

The myth of safe fruit and vegetables

Presentation on behalf of PAN Germany

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Background

- Harmonisation of MRLs started in 1978
= community MRLs or EU MRL (today
30.000 EU MRLs)
- Member States set national MRLs for
the **remaining** pesticide/commodity
combinations

The Myth

- Once upon the time...
- authorities told the public about the safety of MRLs...
- esp. German authorities insisted that THEIR MRLs are checked against the diet of a 13.5 kg heavy girl...
- ...and this myth was told us many many years

The fading Myth

- New diet study published in Mai 2005 by the German Bundesinstitut für Risikobewertung
- Discovery of a large number of ARfD exceedances in samples taken by Greenpeace Germany - residues were below MRL!

ARfD Definition & Calculation

- ARfD = Acute Reference Dose - the dose of a pesticide a person can consume in a short term (1 day) without being harmed. ARfD are expressed in mg/kg bodyweight.

ARfD Calculation (apples)

- Linda lives in London her bodyweight is 14,5 g (**bw= body weight**)
- Some days she eats 373 gram apples (**LP = large portion**)
- Average UK apple weights 112 gram (**U = unit weight**)
- Unit weight < 250 gram (**v= variability factor = 7**)



ARfD Calculation (apples)

- Large portion (373 gram) > Unit weight (112 gram)
- Equation for pesticide **intake** via **raw** apples:

$$\frac{U * \text{Residue} * v + (LP-U) * \text{Residue}}{\text{Body weight}}$$

- Comparison: of percentage of allowed ARfD (ARfD * 14,5 kg) with calculated Intake



Pesticide	EU-MRL for apples	ARfD (mg/kg body weight)*	Intake in % of the Acute Reference Dose (ARfD)		
			German child 2 ≤ 5 years 16.15 kg	British child 1.5 - 4 years 14.5 kg	Dutch child 1 - 6 years 17.1 kg
Imazalil	5	0,05	820	720	636
Carbendazim	2	0,02	820	720	636
Chlorothalonil	1	0,015	547	480	424
Ethephon	3	0,05	492	432	382
Pyrazophos	0,05	0,001	410	360	318
Parathion	0,2	0,005	328	288	255
Bifenthrin	0,3	0,01	246	216	191
Captan	3	0,1	246	216	191
Triazophos	0,02	0,001	164	144	127
Vinclozolin	1	0,06	137	120	106
Carbaryl	3	0,2	123	108	95

Worst case scenario: the highest residue found is equivalent to the MRL

German Large Portion: 238 g
 British Large Portion: 373 g
 Dutch Large Portion: 260 g

German Apple Weight: 181 g
 British Apple Weight: 112 g
 Dutch Apple Weight: 138 g

Variability factor: 7

Results

- Analysis of current EU MRLs showed 60 unsafe MRLs in 19 crops (raw and unpeeled only!)
- FAZIT: authorities did not tell the truth - double standards were reality!

Changes?

- New regulation 396/2005 does not mention a re-evaluation of old EU MRLs
- It does not mention either:
 - what child will be taken into account
 - how Codex MRLs have to be considered, which do not respect childrens' vulnerability