

EXPOSURE TO PESTICIDE RESIDUES THROUGH INTAKE OF TOMATO AND APPLE IN A BELGIAN SUBPOPULATION: PRELIMINARY RESULTS.

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Rationale

Tomatoes and apples were found to be frequently consumed food items in Belgian adolescents, accounting for 20% and 59% of vegetable, respectively fruit intake.

Purpose

To estimate exposure to pesticides through intake of tomato and apple in Belgian women of childbearing age (n=1168) and to compare with Accepted Daily Intakes (ADI).

Methods

Intake of tomato and apple (via a semiquantitative food frequency questionnaire) was combined with Belgian contamination data for several pesticides, using a deterministic model. For the “most probable” and the “worst case” scenario, the mean contamination, respectively highest contamination was used in the model.

Results

A total of 24 different pesticide residues was studied. Expressed as a percentage of the ADI (mean (95th percentile)), ethephon accounted for the highest intakes in the most probable scenario, namely 0.61% (1.79%) and 0.10% (0.25%) for tomato and apple respectively. In the worst case scenario, the intake of ethephon via tomato (mean (95th percentile)) increased to 5.27 % (15.53%) of the ADI. For apple, the highest intakes were taken over by captan, that accounted for 2.73% (6.81%) of the ADI in the worst case scenario.

Conclusions

For the total of the pesticide residues under study, the exposure via tomato and apple intake is far below the ADI.