



D8.5 Dynamics on the Markets for Feed Grade Amino Acids and Insect Biomass (TI)

AUTHORS: Viktoriya Sturm; Petra Salamon; Martin Banse

SUMMARY:

The objective of this case study is to investigate the dynamics on the markets of feed grade amino acids and insect biomass/insect meals in the EU. For this purpose, relevant data are collected and analysed. The data collection is done in light of the methodology discussed in BioMonitor and its case study protocol. First, the animal feed market and its regulations were examined. Next, the analysis focused on amino acids and insect biomass. Some amino acids are already produced on a large scale, other amino acids are emerging productions with low volume. Regarding insect farming, the production is a relatively new but a fast-growing sector in the EU. The end products of insect farming are live insects as well as products processed from insect biomass such as insect protein, insect oil, organic fertiliser.

KEY RESULTS:

- Official statistics can hardly offer any data for analysis for new bio-based feed ingredients such as amino acids and insect biomass.
- The main problem is caused by a lack of dedicated codes and confidentiality issues.
- The main challenges for the feed-grade amino acids producers are the low market uptake and demand for new free grade amino acids, higher environmental standards, and the high costs, especially related to the legislation regulating the placing of a new amino acid as a feed additive on the EU market.
- The most important factors for increasing the insect biomass production are the authorisation of insect protein for use in poultry and pig feed, the approval of new feed substrates for insects and investments in automatization.

CONTEXT and DRIVERS:

- The users of bio-based feed grade amino acids rely mainly on imports from non-EU countries.
- The use of amino acids in animal feed is driven by the level of feed efficiency that should be achieved and the quantity of animals.
- A negative driver on the market of feed-grade amino acids is the expansion of organic livestock husbandry: The use of free amino acids in feed is banned in organic livestock husbandry.
- A positive driver on the market of feed-grade amino acids is the increasing focus on the negative environmental effects of livestock farming: The use of amino acids in feed can help to reduce emissions and nutrient leakage.
- EU regulatory framework for the insect industry has a big impact on the development of the market landscape in the EU.

LIMITATIONS:

- Focus on amino acids only in feed-grade quality.
- Figures on EU-wide production of insect biomass come from the secondary source (IPIFF).

GOOD PRACTICES:

- Involvement of stakeholders from the use side can help to make estimates on the production when producers are reluctant to disclose figures because of confidentiality issues
- Surveys are currently the only way to collect information related to insect industry.

RESEARCH QUESTIONS:

Can necessary data be collected to monitor the market dynamics of emerging feed ingredients in the EU? What are the driving forces for market of (bio-based) feed-grade amino acids and insect biomass?

CASE:

The monitoring system for the market dynamics of emerging feed ingredients in the EU

BIO-BASED PATHWAYS:

Feed grade amino acids; insect biomass/insect meals

DEVELOPMENT STAGES:

Drive to maturity; Mature

DATA SOURCES:

Official statistics, literature, websites and interviews

DATA ANALYSIS:

Qualitative thematic analysis

INDICATORS:

Production volumes/values; Consumption volumes/values; Prices; Types of feedstock used for production; Quantities of bio-based feedstock; Progress in replacing non-renewable feedstocks by biomass; Environmental impact of production and use

GEOGRAPHICAL SCOPE:

Germany, All EU member states

TIME REFERENCE:

2019

AUDIANCE:

Producers
Policymakers

FEEDBACK and RECCOMANDATION to other WPs

WP1 Indicators:

In addition to indicators capturing the direct and indirect impacts of production activities, indicators capturing the impacts of the use of bio-based products could also be introduced. LCA-Database can help to calculate indicators on the level of products/ product groups.

WP2-3 Data collection:

In order to be able to use official statistics for monitoring product groups, a clear mapping of production activities (PRODCOM codes) and defined product groups is required. If to one production activity several products are assigned, additional information on the distribution of PRODCOM output to different product groups is needed.

WP4-5 Model Toolbox:

All additional information (except official statistics) used for modelling of production levels should be updated regularly. In the new markets with a small number of producers, the shutdown of a single plant can have a significant impact on production (even a drop of -100 percent).

