



Europe needs an innovative, participative IPM strategy within a holistic integrated production approach

Daniel Lešinský
Centre for Sustainable Alternatives, Slovakia
PAN – Europe

IPM and added value ?

- **for consumers, citizens** = minimise negative direct impacts/external costs, information...
- **for farmers** = price/income security, information & knowledge guidance, workers' health, healthy soil,...
- **for retailers/seller** = clear measurable standards, high quality product guarantee...



Fair price and minimal negative impacts

Cost category framework for assessing full costs of pesticide use (million US \$ per year, adjusted to year 2000)

Damage costs	China ¹	Germany	UK	USA
1. Drinking water treatment costs	nd	104	215	1059
2. Health costs to humans (farmers, farm workers, rural residents, food consumers)	500-1300	17	2 ²	157
3. Pollution incidents in watercourses, fish deaths, monitoring costs and revenue losses in aquaculture and fishing industries	nd	60	7	153
4. Negative effects on on- and off-farm biodiversity (fish, beneficial insects, wildlife, bees, domestic pets)	200-500	10	75	331
5. Negative effects on climate from energy costs of manufacture of pesticides	148	4	3	55
TOTALS	848-1948	195	302	1755

1. China costs are just for rice cultivation; 2 Does not include any costs of chronic health problems; 3nd = no data

(Pretty, J. and Waibel, H. (2005) Paying the price: the full cost of pesticides. In: *The Pesticide Detox. Towards a more sustainable agriculture*, Ed. J Pretty, Earthscan, London, pp.39-54.



Court case - clothianidin



In November 2006, 21 NGOs sent a letter to Commissioner of Health and Consumer Protection to reassess authorisation of **Imidacloprid, Fipronil, Thiamethoxam & Clothianidin**, nothing happen...

untill summer 2008 when

Vast numbers of the insects were killed in the Rhine valley area of Germany's BadenWuerttemberg state by the chemical clothianidin, the Julius Kuehn Institute in the northern city of Braunschweig said.

Honey-bees pollinate about 46 from 115 world's leading food crop = 1/3 of the human diet.

Successful implementation of IPM needs clear definition

Different IP, IPM, ICM approaches in EU **but...**
no common standards, support, marketing etc.

PAN – EUROPE understand IPM/ICM :

**Synthetic fertilizers & pesticides could be used, but
their environmental/health burden should be
minimized as much as possible or eliminated.**

**Prioritise preventive measures,
non-chemical methods.**

Long-term target:

**zero residues in food,
feed and environment.**



Holistic approach - Key elements

Successful, broad and long-term implementation of IPM/ICM in the EU requires 12 elements:

- 1. A soil structure serving as an adequate buffering system;*
- 2. Balanced farming design, structure and species*
- 3. A crop rotation frequency enhancing balanced population of soil organisms*
- 4. Use of best available resistant crop varieties;*



Key elements (2)



5. *Use of optimal crop spacing and management to prevent growth of fungi;*
6. *Refugia for natural enemies & prevent pesticide-resistance development;*
7. *Economical nutrient management on the basis of field-specific info (nutrients & soil structure)*
8. *Optimal water management*
9. *Generally only use mechanical weeding (or other non-chemical methods like heat);*

Key elements (3)

10. Use of pesticides only based on incidence / pressure data information (scouting, diagnostics) and restricted to selective pesticides, not harming beneficial organisms;

*11. Prioritise 'green' **bio-pesticides** and pest-preventive substances;*

12. Minimise contribution to climate change (energy, resources) and



Policy and system instruments

- a. Independent advisory and training system based on participatory R&D, e.g. FFS*
- b. Global knowledge database on best available practices, varieties*
- c. Effective monitoring and transparent info system on pesticide use & residues*
- d. Consistent control and polluters pay principle*





Policy instruments (2)

- e. Appropriate **financial and insurance tools** to help IPM/ICM farmers deal with any increased risk.*
- f. **Fair financing**: all costs connected to pesticide use to be covered by those profiting from their use*
- g. Motivating change in practice via **EU subsidies** (3 levels of support)*
- h. Good marketing system via **certification and labeling** (3rd level is residues free produce); same qualitative requirements for any imported goods.*


IPM is not

“to say that farmers get something for nothing – they are replacing the use of an external manufactured input with knowledge and skills (human capital), collective capacity to work together (social capital) and practices that make the best use of nature’s locally available pest management services.”

(Pretty & Waibel, 2005)

Recommendations for ENDURE

- Study /methodology on external costs of different plant protection approaches + calculations of fair product price
- Research on resistant crop varieties and application of new technologies (GIS analyses)
- Build up on-line knowledge database on best available practices & varieties for IPM system



Thank you for your attention

more information you find at our web page:

www.pan-europe.info

Daniel Lesinsky

lesinsky@pan-europe.info