

CDG ARABLE CROPS – COP SECTOR

4/7/17

ACRYLAMIDE

Background

Acrylamide is present in food following formation from the naturally present substances free asparagine (amino acid) and sugars during high temperature processing, such as frying, roasting and baking.

The presence of acrylamide in food was detected in 2002 and since then research was undertaken to identify measures to reduce the presence of acrylamide in food, FoodDrinkEurope developed a voluntary toolbox and the Commission issued Recommendations on monitoring and investigations into increased levels of acrylamide.

Upon request of the Commission, EFSA adopted, in early June 2015, a scientific opinion on acrylamide in food. EFSA confirms that acrylamide is a carcinogenic substance and that current levels of dietary exposure to acrylamide indicate a concern with respect to the carcinogenic effects. EFSA stated that the levels of acrylamide were not consistently decreased in recent years.

The main contributors to the exposure are potato-based products, cereal based products and coffee (and coffee substitutes).

The investigations performed by the Member States in application of a Commission Recommendation, showed that the implementation by food business operators of mitigation measures to reduce the presence of acrylamide were very variable from no measures taken at all to correct application of mitigation measures.

The current regulatory situation

As part of its better regulation agenda, the Commission has published the draft Commission Regulation establishing mitigation measures and benchmark levels for the reduction of the presence of acrylamide in food on 9 June 2017 for a 4-week public consultation¹. Comments can be uploaded until 7 July 2017.

The envisaged draft Regulation shall oblige food business operators to apply mitigation measures to reduce the presence of acrylamide in food and to monitor their effectiveness, using the established benchmark levels as reference.

At the same time, in addition to sampling and analysis by the business operators, Member States will be required to perform regularly official controls, to ensure compliance with the legal requirements.

¹ http://ec.europa.eu/info/law/better-regulation/initiatives/ares-2017-2895100_en

The Commission has also the intention to discuss the setting of maximum levels of acrylamide in certain foods, following the adoption of the above-mentioned draft Commission Regulation.

Furthermore, the Commission intends to take initiatives to inform European consumers on how to limit acrylamide exposure from home-cooking and to inform food business operators of the obligations imposed by this Regulation to reduce the presence of acrylamide in the food they produce.

Relevance for the breeding and agricultural sector, including research activities

As regards the breeding and agricultural sector there is an urgent need to have EU-wide research activities to have further knowledge on:

Potato sector

- Need to develop potato varieties with low reducing sugar content in particular and low free asparagine content
- Good storage conditions to avoid formation of high quantities of reducing sugars
- Difference in varieties as regards formation of reducing sugars
- Influence of fertilisation on acrylamide forming potential of potatoes.

Cereal sector

- Need to develop cereal varieties with low free asparagine content.
- Environmental factors have significant effects on free asparagine content
- Sulphur deficiency results in massive accumulation of free asparagine in wheat grain
- Nitrogen fertilisation increases free asparagine and total free amino acid concentration in cereals