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The production of feed-grade amino acids by fermentation should be included in the carbon border adjustment mechanism

Ajinomoto Animal Nutrition Europe (AANE), subsidiary of the Ajinomoto Group, is the main producer of feed grade amino acids[1] established in the European Union, exclusively by fermentation. Amino acids are the main building block for proteins. Using amino acids in livestock production enables to meet the animals' nutritional requirements more accurately, saving therefore land used for production of resources, and reducing nitrogen pollution on livestock farms such as nitrates and ammonia. It also enables to use less protein-rich feed ingredients such as soybean meal in feed diets, which contributes to reduce pressure on deforestation. Amino acids are essential ingredients for livestock farming. From a strategic perspective, it is therefore important to develop the EU amino acid production and reduce dependency from imports

AANE welcomes the reflection engaged by the European Commission on the carbon border adjustment mechanism. To be effective in terms of reduction of greenhouse gas emissions and avoid carbon leakages, it is important to measure the carbon footprint of a product throughout its life cycle, instead of limiting the scope to emissions taking place on the EU territory.

The amino acids market is growing, at global and EU level. Despite this positive trend, the production of amino acids in the EU is today in danger, mainly because of the fierce competition imposed by Chinese producers. With a strategic objective to reduce its dependency from US soybeans, China has drastically increased its amino acids production capacity over the past recent years and is today the main amino acid supplier of the EU. The competition does not take place on a level playing field, considering for example the social and environmental production standards. The carbon border adjustment mechanism offers an opportunity to valorise EU production.

The production of amino acids by fermentation is indeed an energy-intensive process, however enabling eventually the reduction of the environmental footprint of animal products. The carbon footprint of amino acids production is primarily determined by the following parameters: source of carbohydrates, source of energy, source of ammonia and plant efficiency through fermentation yield. AANE has performed the peer-reviewed life cycle assessment of its amino acids portfolio, following the Product Environmental Footprint (PEF) methodology developed by the European Commission. Taking the example of lysine, which is the main amino acids in terms of volume, results show that the carbon footprint of lysine produced in the EU is around 4,5 times lower than the carbon footprint of lysine produced in China, whereas China is the main lysine supplier of the EU with increasing market share.

Including feed-grade amino acids production by fermentation in the scope of the carbon border adjustment mechanism is a powerful opportunity to reduce greenhouse gas emissions and to strengthen the EU amino acid industry at the same time.

It is however sensible to be cautious in the implementation of this new mechanism by ensuring consistency with existing mechanisms such as free allocation of emission allowances and compensation for indirect carbon costs.

[1] As of today, all available feed grade amino acids are produced by fermentation, except methionine.