

**ADVISORY COMMITTEE ON ANIMAL FEEDINGSTUFFS**

**50<sup>th</sup> Meeting of ACAF on 3 June 2010**

**Information Paper**

**Developments concerning the use of trace element additives to fortify animal feeds.**

**ACAF Scientific Secretariat  
May 2010**

## **Developments concerning the use of trace element additives to fortify animal feeds.**

### **Purpose**

1. This paper is to inform the Committee about developments in three areas that relate to trace element-based feed additives that are used to fortify animal feed:
  - (a) re-assessment and re-authorisation;
  - (b) excessive exposure to trace elements; and
  - (c) levels of trace elements in the environment.

### **Background**

2. It is common practice for compounds of certain trace elements (e.g. copper, iodine and manganese) to be added to manufactured feed. This is done in order to help ensure that animals' dietary needs for these elements are satisfied. The use of such substances in feed is controlled by European feed additive legislation (European Parliament and Council Regulation (EC) 1831/2003). These controls include a positive list of permitted trace element compounds, together with maximum permitted levels. However, sources of 'macro' elements such as calcium, sodium and phosphorus (e.g. sodium chloride) are not controlled by Regulation 1831/2003, as these are considered to be feed materials.

3. Traditionally, the trace element substances used as feed additives have been simple inorganic compounds. However, a number of organic forms (e.g. chelates) are now authorised, and have been used more recently due to their apparent increased bioavailability. It should be noted that the current maximum permitted levels are not based entirely on physiological requirements. For example, higher levels of copper are permitted for young piglets. The added copper is believed to play a role in the prevention of scouring, thereby enhancing piglet viability and growth rates.

### **Re-assessment and re-authorisation**

4. Feed additives that are currently authorised under long-standing legislation (Directive 70/524) need to be re-assessed and re-authorised under the procedure outlined in Article 10.2 of Regulation 1831/2003; most of the substances authorised as trace element additives fall into this category. Essentially, a dossier must be compiled and submitted by 7 November 2010 for such substances to continue to be authorised as feed additives. In the longer term, the dossiers will be assessed by the European Food Safety Authority (EFSA) and, where appropriate, new authorisations will be made.

5. The Committee is invited to note that it is possible that some trace element additives currently authorised might not be supported by a re-authorisation dossier, and that the authorisation for such 'orphan additives' would be revoked. However, it is not expected that all the authorised forms of any one trace element would fall into this category.

6. As part of its assessment it is expected that EFSA's FEEDAP Panel will consider the maximum permitted levels, and it is possible that the Panel will suggest that changes to the current limits for certain trace element additives should be made.

7. The onus falls to the feed and feed additive sectors to submit the necessary dossiers. Given that the additives in question here have generic authorisations (i.e. not company- specific or product-specific); only one dossier per substance is required. The commercial sector is known to have developed consortia to work on the submission of re-authorisation dossiers. However, much of this work is being done in private, and it is difficult for Agency officials to be sure at this stage whether or not a specific additive will be supported by a dossier.

### **Excessive exposure to trace elements**

8. There have been some concerns discussed within the Agency, the Veterinary Laboratory Agency (VLA), amongst veterinary practitioners, and the feed and farming sectors about morbidity and deaths in livestock due to exposure to high levels of certain trace elements (copper and selenium in particular). It is well known that most breeds of sheep are particularly sensitive to copper. However, problems caused by excess dietary copper in cattle appear to be increasing. The Committee will be asked shortly whether it wishes to help address this issue by, for example, helping to develop suitable guidance. A more detailed discussion paper will be prepared for the Committee's consideration once more information is available from the industry and the VLA later this year.

### **Levels of trace elements in the environment**

9. Colleagues at the Department of the Environment and Rural Affairs (Defra) have been studying levels of trace elements found in the rural environment for over ten years. Recent work performed by ADAS on behalf of Defra suggests that inputs from livestock are not reducing, despite a lowering of many maximum limits for trace element additives in 2004. While it is unreasonable to assume that prior to 2004 the feed and farming sector were using the maximum permissible amounts, it is understood that significant amounts of zinc compounds in particular are now being prescribed by veterinarians that are above the maximum permitted levels for feed additive use. While there is little concern about current levels, they may cause significant problems in the rural environment for future generations.

## **Conclusion**

10. The Committee is invited to note three issues concerning the use of trace element feed additives that might be developed further at future Committee meetings:

- re-assessment and re-authorisation;
- excessive exposure to trace elements; and
- levels of trace elements in the environment.

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