EUROPEAN COMMISSION
HEALTH & CONSUMER PROTECTION DIRECTORATE-GENERAL

Directorate B - Scientific Health Opinions
Unit B3 - Management of scientific committees II

Assessment by the Scientific Committee on Animal Nutrition (SCAN)

of a micro-organisms product : Esporafeed Plus® [1]

EXECUTIVE SUMMARY

(adopted on 03 December 1999)

The strain of *Bacillus cereus*, the active component of the feed additive Esporafeed Plus®, was found to be resistant to tetracyclines, important antimicrobial agents in human and veterinary medicine. Animals are thought to act as a reservoir of antimicrobial resistance genes and their transfer to human bacteria via the food chain or other routes may contribute to the increase in antimicrobial resistance genes found in human bacteria. Of particular concern is the fact that the tetracycline resistance gene (*tetB*) of the *Bacillus cereus* is typically located on a transposon, a mobile genetic element that is easily transferable to other bacteria.

The Esporafeed Plus® strain belongs to a group of bacteria commonly implicated as a cause of food poisoning in humans and known to produce enterotoxins and/or an emetic toxin. In the slaughtering process, there is a risk that meat products may be contaminated with *Bacillus* spores and spread to humans via the food chain. Any *Bacillus* strain fed to food-producing animals as an additive must, therefore, be shown not to produce toxins damaging to human health. Several test systems are available for the detection of enterotoxin production by *Bacillus cereus.* However, from the choice and limited number of such tests performed with the Esporafeed Plus® strain it can not be established with confidence that this strain of *Bacillus cereus* does not produce toxins damaging to human health.

Considering the risk of disseminating tetracycline resistance genes among animals, the food chain and the wider environment and the lack of adequate data showing that enterotoxins are not produced, SCAN concluded that Esporafeed Plus® poses a risk to human or animal health or to the environment if used as an additive for pigs and calves.

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1 *See also the SCAN "Report on the use of certain micro-organisms as additives in feedingstuffs"*