestations with *Tropilaelaps* and *Aethina tumida* have never been reported. The detailed incidence of diseases reported is as follows:

Table 5: reported occurrence of American foulbrood in Spain (source: OIE)

American foulbrood	2011		2012		2013	
	1st sem	2nd sem	1st sem	2nd sem	1st sem	2nd sem
The Whole Country	+()	+()	+()			
CANARIAS	1
CASTILLA Y LEON		2	3
CATALUÑA		1	1
MADRID	1

Table 6: reported occurrence of varroasis in Spain (source: OIE)

Varroasis	2011		2012		2013	
	1st sem	2nd sem	1st sem	2nd sem	1st sem	2nd sem
The Whole Country	1	1	+()	+()		
CASTILLA Y LEON	...	1	26	...	21	40
CASTILLA-LA MANCHA	...		...		...	1
CATALUÑA	...		+()	...	...	+
GALICIA	1	...	...		...	8
VALENCIANA	...		...		...	23

5.2.2 General Surveillance

The ADSAs may offer routine or *ad hoc* veterinary service to their members, including subsidised visits. In *Cataluña*, a specialised official veterinarian was available to investigate exceptional sanitary events in bees. The CCA offers also an investigation support to the RCAs for the analysis of cases of high mortality or depopulation of hives.

Various research projects on bee health and diseases have been developed at national or regional level, supported by the universities, the CAs or the National Agricultural Research Institute.

Royal Decree 608/2006 foresees a pilot survey on bees, in order to determine the prevalence and variation of the diseases encountered. Since 2012, Spain has participated in the European pilot survey on honey bee colony losses (planned for two years), coordinated by the EU-reference laboratory on bee diseases³. Initial results at European level were published in 2013⁴. While the participation of the regions was voluntary, the 14 main regions for bees in Spain participated.

3 http://ec.europa.eu/food/archive/animal/liveanimals/bees/docs/annex_i_pilot_project_en.pdf

4 http://ec.europa.eu/food/animals/live_animals/bees/docs/bee-report_en.pdf

In addition to the scope decided at European level (systematic search for *Varroa*, *Aethina tumida*, *Tropilaelaps*, deformed wing virus, acute bee paralysis virus, and investigation of the same, plus chronic bee paralysis virus, American and European foulbrood), the CCA added further modules to the survey:

- systematic search for *Nosema* spp and for the virus of chronic paralysis;
- Study on phyto-sanitary substance: clinical cases, and systematic search in combs.

This survey involved a lot of preparation. A specific user-friendly software (APINET) was designed for recording field data; practical difficulties were identified and solved, such as selection of samples on the basis of apiaries (not on the basis of holdings, as currently registered in REGA), or follow-up of transhumant colonies. The field visits were organised by the regions, and performed either by veterinarians of ADSA, or by official veterinarians. About 85 persons participated in field visits in Spain. Two training sessions were organised by the CCA, in 2012 and in 2014.

The CCA also developed in 2012 a manual for control of *Tropilaelaps* or *Aethina tumida*, developing contingency measures in case of suspicion or confirmation of these parasites, including an operational manual for the measures to be applied to the colonies, equipment, and ground. The measures in case of confirmation include census, movement restrictions and surveillance in protection and surveillance zones, of at least 3km and 10 km respectively. A further security zone of 50 km with movement controls is foreseen.

Observations:

- At all levels, people involved in the survey praised the initiative, not only because it brought reliable data on the sanitary status of bees in Spain, but also because it gave the possibility to data collectors to gain experience and have the opportunity to share with bee-keepers. The pilot survey at European level terminates in 2014, but the CA has decided to continue the survey at least for a further year at national level
- The organisation and implementation of the survey required an important mobilisation of resources. At the National Reference Laboratory (NRL), the mission team observed that some analyses were delayed. The main objective was collection of data, and not their analysis, so release of individual results to the RCA and data collectors suffered further delays on some occasions, even for clinical cases. As a result, veterinarians and bee-keepers did not receive timely information which could have been beneficial for the sanitary management of their bees.
- The CCA supervised data collection; however, they could not perform supervision in the field. This prevented them from verifying the harmonised assessment of some subjective criteria, such as the vigour of colonies.
- The results from the first year of the pilot survey indicated that the overall winter colony mortality was not exceptionally high (9.5%), even though high variations were observed across the regions. Spring mortality was 6.8%.
- The prevalence of clinical nosemosis was 1.5% in apiaries, despite the fact that *Nosema* was identified in 76% of the apiaries (95% of cases with *Nosema ceranae*). The clinical prevalence of chronic paralysis virus was between 0.5 to 1% of the apiaries. European foulbrood was never identified in clinical samples.

- At the time of the mission, the results of the additional modules of the survey were not available. The CA indicated their intention to publish them.
- The European pilot survey required information on apiaries which would be most at risk of infestation by *Tropilaelaps* or *Aethina tumida*. The CCA indicated that it was about identifying which apiaries included at random in the pilot survey would be close to possible sources of entry of such parasites, not on the identification of possible sources of entry (or identifying and monitoring sentinel colonies around these locations).
- The contingency plan for *Tropilaelaps* and *Aethina tumida* does not describe how apiaries and their locations would be identified, taking into account the current traceability norms in place. The chapter on resources does not include human resources: no estimation is given on the number and qualification of personnel needed to perform the tasks foreseen in the set timespan. The depth of clinical examinations in these zones is not set either.
- The bee-keepers met did not suffer problems of colony losses. One bee-keeper indicated that when they have a problem of colony loss that they suspect is due to the use of phyto-sanitary products, they stop bringing the hives to this area. The CCA gave anecdotal evidence of a case investigation, where a suspicion of intoxication by phytosanitary products was eventually found to be due to a viral infection.

5.2.3 *Varroa*

Royal Decree 608/2006 introduces specific measures against *Varroa*, including a compulsory annual treatment (the period of which is decided by the RCA on an area basis, usually between September and November). The national bee plan, adopted for 2014-2016, and approved and supported by the European Commission, includes financial support for the control of *Varroa*. This financial support is subject to compliance with the measures of the Royal Decree.

The control of *Varroa* is performed in some RCAs through ADSAs. They develop action plans which may include active surveillance, monitoring of the efficacy of treatments, recommendations of the product to be used (and ensure rotation of treatments) or other concerted activities. In *Cataluña*, authorisation of movements of bee hives is linked to a control on *Varroa* infestation: depending on the grade of infestation, the movements can be authorised for 12 months, six months, or prohibited. The controls must be performed by approved veterinarians.

Observations:

- The result from the pilot survey showed that 40% of the colonies (and 70% of the apiaries) were infested with *Varroa*. The survey was performed in autumn, either before or after the compulsory treatment. The differential analysis of the infestation rate with or without treatment was not available at the time of the mission. The clinical prevalence of *Varroa* observed during the study was very low in apiaries, according to the EU-RL publications: between 0.5% (Spring) and 1.5% (Autumn). The CA indicated that these data were only showing results from laboratory analyses, while field observations during the study detected a clinical prevalence between 4% (Summer) and 14% (Spring and Autumn).
- Activities related to *Varroa* treatment were very well documented, due to the financial support and related controls. All stakeholders met agreed that *Varroa* constituted the main bee health problem in Spain.

- The RCA of *Cataluña* agreed that the absence of objective criteria for the evaluation of the grade of infestation, and the lack of official supervision of the approved veterinarians, were factors that could affect the reliability of these controls.
- The Basque country programme foresees an evaluation of the *Varroa* control programme, but does not detail the process.

5.2.4 *American foulbrood*

Royal Decree 608/2006 gives the RCAs the power to define eradication programmes in zones affected by American foulbrood, *Aethina tumida* or *Tropilaelaps* infestations, including movement restrictions of hives, and destruction of colonies or hives. A financial compensation is foreseen.

Article 288 of the legislation of epizootics (dating from 1952 and 1955) requires an official visit in case of foulbrood, nosemosis, or acarasis, in order to prohibit the movement of bees and equipment, decide about the treatment or destruction of the swarm and disinfection of moving hives or destruction of permanent ones.

At present, the Basque country is the only region which has developed a programme for American foulbrood. It includes the destruction of affected colonies in case of outbreak, and restriction of movements of colonies with active infection. A plan was under development in *Cataluña*.

Observations:

- The preliminary results of the general survey has identified a prevalence of American foulbrood in apiaries varying between 0 and 2.5%, according to the period of the survey.
- Although the legislation of epizootics has not been formally repealed, these measures were not applied in the regions visited. The NRL did not notify immediately positive results of American foulbrood detected during the pilot survey to the regions.
- In *Cataluña*, a case of American foulbrood was identified following an inspection in the framework of the general survey. The holding was visited by an official veterinarian eight days after the results from the NRL were received. The infected hive was destroyed but no further prohibition or official controls were put in place.
- ADSAs may offer diagnostic assistance to their members. In an ASDA visited by the mission team, the veterinarian indicated that bigger bee-keepers can recognise American foulbrood from symptoms and decide to destroy the infected colonies without seeking laboratory confirmation or notifying the disease. A guide on actions to be undertaken in case of outbreak of American foulbrood is under development at national level.

5.2.5 *Availability and use of veterinary medicinal products for bees*

Nine veterinary medicinal products are registered in Spain for treatment of bees, all for treatment against *Varroa*, and the CA made the list available to the public⁵. Their active ingredients include essential oil (thymol), organic acids (oxalic or formic acid), or acaricide (pyrethroids: flumethrin; tau-fluvalinate; organophosphate: coumaphos; amidine: amitraz).

5 <http://www.aemps.gob.es/medicamentosVeterinarios/Med-Vet-autorizados/Med-abejas/home.htm>

Medicinal products for bees are delivered only under veterinary prescription and distributed through the same channels as other similar veterinary drugs. The products need to go through retailers, which can be pharmacies or authorised livestock associations.

Observations:

- The documentation kept for treatments was very good.
- A group of stakeholders (veterinarians, universities, laboratories) developed a guide on the responsible use of veterinary medicines in bees⁶. This guide reviews all aspects related to treatments, including the cascade principle for prescription, the good practice for treatments, but also biosecurity diagnosis aspects.
- Very few non-compliances on the use of medicinal products are encountered within the framework of the national residue monitoring plan. Over the last two years, one sample resulted positive (antibiotics).
- The RCAs may restrict further the use of anti-*Varroa* treatments in the framework of regional plans of subsidies. In *Andalucía*, the subventions in the framework of agro-environmental measures require the bee-keepers to adopt a system of integrated control, coupled with the exclusive use of synthetic chemical product.

5.2.6 Conclusions

Knowledge of the health conditions of bees in Spain has substantially increased over the last few years, thanks to activities initiated at EU and national level. The implementation of the EU-initiated health survey also allowed the development of expertise and awareness towards exotic parasites within the CA, and stakeholders. This was considered so beneficial that Spain is maintaining the programme despite its termination at EU level.

The official control programme for *Varroa* is well implemented and subject to close controls, including for the use of treatments. Whereas the preparedness against a possible intrusion of *Aethina tumida* and *Tropilaelaps* has been upgraded, practical details still need to be developed to make the plan fully operational. Although American foulbrood is formally a disease under official control and is present in Spain, implementing measures are non-existent or scarce.

5.3 TRADE AND IMPORT OF BEES

5.3.1 Intra-Union trade

The regions are responsible for organising the checks at departure and at destination for IUT. In *Andalucía*, certification of bumble bees from intermediate warehouses was performed following a visit from the official veterinarian. In both regions visited, certification of all other consignments of bees and bumble bees was based on pre-certification performed by a private veterinarian, with no other particular requirement than being registered in Spain.

Cataluña does not perform checks at destination, unless the holdings they visit in the framework of their annual checks received consignments from other MSs within the last 12 months. *Andalucía*

⁶ http://www.vetresponsable.es/vet-responsable/guias-por-especies/apicultura_268_1_ap.html

developed a programme for control of animals and genetic material submitted to IUT⁷. This programme foresees a frequency of controls modulated according to a risk categorisation of the MS of origin.

Observations:

- There were no instructions or guidelines available for private or official veterinarians in relation to American foulbrood. The certificate for IUT requires that bees do not come from an area subject to a prohibition order associated with American foulbrood. It also requires that such prohibition be continued for at least 30 days following the last case, and that all hives in a radius of 3 km be checked.
- For certification of bumble bees, Spain is using the option (available in the IUT certificate) that the animals come from an environmentally isolated structure, recognised by and under the supervision of the CA. However, this option requires that the MS is free from American foulbrood.
- Neither the private veterinarian nor the official veterinarians had received training on bee diseases. The certificate requires that bumble bees show no clinical sign or suspicion of American foulbrood. The veterinarians met could not indicate what these clinical signs would be in this species. The private veterinarians had nonetheless sent routine samples to be tested to a laboratory, in order to support the absence of the disease.
- Directive 92/65/EEC provides a unique certificate for bees and bumble bees. The purpose for certification contains only two options (“breeding” and “transhumance”), which are not fit for the main purpose of trade in bumble bees as they are either in transit, or sent at a final destination for production.
- The official veterinarians met by the mission team in *Andalucía* did not know where to find the risk categorisation of the MS of origin for the checks at destination. They indicated that they were trying to visit all places of destination for all consignments coming from other MSs, but did not have enough resources to do it.
- Checks at destination were recorded in TRACES database. The most frequent non-compliance was that the holding of destination was not authorised (with sometimes the indication that the national requirements were not met).
- A Spanish bee-keeper bringing his hives for transhumance to France and Andorra required IUT certificate for movement to the other MS. He acknowledged that he rarely asked for a IUT certificate for bringing back his hives from France, as he did not know where to make the request, nor did he master the language there. The CA did not control (in TRACES or during the annual verification of the holding registers) whether the hives returned with IUT certificates.
- The collaboration with rural agents in *Cataluña* allowed to identify the irregular presence of hives coming from other MSs. No sanitary visit was performed in such cases.

⁷ <http://www.juntadeandalucia.es/agriculturaypesca/portal/areas-tematicas/ganaderia/inspeccion-y-control/programas-de-inspeccion-sanitaria/intercambiointra-comunitario-de-animales-vivos-y-material-genetico/objetivos-documento-control-actuaciones.html>

5.3.2 Import controls

Article 13(1) of Regulation (EU) No 206/2010, requires imported bees to be conveyed without delay to the final place of destination, where they should be placed under the control of the CA, and the queen bees transferred to other cages before being introduced to local colonies.

Article 13 (2) of Regulation (EU) No 206/2010, requires that queen bees imported are separated from their attendants, and that cages, attendants and other material be sent to a laboratory for their examination.

Article 13 (3) of Regulation (EU) No 206/2010 requires that consignments of bumble bees be conveyed without delay to their place of destination. Bumble bees may remain in the same container until the end of the lifespan of the colony, but the container and the accompanying material must be destroyed. A note from the CA in the Province of *Almería* (from 2011) required that all consignment of animals and products of animal origin from other MS or third countries be subject to controls.

The CCA developed a technical instruction for the separation of queen bees from their attendants. The laboratory in charge of analyses following imports of queen bees has been the NRL.

Observations:

- The consignment of queen bees imported in 2014 was not subject to official supervision or control at the place of destination. The bee-keeper indicated that he introduced the imported cages, together with the queen and attendants, into the receiving colonies. The local CA did not spot the notification through TRACES: they indicated that they receive too many notifications, including those not pertaining to their own local office.
- Despite a specific notification issued by the border inspection post of Madrid following imports in 2012, the protocol foreseen in the EU regulation was never followed completely. The places of destination were not visited immediately, and the bee-keepers had already introduced most cages, queens bees and attendants into their colonies.
- One bee-keeper who imported queen bees stated that he would not have let them into the new colonies without their original attendants, as the queen bees, of a different species, would be killed by the other bees. Despite the instruction developed by the CCA, the local CA did not feel confident in performing this separation.
- For checks at destination of bumble bees, the note from the CA did not specify the requirements for controls on the spot. No written instruction or visit was performed by the local CA to the holding which received the five consignments of bumble bees imported from Mexico. No official control was performed on the requirement of Article 13 (3) of Regulation (EU) No 206/2010, related to the destruction of the container and material accompanying the bumble bees at the end of the lifespan of the colony at the latest.

5.3.3 Conclusions

There is little background for the certification of the requirements for bees or bumble bees related to American foulbrood for IUT, and therefore the guarantees brought by the process are very limited.

The IUT certification requirements for bumble bees do not take full account of the reality of the production and trade system, and are therefore difficult to put into practice. The absence of sanitary checks of consignments brought into the country without certification could have consequences if the health status of the place of origin is lower than in Spain.

Spain has developed some measures to fulfil post importation requirements of queen bees, but the current system for application and control of post-import requirements of bees does not work properly. The absence of channelling from the border inspection post to the place of destination was a major obstacle, and the presence of the CA at arrival at the place of destination was not ensured. The very technical manipulation required at the place of destination needs a grade of preparation that was not met at the few occurrences of importation of queen bees. The risk created by the non-respect of the post-import requirements was mitigated by the few consignments imported, and the fact that they all came from a country which had never declared the presence of *Aethina tumida* or *Tropilaelaps*.

5.4 LABORATORY CAPACITY

5.4.1 National reference laboratory for bee diseases

Real Decree 608/2006 nominated the central animal health laboratory of MAGRAMA, in Algete, as the NRL for varroasis. The same laboratory acts as the NRL for all bee diseases, and offers diagnosis and expert services.

Observations:

- The laboratory has a specific department for bee (and fish) diseases. The departments of bacteriology and PCR are also involved in diagnosis of bee diseases (the former for American and European foulbrood, and the latter for the same, plus Nosemosis, and viral diseases).
- The laboratory has been accredited according to ISO 17025 norm. for diagnostic of bee diseases, the scope included microscopical detection of *Varroa* and *Nosema*. The laboratory was planning to move from a fixed scope to a flexible scope of accreditation, which, according to the management, should facilitate the inclusion of methods within the scope of accreditation⁸. Standard operating procedures are being developed for some bee diseases (such as PCR identification of American foulbrood).
- The NRL collaborates with the EU reference laboratory. It participated in the proficiency test organised for PCR identification of American foulbrood on DNA samples in 2013.
- No written procedure was available for the post-import checks on bees required by Regulation (EU) No 206/2010. The method described consisted in pooling attendant bees in an alcohol bath, stirring and straining through a sieve, and examining the debris collected. The NRL could not tell the diameter of the pores of the sieve⁹, and pointed out that the

8 In their response to the draft report, the competent authorities of Spain indicated that they obtained accreditation of PCR detection of viruses of veterinary interest (flexible scope), therefore including detection of viruses affecting bee health.

9 In their response to the draft report, the competent authorities of Spain indicated that the method also included a

methods for post-import examination were not harmonised at EU level.

- Thanks to its important role in the general survey since 2012, the NRL has developed procedures and gained proficiency through the numerous analyses performed
- The NRL was not requested to comment on or control the conformity of the post-import samples sent.

5.4.2 Network of laboratories performing bee diseases diagnosis

Each RCA can approve on their territory official laboratories for bee diseases. Such laboratories have been approved in 14 regions. In eight regions, their range of diagnosis is restricted to *Varroa* (and *Tropilaelaps*). American foulbrood is included in the scope of approval in three of these laboratories.

Observations:

- The NRL organised in 2012 a training course to testing laboratories on *Varroa*, *Tropilaelaps* and *Aethina tumida*. A network of official laboratories has been formally organised in 2014. The NRL provides reference material to the laboratory network.
- In addition to official laboratories, private laboratories can also provide diagnostic services for bee diseases: the laboratory which provided the analytical results to the veterinarian in charge of the bumble bee establishment was not in the list of approved laboratories.

5.4.3 Conclusions

The capacity of laboratory diagnosis of bee diseases has been reinforced during the last few years, and currently provides a good support for health surveillance. The standard of implementation of EU requirements following import of queen bees is not controlled or ensured at the laboratory.

6 OVERALL CONCLUSIONS

The Spanish CA has developed a basis for bee health controls that goes beyond EU requirements, in particular for traceability of bees within their territory, and for the control of a main health threat, *Varroa*. The bee-keeping industry, very important in Spain (with a significant professional sector), is well structured and active in bee health. Official activities over the recent years have further strengthened the organisation and expertise in relation to bee health.

Trade in bumble bees is significant in Spain, experiencing a sustained development. It is under effective official control, while the specificities of the sector are not sufficiently taken into account to develop the standards of controls and health guarantees required to protect bee health.

The mission identified further practical and structural difficulties in the implementation of some EU health requirements for trade and import of bees and bumble bees.

microscopical examination of all bees in search for adult small hive beetle, and that cages and their content were examined for detection of eggs or larvae, and that the diameter of the sieve was of 3.35 mm.

7 CLOSING MEETING

A closing meeting was held on 3 October with representatives of the competent authorities. At this meeting the FVO team presented the main findings and preliminary conclusions of the mission. The CA did not express any major disagreement.

ANNEX 1 - LEGAL REFERENCES

Legal Reference	Official Journal	Title
Dir. 82/894/EEC	OJ L 378, 31.12.1982, p. 58-62	Council Directive 82/894/EEC of 21 December 1982 on the notification of animal diseases within the Community
Dir. 92/65/EEC	OJ L 268, 14.9.1992, p. 54-72	Council Directive 92/65/EEC of 13 July 1992 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
Dir. 2001/82/EC	OJ L 311, 28.11.2001, p. 1-66	Directive 2001/82/EC of the European Parliament and of the Council of 6 November 2001 on the Community code relating to veterinary medicinal products
Reg. 852/2004	OJ L 139, 30.4.2004, p. 1, Corrected and re-published in OJ L 226, 25.6.2004, p. 3	Regulation (EC) No 852/2004 of the European Parliament and of the Council of 29 April 2004 on the hygiene of foodstuffs
Reg. 882/2004	OJ L 165, 30.4.2004, p. 1, Corrected and re-published in OJ L 191, 28.5.2004, p. 1	Regulation (EC) No 882/2004 of the European Parliament and of the Council of 29 April 2004 on official controls performed to ensure the verification of compliance with feed and food law, animal health and animal welfare rules
Reg. 37/2010	OJ L 15, 20.1.2010, p. 1-72	Commission Regulation (EU) No 37/2010 of 22 December 2009 on pharmacologically active substances and their classification regarding maximum residue limits in foodstuffs of animal origin
Reg. 206/2010	OJ L 73, 20.3.2010, p. 1-121	Commission Regulation (EU) No 206/2010 of 12 March 2010 laying down lists of third countries, territories or parts thereof authorised for the introduction into the European Union of certain animals and fresh meat and the veterinary certification requirements