

Title            A review of proposed maximum tolerated levels for fumonisins in maize and maize products.  
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#### **Abstract**

Fumonisins are mycotoxins produced by *Fusarium verticillioides* and occur widely in maize and maize products. Fumonisins are the cause of leukoencephalomalacia in horses, pulmonary oedema in pigs, liver cancer in rats, and liver and kidney damage in many other animals. A statistical relationship between the occurrence of *F. verticillioides* and fumonisins in maize and oesophageal cancer in humans has been demonstrated in parts of South Africa and China. The "toxins derived from *F. verticillioides*" and fumonisin B1 have been labelled Group 2B carcinogens i.e. possibly carcinogenic to humans, by the International Agency for Research on Cancer of the World Health Organization. We reviewed the available epidemiological and toxicological evidence of the effects of fumonisins on humans and animals, their occurrence in maize and maize products, previously proposed or adopted maximum tolerated levels (MTLs) for fumonisins in maize and maize products, and the practical implications of MTLs set for maize and maize products. Based on the results of this study we propose the following MTLs for total fumonisins in maize and maize products for human consumption: 4 micro g/g in whole, uncleaned maize; 2 micro g/g in dry-milled maize products with a fat content more than or equal to 3.0%, dry weight basis (e.g. sifted and unsifted maize meal); 1 micro g/g in dry-milled maize products with a fat content of less than or equal to 3.0%, dry weight basis (e.g. flaking grits, brewers grits, samp, maize rice, super and special maize meal).