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EUROPEAN COMMISSION
HEALTH & CONSUMER PROTECTION DIRECTORATE-GENERAL

Directorate D - Food Safety: production and distribution chain
D3 - Chemical and physical risks; surveillance

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Standing Committee for Foodstuffs – 82nd meeting - 14-15 June

Agenda item 4: Discussion on the establishment of a specific limit for aflatoxins in cereals to be subjected to sorting or other physical treatment

I. Background

Commission Regulation (EC) N° 1525/98 of 16 July 1998 amending Regulation (EC) N° 194/97 of 31 January 1997 setting maximum levels for certain contaminants in foodstuffs, as amended by Commission Regulation (EC) No 1566/1999 of 16 July 1999, establishes, inter alia, a maximum limit of 5 µg/kg aflatoxin B1 and 10 µg/kg aflatoxin total (B1+G1+B2+G2) for nuts and dried fruit to be subjected to sorting, or other physical treatment, before human consumption or use as an ingredient in foodstuffs. No maximum limit was established for aflatoxin B1 nor aflatoxin total for cereals to be subjected to sorting or other physical treatment before human consumption or use as an ingredient in foodstuffs.

With regard to nuts and dried fruit to be subjected to sorting, or other physical treatment before human consumption or use as an ingredient in foodstuffs, it was foreseen to reconsider before 1 July 2001 the maximum limits according to the progress of scientific and technological knowledge. In particular the effectiveness of the possible sorting or other treatments have to be assessed to reduce the aflatoxin content.

With regard to cereals to be subjected to sorting or other physical treatment before human consumption or use as an ingredient in foodstuffs, it was foreseen that in so far no specific limit will be fixed before 1 July 2001, the limits established for cereals intended for direct consumption (i.e. 2 µg/kg aflatoxin B1 and 4 µg/kg aflatoxin total) will apply. This provision was foreseen because in the case of cereals, it cannot be excluded that sorting methods or other physical treatments can reduce the level of contamination of aflatoxins but that the real effectiveness of these methods have to be demonstrated. It was furthermore mentioned that in absence of data justifying the fixing of a specific maximum limit for unprocessed periods the limits of 2 µg/kg aflatoxin B1 and 4 µg/kg aflatoxin total apply.

The issue was discussed in detail at the meeting of the Expert Committee "Contaminants" on 8 May 2001.

II. Discussion at the Expert Committee meeting

Nuts and dried fruit

Only data with regard to almonds were submitted. These data were contained in a document "Aflatoxins in Almonds: Effects of further processing" (SANCO/1758/2001) submitted by the Almond Board of California (US).

The data contained in the submitted document demonstrated that through the different sorting and physical treatments the aflatoxin content of unprocessed almonds was significantly reduced in the final consumer product. However, the Committee would welcome a more detailed description of the newest technologies concerning sorting and physical treatments and in particular the guarantees provided by these technologies to reduce the aflatoxin content in the final consumer product below the maximum levels established. More data are necessary in order to be able to assess quantitatively more precisely to which extent this reduction can be realised.

Conclusion: Taking into consideration the data submitted, it is clear that the aflatoxin content in almonds is reduced through sorting, cleaning and other physical treatment. However given the variability of the data it is difficult to assess to what extent. Therefore the Committee concluded that it is appropriate to maintain the current maximum limits and to delete the footnote on revision of the maximum limits. It is noted that the maximum limits on the basis of new technological and scientific knowledge and progress, the provisions can be reviewed anyhow at any time.

Cereals

Only data with regard to maize were submitted. These data were contained in a document "Aflatoxin Test results" (SANCO/1757/2001) submitted by the European professional organisation "Euromaisiers".

Although a continuous monitoring was performed during more than two years, only a limited number of lots were found contaminated. Therefore the possibilities to demonstrate the effectiveness of sorting, cleaning and other physical treatments were consequently limited.

On the basis of these limited data, it is evident that through the different sorting and physical treatments the aflatoxin content of unprocessed maize can be significantly reduced after cleaning in the final consumer product (flaking grits, other grits). The aflatoxin contamination was mainly concentrated in the screenings (waste) and to a lesser extent in maize germ, bran meal and broken maize (products for animal feed).

Given the limited number of data and the large variability thereof, it was not possible to assess in a reliable way quantitatively to what extent this reduction can be realised. Therefore more data are needed before drawing final conclusions.

Conclusion:

Given the fact that :

- no data were submitted for cereals other than maize
- evidence has been submitted that efforts have been undertaken by the involved professional organisations to provide the data
- that the data are insufficient for assessing in a reliable way to what extent this reduction can be realised

it is appropriate to extend only for maize the period of time with another two years to submit further data and information on the possibilities to reduce the aflatoxin content through sorting cleaning or another physical treatments. For raw cereals, other than maize the maximum limits established for the cereals intended for direct human consumption do apply as from 1 July 2001.

III. Conclusion

The Standing committee is invited to endorse the conclusions of the Expert Committee. In case the conclusions are endorsed this would result in following modifications:

	Aflatoxins: maximum admissible levels ⁽¹⁾ (µg/kg)		
	B ₁	B ₁ + B ₂ + G ₁ + G ₂	M ₁
2.1.1.3. Nuts and dried fruit to be subjected to sorting, or other physical treatment, before human consumption or use as an ingredient in foodstuffs.	5 ^(4,5)	10 ^(4,5)	-
2.1.2. Cereals (including buckwheat, Fagopyrum sp)			
2.1.2.1 Cereals (including buckwheat, Fagopyrum sp) and processed products thereof intended for direct human consumption or as an ingredient in foodstuffs	2	4	-
2.1.2.2 Cereals (including buckwheat, Fagopyrum sp), with the exception of maize, to be subjected to sorting, or other physical treatment, before human consumption or use as an ingredient in foodstuffs	⁽⁶⁾	⁽⁶⁾	-
2.1.2.3 Maize to be subjected to sorting, or other physical treatment, before human consumption or use as an ingredient in foodstuffs	⁽⁶⁾	⁽⁶⁾	-

⁽⁴⁾ The maximum limits apply to the edible part of groundnuts, nuts and dried fruits - If nuts "in shell" are analysed, it is assumed when calculating the aflatoxin content, all the contamination is on the edible part.

⁽⁵⁾ The maximum limits shall be reconsidered before 1 July 1999 according to the progress of scientific and technological knowledge.

⁽⁶⁾ In as far as no specific limit will be fixed before 1 July 2004 2003, the limits laid down in point 2.1.2.1 of the table will apply thereafter to the cereals referred to in this point.

*melauke 1. juli 2001 - sa
tabel growwacht for
tabel voor use for raisins*