

Advice 02-2010 of the Scientific Committee of the FASFC: Exposure assessment of the Belgian population to pesticide residues through the consumption of fruit and vegetables: year 2008

The Federal Agency for the Safety of the Food Chain (FASFC) monitored 1,413 samples of fruit and vegetables in 2008. Pesticide residues were detected in approximately 72% of the samples and in about 6% of the cases the standard was exceeded. These values (detection frequency and number of exceedings) can lead to unnecessary concern among consumers. A more nuanced representation is obtained when the exposure to pesticide residues is considered. Based on the data collected in the Belgian food consumption survey performed by the Institute of Public Health (WIV 2006) and data of the 2008 pesticide monitoring programme of the FASFC, the exposure of Belgian consumers to pesticide residues through consumption of fruit and vegetables is evaluated in this advice.

Calculations (deterministic and probabilistic approach) demonstrate that the chronic exposure of the Belgian adult population (15 years and older) is generally under control, even at high or frequent consumption of fruit and vegetables. For most of the pesticides residues studied, the exposure is one hundred times lower than the 'acceptable daily intake' or ADI. The highest exposure is observed for imazalil, prochloraz and chlorpropham with for high or frequent consumers (P97.5) an exposure of 24%, 10% and 7% of the ADI respectively. Washing and peeling of fruit and vegetables result in an exposure that is probably five to six times lower. For children (2-5 years) there are however, indications that at high intake of fruit and vegetables the ADI can be exceeded, at least when the expected reduction of the residue level after culinary operations (peeling, cooking, etc.) is not accounted for. Moreover, there is considerable uncertainty regarding the exposure assessment for this group of consumers (amongst others because of lack of consumption data). Hence, an additional study regarding the exposure of this sensitive group of consumers is necessary.

The full text is available on this website in dutch and in french, respectively under the section "Wetenschappelijk Comité/Adviezen" and "Comité scientifique/Avis".