Fruit, vegetables and pesticides rezidues in EU

F&V Advisory group of EC,
7th November 2012, Brussels

Daniel Lešinský

PAN – Europe & CEPTA

Pesticides Action Network PAN - Europe

- 31 not-for-profit members from 19 EU countries, CEPTA – member of PAN-E;
- Goal of productive + sustainable farming, minimising agrochemical inputs; adverse health & environmental impacts
- Working to replace use of hazardous pesticides with ecologically sound alternatives
    - more info: www.pan-europe.info

EU residues monitoring programme in 2009 – objective results?

- EU-coordinated programme (EUCP);
- National programmes;
- In 2009 - **500** pesticides were authorised in EU, more than **1 000** pesticides can be potentially found in food from world consumed in EU;
- Numbers of analysed pesticides in EU: **RO=179, SK=286, FR=298, AT= 454, D=794;**
- Numbers of food samples analysed (all 400):

BG=30, PL=42, SK=50, AT=83, FR=138, D=142;

Do you know what do we eat?

EFSA Report 2011 (monitoring from 2009):

- 2,6% exceed MRL; (EU - ! from Cyprus, Portugal, Belgium and Lithuania) / 3rd countries 6,9%; (! from Bolivia, Guyana, Thailand, Uganda, Jamaica, Japan, India...);
- 25,1 % of samples contain multiply residues;
- 26 residues in one sample of raisins (from Turkey)

Residues over MRL

- Residues over MRL = 2,6% is statistical result, look at % of worst F&V samples in EU (2009):

Country of origin	Product	Compound	No. of samples analysed(*)	% of samples analysed with residues above the MRL(*)
Turkey	Pears	Amitraz (sum)	15	73%
China	Wild fungi	Nicotine	14	57%
Germany	Table grapes	Folpet	34	56%
China	Wild fungi	Tetramethrin	11	55%
Greece	Melons	Pyrimethanil	11	45%
Egypt	Oranges	Malathion	19	42%
France	Lettuce	Folpet	23	30%
Italy	Radishes	Dithiocarbamates	13	23%
Greece	Carrots	Chlorpyrifos	23	22%

Residues over MRL -

Enforcement sampling:

Product		No. of samples	Above MRL	%
Fruit and nuts	Processed	11	0	0.0
	Unprocessed	611	122	20.0
Vegetables	Processed	50	7	14.0
	Unprocessed	650	156	24.0

Organic food residues:

Product	Production method	No. of samples	Above MRL			
			No.	%	LCL(a)	UCL(b)
Fruit and nuts	Organic	918	4	0.4	0.2	1.1
	Other production	25045	676	2.7	2.5	2.9
Vegetables	Organic	1097	5	0.5	0.2	1.1
	Other production	27355	920	3.4	3.2	3.6

How are MRL safe?

- MRL are not toxicological limits (just GAP), EFSA 2011: „The MRLs are set at a level which should ensure that normally the harvested crop does not exceed the legal limit if the crop was produced according to GAP “
- MRL does not reflect to „cocktail effect“ (25%), sensitive consumers, long-time influence...
- Human toxicity is reflected by ADI and ARfD

pesticide	EU MRL apples mg/kg	ARfD (mg/kg) = 100%	% ARfD child 16,5 kg – D	% ARfD child 16,5 kg - UK	% child 16,5 kg - NL
Imazalil	5	0,05	**820%**	**720%**	**636%**
Carbendazim	2	0,02	**820%**	**720%**	**636%**
Chlorothalonil	1	0,015	**547%**	**480%**	**424%**
Carbaryl	3	0,2	**123%**	**108%**	**95%**

MRLs in EU after 2008

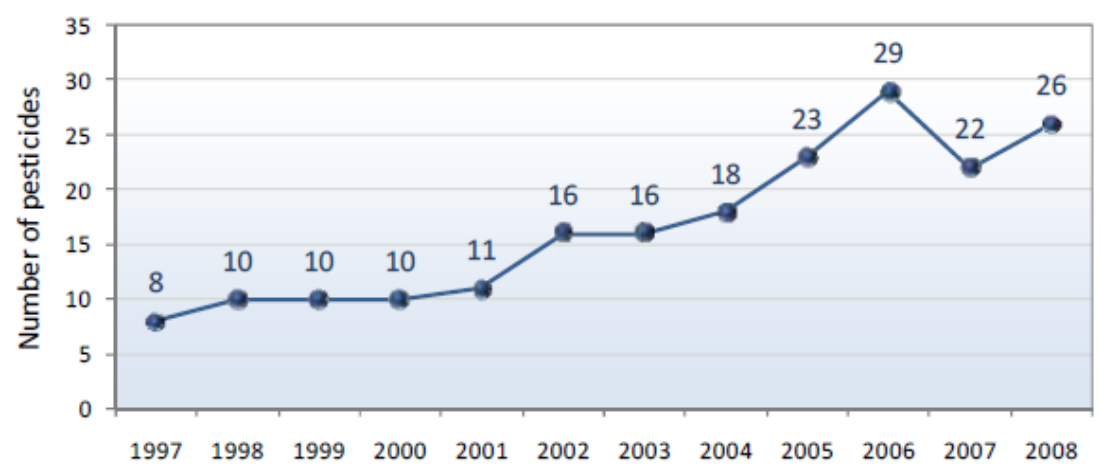
- The MRL harmonisation which entered into force in September 2008 is expected to lead to lower MRL exceedance... (in AT - 66% of MRLs were increased);
- **About 50% of MRLs** are still just temporary limits (in 2008 highest in EU; = several 10x1000 MRLs), not limits based on scientific health and envi. risk analyses;
- **NO combination effect**, cumulating effect, synergetic effect **of multiply residues** is taken info the account;
- MANY other toxic effects not taken into account such as endocrine disruption, immunotoxicity and epigenetic changes;
- Extra safety **factor of 10** would be necessary from precautionary principle point of view;

Actual EU MRL's are unsafe

- Actual EU MRL's are unsafe and have to be made stricter, some with a factor of 10, 100 or even 800 (source: EFSA 2009)

Active substance	Number of MRL's to be lowered	Maximum factor lowered MRL
Methomyl	38	50
Methamidophos	3	50
Fenarimol	3	25
Oxydemeton-methyl	7	10
Pirimiphos-methyl	14	100
Procymidon	20	500
Ethephon	4	100
Vinclozolin	30	800

Multiply residues in one sample



Commodity	Number of samples	Number of residues (Percentage of samples)									% samples with multiple (>1) residues
		0	1	2	3	4	5	6	7	>=8	
Vine leaves (grape leaves)	7	28.6			14.3	14.3	14.3	14.3		14.3	71.4
Cane fruit (e.g. raspberries and blackberries)	295	24.1	18.3	11.9	12.9	12.9	8.5	4.7	4.4	2.4	57.6
Citrus fruit	4258	27.0	16.4	18.4	15.9	11.1	6.1	2.9	1.2	1.1	56.6
Table and wine grapes	3019	26.2	18.2	15.4	11.2	8.1	6.1	4.6	3.4	6.7	55.5
Strawberries	2408	28.7	17.4	13.8	13.3	10.4	6.8	4.2	2.1	3.2	53.8
Pome fruit	5124	34.8	18.9	15.2	11.1	8.2	4.4	3.0	1.6	2.7	46.3

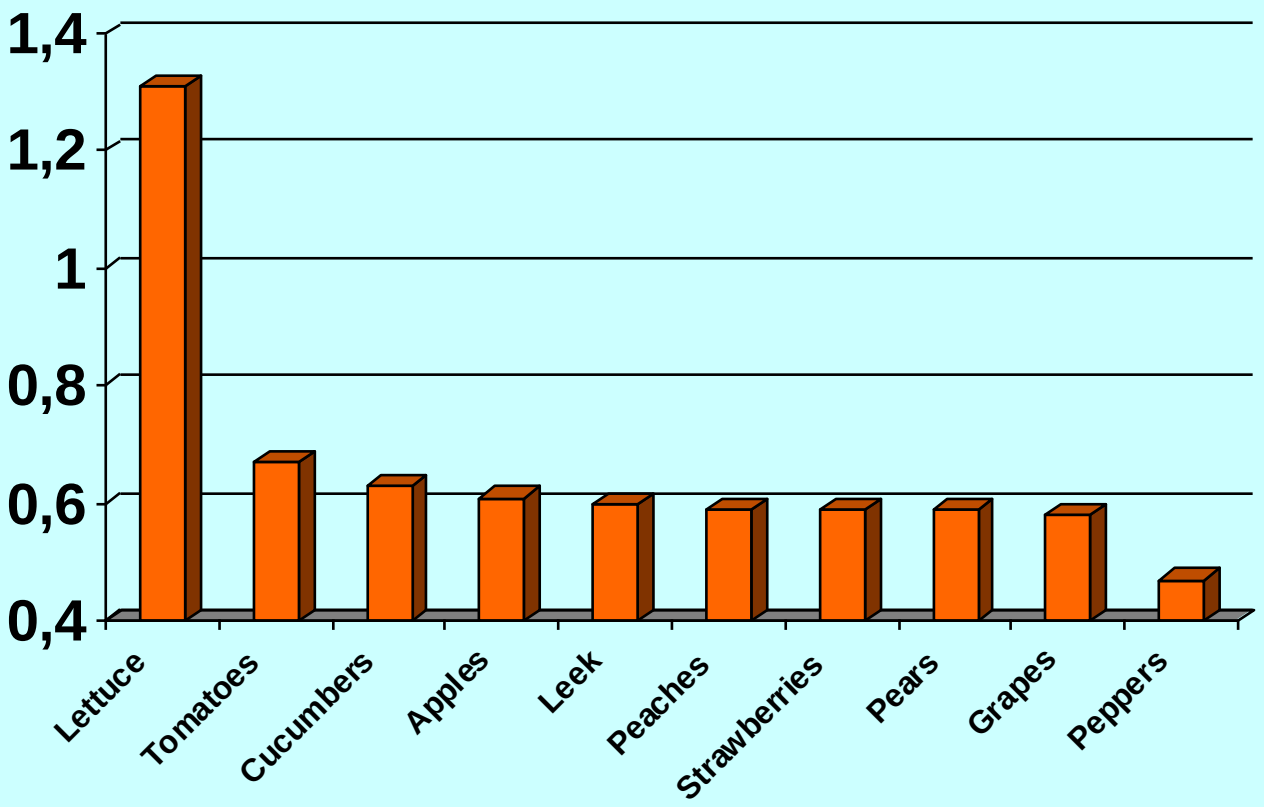
Why are pesticides danger?

- for Health (users + non – users direct exposure; residues) - carcinogenic, mutagenic, reprotoxic, immunotoxic, neurotoxic, IQtoxic ... obesity, asthma, heart disease, type 2 diabetes, endocrine disruptions...);
- for Biodiversity (honey bee collapse – 1/3 of bees in 2008 UK, 2008 Germany; 2011 Slovenia;)...;
- for Environment (drinking water pollution, waste, obsolete pesticides...)

ED – Endocrine disrupting residues of pesticides

- Children and foetus are most sensitive groups on residues
- Chronic intake of ED residues can result in: sexual malformation and sperm problems, sex hormone related cancers (breast, prostrate), brain and developmental damage, change of DNA (epigenitics) etc.
- New Regulation 1107/2009 concerning the placing of PPP on the market says NO exposure to endocrines!
- most frequent ED residues in EU food (2009):
  DITHIOCARBAMATES in 52% of cauliflower,
  CARBENDAZIM in 21.04% of orange juice,
  IRPODION in 14.31% of table grapes;
- Exposure to endocrines should be prevented **but** half kilo of apples today contain more ED than pregnancy pill!

Combined levels of EDC's (mg/kg) in selected food as chronic intake - cf. pregnancy pill = 0,2 mg

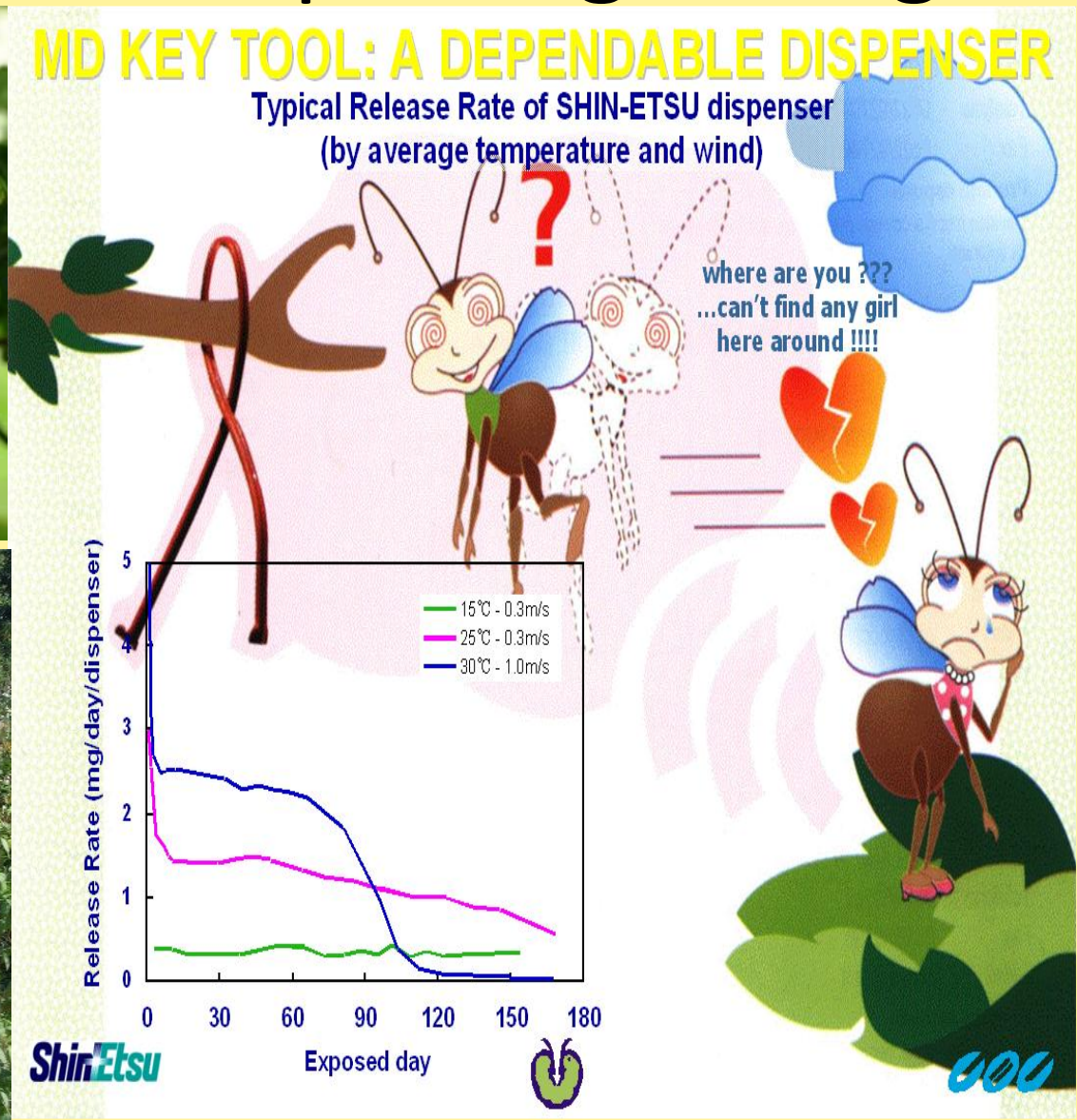


Source: based on residues report EFSA 2011 monitoring report, calculated by PAN-E

Possible actions preventing pesticides residues in SFS

- Quit SFS, don't eat fruits and vegetables, (**not good option :)**;
- Pesticides free fruits and vegetables **program** in EU at least for SFS (starting with SFS);
- Ban of most danger pesticides use in SFS products **now** (like ban of ED – neonicotinoids in UK Co-op from 2009);
- Support pesticides free growing of fruits and vegetables production (**NAP** from 26.11.2012?);
- select **ORGANIC** (and good IPM) product for SFS;

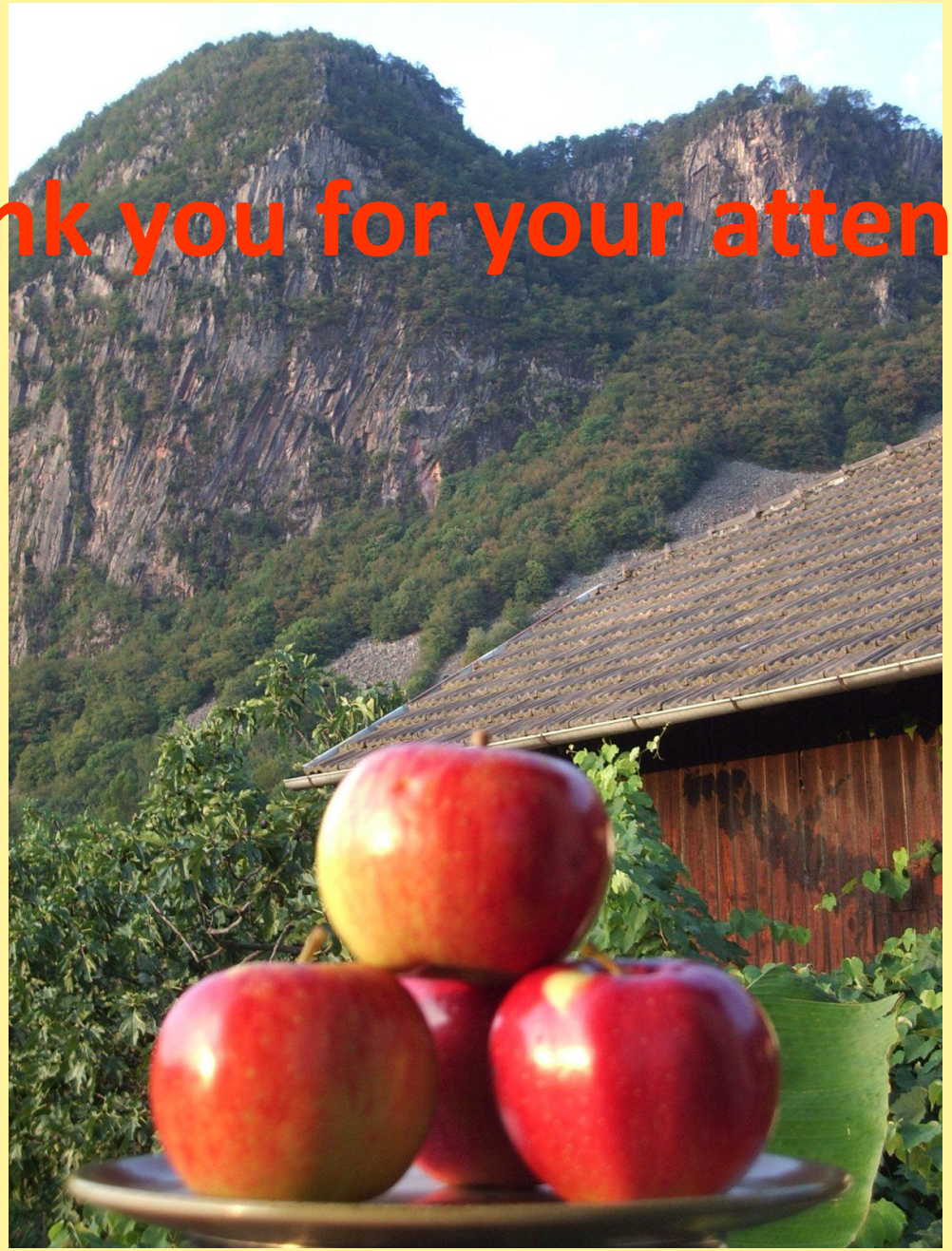
IPM – Mating pheromone traps, pesticides free example of growing



1x Typhlodromus pyri

and NO acaricides are needed

Thank you for your attention



Centre for Sustainable alterantives

Pesticide Action Network - Europe

Daniel Lešinský, lesinsky@changenet.sk