



THE NATIONAL BEE MONITORING NETWORK IN ITALY (2009-2013)



The establishment of a national monitoring network, covering geographically differentiated areas, is an essential tool to gather information on the health status of honey bees in each country. The creation of a national monitoring network follows the indications of the Commission Directive 2010/21/EU of 12 March 2010, amending Annex I to Directive 91/414/EEC as regards the specific provisions relating to clothianidin, thiamethoxam, fipronil and imidacloprid. In particular, concerning the placing of plant protection products on the market, prescribes the initiation of monitoring programmes to verify the real exposure of honey bees to pesticides, with specific reference to neonicotinoid-based ones. In Italy, since 2009, the national bee monitoring network has been activated and supported by two national projects funded by the Italian Ministry of Agricultural, Food and Forestry Policies: ApeNet (2009-2010) and BeeNet (2011-2013).

The network is organised in modules, each consisting of five apiaries with 10 non-migratory colonies each. The ApeNet network was composed of 28 modules, corresponding to about 1,350 hives; within the BeeNet project the number of modules was increased to the current 63, corresponding to 303 apiaries and approximately 3,000 beehives, with coverage of all the Italian regions.

Each module is managed by a referent person, who is in charge to carry out four visits per year: 1) end of winter; 2) spring-summer; 3) end of summer-beginning of autumn; 4) before wintering. At each visit, environmental and beehive data are recorded, while at visits 1) and 3), samples of beehive matrices are also collected (beebread and alive honey bees) to conduct chemical (pesticides), pathological (*Nosema* spp., viruses and *Varroa*) and nutritional (beebread raw protein) analyses. In case of abnormal honey bee die-off, supplementary

samplings are carried out independently of the scheduled routine sampling times, and followed by further laboratory analyses. The results of the monitoring network are published by means of six-month reports, produced through the GeoDataWarehouse system (BeeNet information system) and available on the National Rural Network web site “SOS api” (www.reterurale.it/api).

The monitoring network is supported by the BEST (Bee Emergency Service Team), a working tool which permits to record anomalous events in beehives that do not belong to the network and to activate real time intervention on site.

The activities of the monitoring network and the BEST are managed by a national coordinating team, composed of the researchers of four Italian institutions (CRA-API, IZSVE, SIN, DipSA-Entomologia)*. The role of the coordinating team is to organise and supervise the functioning of the network - by coordinating the regional modules and their referents - and to implement the activities of the BEST. Furthermore, in each Italian region, an institutional supervisor is established, belonging to the Agriculture or Health Department or other institutions that cooperates with the national coordination team in the project management at regional level.

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Links

ApeNet report 2009: <http://www.reterurale.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/4600>

ApeNet report 2010: <http://www.reterurale.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/5773>

ApeNet report 2011: <http://www.reterurale.it/apenet>

Bollettino BeeNet n. 1 2011: <http://www.reterurale.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/9025>

Bollettino BeeNet n. 1 2012: <http://www.reterurale.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/10292>