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IPA EU and EFFCA's position regarding classification of a food culture as Novel Food in EU

Foods are rich in microorganisms which are naturally present both in and on the food. The use of microorganisms is one of the oldest food processing technologies resulting in the transformation and preservation of food. Spontaneous fermentation was the beginning of fermented food and still is a significant contribution to the current food supply e.g. raw milk cheeses, fermented olives, many wines, etc.

Today defined food cultures are used as ingredients for their desirable effect in the food product. The food cultures are specifically selected using a large pool of strains from species which origin from food products and of which a body of knowledge exists. Biological variations are created all the time by the microorganisms themselves as they are growing and undergo cell division. This is a natural phenomenon, which the industry is using by selecting the strains that have developed in a favourable direction regarding characteristics as e.g. viscosity, pH, flavour etc. This evolution of the genome of the microorganism, continuous also during the fermentation of the yoghurt, the production of the cheese, the fermentation of the wine, etc.

Repeated use of the same food cultures in a single plant, increases the risk and negative impact of bacteriophage (virus) infection. It is therefore necessary on a regular and sometime acute basis to replace a phage-sensitive strain with a phage-insensitive strain of the same species. A phage-insensitive strain is found as a survival mutant from an infected sample. The strain has all the same properties as the previous strain and is now also insensitive to a single bacteriophage. If this way of selection was not used, the quality of the food production would be endangered resulting in considerable economic losses for the dairy industry.

The isolation of biological variations of strains from well-known pre-1997 species of food cultures are not regarded as Novel Food by the food culture industry. The safety assessment of a food culture strain is carried out according to the general food law (EU Reg. 178/2002) under the responsibility of the manufacturers, and the requirements for a safety assessment of all food cultures strains are the same. The IDF Inventory lists species that were on the market in EU before 1997.

Conclusions

- Food cultures like all other ingredients used in foods, need to be safe.
- In the EU this is set out in the General Food Law. In this context, food culture manufacturers have an obligation with respect to the results.
- Food culture manufactures have implemented a safety assessment procedure to evaluate if the food culture produced is safe and can be used in a safe way. This includes screening for AMR genes, biogenic amines, virulence factors etc.
- Strains of pre-1997 species of food cultures are not Novel Food as only use is made of biological developments within a species.