

## 6<sup>th</sup> Session of the Meeting of Parties

Prague, Czech Republic, 20 – 22 September 2010

### *Draft* Resolution 6.16

Impact on Bat Populations of the Use of  
Antiparasitic Drugs for Livestock



*The Meeting of the Parties to the Agreement on the Conservation of Populations of European Bats (hereafter “the Agreement”),*

*Recalling* paragraph 8 of Article III of the Agreement text (“Each Party shall, wherever appropriate, consider the potential effects of pesticides on bats when assessing pesticides for use,...”);

*Recalling* paragraph 23 of the Conservation and Management Plan agreed at the first Meeting of Parties to EUROBATS (EUROBATS.MoP1.Report. Annex K), which states “The impact of pesticides such as antiparasitic drugs should be carefully assessed and the appropriate advice given to land managers to avoid possible deleterious effects on bats”.

*Further recalling* that this concern has been incorporated into subsequent Conservation and Management Plans compiled at EUROBATS MoPs;

*Recognising* that a number of these drugs (Endectocides) can have serious impact on the insect fauna associated with the dung of treated animals;

*Further recognising* that such impacts on the insect fauna will have impacts on bat species that prey particularly on such insects;

*Noting* that the use of these drugs is of conservation concern for a wide range of fauna and flora;

*Further noting* EU Directive 2001/82/EC of the Council of 6 November 2001 requiring that any new such product must be tested for its impacts on dung fauna;

*Noting* that for most purposes less toxic products or non-chemical treatments may be available;

*Concerned* that firm data on the direct effects on bats are not available;

*Urges Parties and Range States to:*

1. Adopt a precautionary approach with respect to the use of endectocides;
2. Limit the impact of chemical treatments through use of products of least toxicity to non-target species, but appropriate for the purposes of treatment and through timing of treatment and animal husbandry practices;
3. Avoid the use of chemical sustained-release bolus treatments as far as possible;
4. Adopt or encourage the development of efficient non-chemical methods to control livestock parasites;
5. Keep the home range of young bats (e.g. up to 1.5km of maternity roost site) of key species, such as horseshoe bats, free of avermectins;
6. Avoid treatment with avermectins of grazing animals in land managed for conservation;
7. Maintain an up-to-date list of chemicals used and their relative toxicity;
8. Raise awareness of the concerns with land managers and livestock managers;
9. Encourage research to reduce impact of treatments;
10. Adopt the more detailed management recommendations provided in Annex 1.

Management Recommendations to reduce the impact on bat populations of the use of antiparasitic drugs for livestock.

1. Key bat species most likely to be affected by the use of antiparasitic drugs with high toxicity to invertebrate fauna of livestock dung.

Species:

*Rhinolophus ferrumequinum*

*Rhinolophus hipposideros*

*Rhinolophus mehelyi*

*Eptesicus nilssonii*

*Eptesicus serotinus*

*Myotis blythii*

*Myotis myotis*

*Myotis punicus*

*Nyctalus leisleri*

*Nyctalus noctula*

*Pipistrellus pipistrellus*

2. Management Recommendations

In general, application by bolus should be avoided. Sustained-release ivermectin bolus can cause risks for Diptera (especially Muscidae and Scathophagidae) for up to four months after application. Impacts are less on adult scarabaeid beetles, but increased in larvae; larvae of *Onthophagus*, *Euoniticellus*, *Copris*, *Onitis* and *Aphodius* may be affected for more than 140 days.

Avoid the use of chemicals of high toxicity to invertebrate fauna of livestock dung. Moxidectin is identified as a product similar to ivermectin, but having almost no effect on Diptera and Coleoptera. On the other hand, Dichlorvos, mainly applied to horses, is particularly dangerous with the main period of impact for the first ten days after application. Restrict the use of products containing doramectin, ivermectin or eprinomectin to housing of the livestock or in the autumn (when the main dung insect

breeding season is over). Treat livestock with any appropriate non-ivermectin product or moxidectin (a less toxic ivermectin);

Many problems can be avoided where animals can be kept indoors for about two weeks after treatment (as is common particularly in northern latitudes).

Graze ivermectin-treated livestock in fields close to others containing untreated animals. Problems may be particularly acute where treatment is applied over a wide area at the same time and where treatments cannot be applied while animals are kept indoors (and this may be particularly applicable to Mediterranean countries). At least some beetle species will avoid dung of treated animals, so where untreated dung is within range of the beetles, the beetles will be able to maintain themselves.

Treat livestock only when necessary and avoiding treatment of older animals if they are not susceptible to the parasite of concern (this may include assessment of parasite burdens before treatment, e.g. by faecal egg count assays or FAMACHA);

In general, chemical treatment should be timed to cause minimum impact. Alter (if appropriate from an animal health perspective) the timing of ivermectin treatment to avoid the period when residues in the dung coincide with key foraging periods of the vertebrates);

Keep stock free of ivermectins within the home range of young bats (e.g. up to 1.5km of maternity roost site) of key species, such as horseshoe bats; see list in 1 above;

As far as possible do not treat grazing animals in land managed for nature conservation with products more toxic to invertebrate fauna of dung;

Maintain an up-to-date list of chemicals used and their relative toxicity.

The use of non-chemical treatments (e.g. diatomaceous earth, herbal supplements) is being increasingly accepted and should be encouraged.

Carry out further investigation of alternative treatments to reduce impact. Such measures might include pasture rotation, biocontrol, targeted treatment to limit resistance, hygiene, breeding, vaccines, 'management'.