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**Challenges of feeding 100 % organic feed**

**Summary**Commission Regulation No 889/2008 allow until 31. December 2011, that 5 % of dry matter of agricultural origin can be conventional in feed for organic monogastric animals. From January 2012 however, all ingredients must be organic. Fishmeal is not considered to be of agricultural origin, but is on a list of animal products, that can be used until 31. December 2011. Fishmeal is considered neither organic, nor conventional. It is unclear whether fishmeal can be used after 31. December 2011. The Regulation includes a list of substances and products which can be used for processing of organic food and feed. Only substances mentioned on the list can be used.

GMO and synthetic products, including – amino acids are not allowed in feed for organic animals.

**Possible postponement of 100 % organic feeding**

At the moment negotiations are carried out between member states, the SCOF-Group and The European Commission. The questions are whether a postponement can be accepted – and under which conditions?

The latest suggestion from The Commission, is that in feed for monogastrics 3 % conventional ingredients of Agricultural origin should be allowed in 2012, in 2013 this proportion should be reduced to 1 % and in 2014 feeding should be 100 % organic. The proportion of conventional ingredients can be calculated as an average over one year. Regarding fishmeal it is suggested that it should stay on the list of ingredient which can be used (probably also after 2013?). It is unclear what will be the outcome of the negotiations. A final decision will not be taken until 24 – 25 November, at which date The Commission has its next meeting.

**Inadequate supply of Amino acids**

Amino acids are the bricks from which protein is build. There are 21 different amino acids, of which half of them are considered essential, i.e. the animals cannot synthesize the amino acid, and therefore these amino acids must be included in the diet. In poultry, methionine is the first limiting amino acid, i.e. the most difficult amino acid to supply in adequate quantity. Cystine and lysine are number 2 and 3. Methionine, cystine and lysine are therefore the most important amino acids to consider, when we evaluate the possibility of formulating balanced diets for organic poultry in the future.

**Impact of AA deficiency on productivity and welfare**

If the animal is not supplied adequate quantities of methionine and lysine, the productivity will decrease, including slower growth in chickens and lower production of eggs in laying hens. The animals will get stressed and aggressive and this can lead to feather picking and cannibalism in poultry.

Even now, when 5 % conventional ingredients (mainly maize gluten and potato protein) and fishmeal is included in the diets, it is difficult to formulate balanced diets. Especially it is difficult to meet the requirements of young animals. From January 2012 it will become even more difficult.

**Too much protein**

In practice the problem of low levels of methionine and lysine in the ingredients, is solved by feeding diets with a high level of protein. This leads to a significant oversupply of protein. Normally oversupply of protein does not impair the wellbeing of the animals, but considering “sustainability” and “environmental effects” the oversupply of protein is not acceptable. Manure from the animals gets wet and sticky, litter quality will be bad, bigger amounts of nitrogen will be excreted and ammonia emission will increase polluting the area surrounding the poultry farms.

During the session it is shown that 100 % organic feeding will worsen the problem of oversupply of protein. Exclusion of fish meal will worsen it even more. It will be demonstrated, that, if new organic high value protein products like larvae meal, mussel meal, hemp cake and sesame cake or fermented amino acid products are included in the diets, it will be possible to formulate totally balanced diets, even for young animals. But it will be expensive.

**Alternative high-value protein sources**

Possible sources presented during the session are organic maize gluten, - potato protein, - algae, - larvae meal, - earth worms, - quinoa, - hemp cake, - sesame cake and fermented amino acid products. Using such ingredients it will be possible to formulate totally balanced diets, even for young animals. Apart from techniques for production of organic fermented amino acid products, the techniques for production of the mentioned high value products are already known, but the products are produced in quite inadequate quantities – or not at all. The products are very expensive, however if better production techniques are developed, the products may become cheaper.