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**Integrated Plant Protection guidelines  
as a complementary data pool for  
zonal PPP efficacy assessments.**

**Plant Protection Institute – National Research Institute, Poland**



Integrated Plant Protection

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Integrated Pest Management

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IPM



# Agenda

- **Polish agriculture and IPM**
- What the Regulation 1107/2009 says about IPM?
- Which IPM guidelines could be implemented into the zonal assessment?
- Conclusions

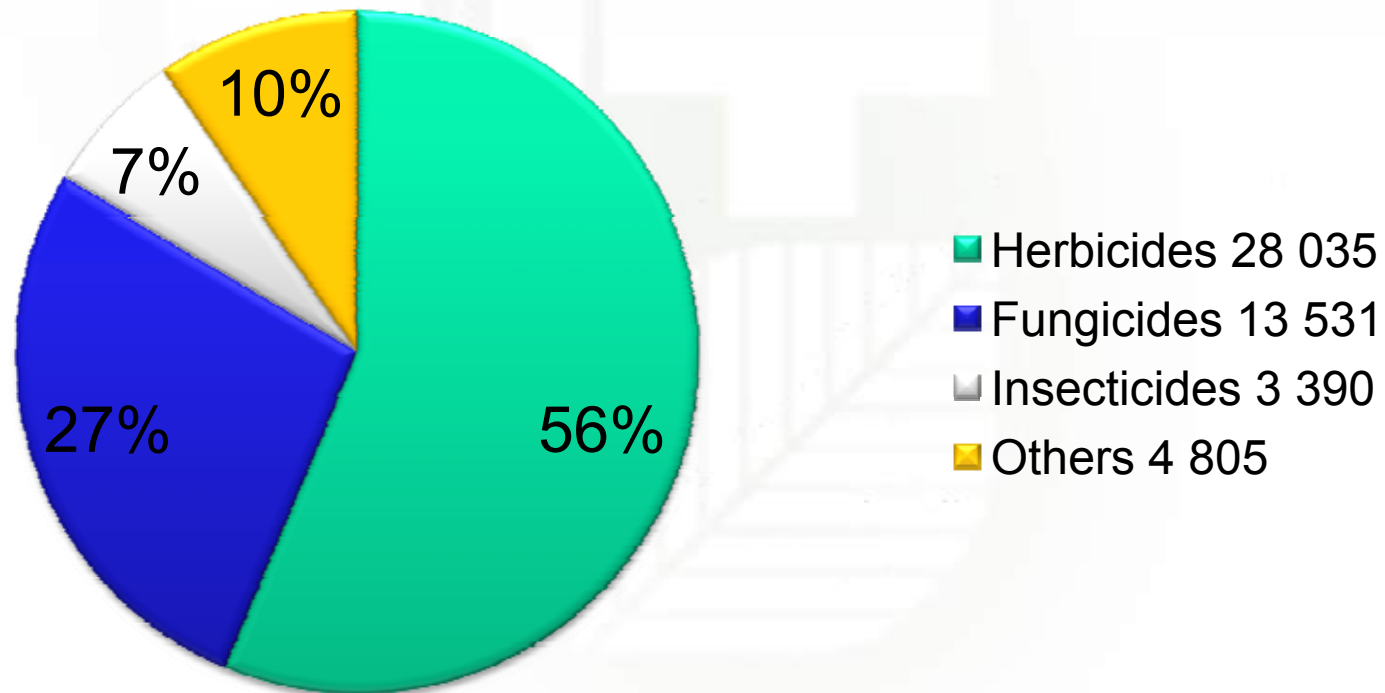


## Poland in 2009 [1.000 000 ha]

<b>Total area</b>	<b>31,3</b>
Agriculture land	16,1
Forests	9,2



# Sales of PPP ≈50 thousand tonnes of formulation in 2009





## Use of plant protection products in forestry

Year	Use [tonnes]	% of total sales
2008	22,0	0,04
2009	3,5	0,007



## Use of active substance in Poland

- Eurostat **2003**

**0,8 kg AS/ha**

- Polish Ministry of Agriculture **2009**  
sales /agricultural area

**0,87 kg AS/ha**

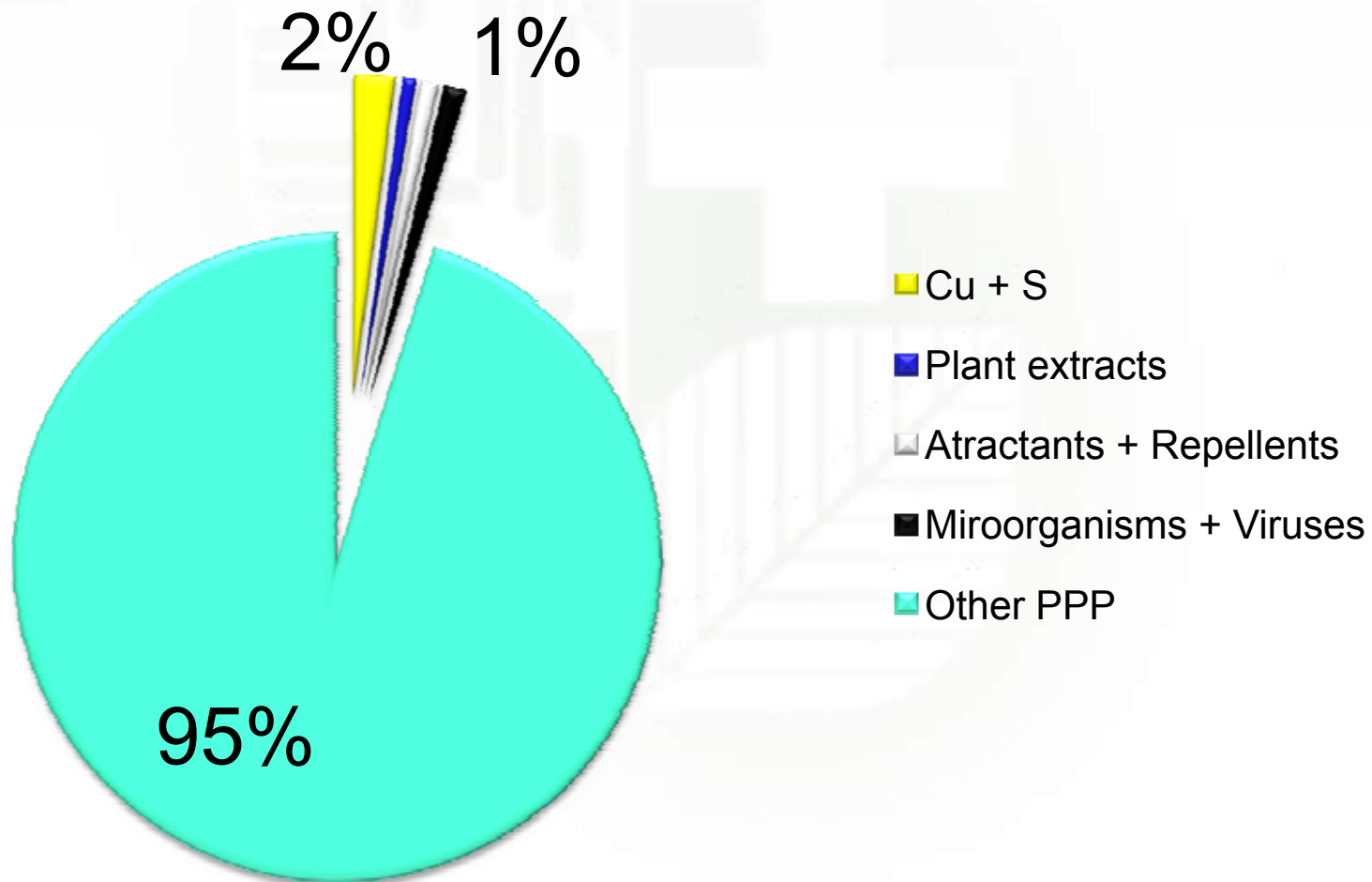


# Registration of plant protection products in Poland

- About **870** products registered
- About **280** active substances
- About **230** firms

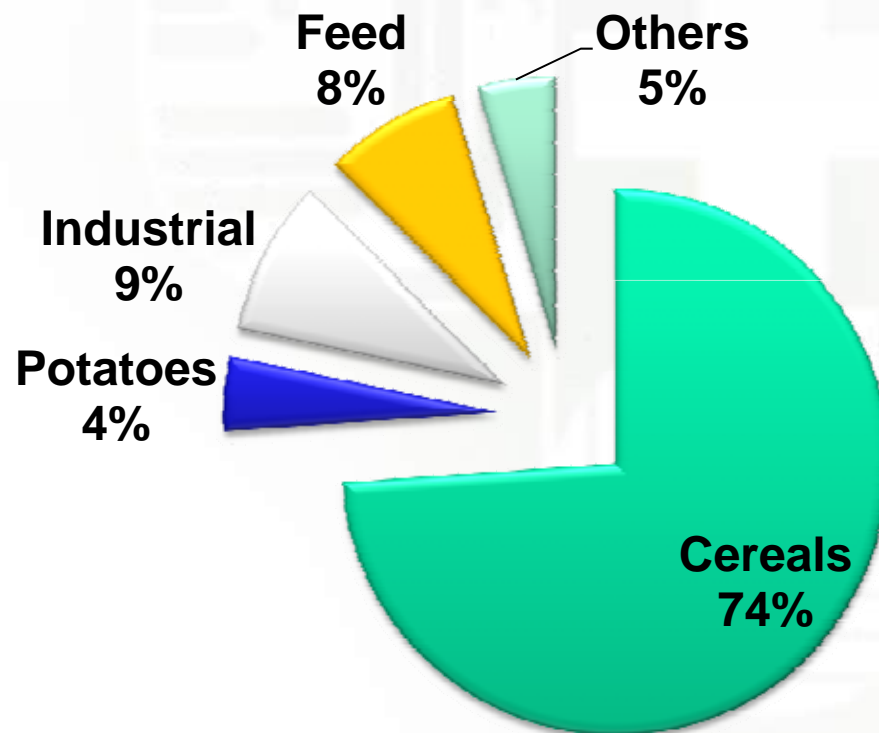


# Availability of PPP of natural origin in Poland





# Main crops in Poland 2009





# Obligatory IPM

## What we have in Poland?

- Low use of plant protection products
- System of trainings, sprayers inspection, packaging collection, supervision of ppp use
- Obligation of documenting the treatments
- Farmers used to depending not only on chemical protection



# Obligatory IPM

## What we have in Poland?

- Own, resistant varieties (potatoes, sugar beets)
- Tradition of cereal mixture growing (both species and varieties)
- Woodlots on the fields (planted as windbreakers - tool against erosion)
- Prognosis and signalisation of agrophags



# Obligatory IPM

## Difficulties to solve

- Advisory service
- Comprehensive decision support system concerning the requirements of IPM
- Farmers are not used to lower doses of PPP
- Biological PPP availability
- Training programmes
- Crop rotation



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# Regulation 1107/2009

## Preamble

„Plant protection products should be used properly, in accordance with their authorisation, having regard to the principles of **integrated pest management** and giving priority to non-chemical and natural alternatives wherever possible”



# Regulation 1107/2009

## Article 55

### Use of plant protection products

„Principles of the **integrated pest management** (...) shall apply at the latest by 1 January 2014”



# Regulation 1107/2009

## Art. 31 Content of authorisations

Paragraph 2 „The authorisation shall set out the requirements relating to the placing on the market and use of the plant protection product.,,

Paragraph 4 „The requirements referred to in paragraph 2 may include the following: (...) indications for proper use according to the principles of **integrated pest management**”



# Annex III to Directive 2009/128

## General principles of IPM

### Paragraph 1. **Prevention**

- Crop rotation
- Adequate cultivation techniques
- Resistant cultivars and certified seed
- Balanced fertilisation and irrigation
- Harmfull organisms - preventing
- Beneficial organisms - protection



# Annex III to Directive 2009/128

## General principles of IPM

Paragraph 2 **Monitoring** of harmful organisms

Paragraph 3 „Based on the results of the monitoring the professional user has to decide whether and when to apply plant protection measures. For harmful organisms **threshold levels** must be taken into account before treatments (!!!)

Defined for the region, specific areas, crops and particular climatic conditions”



# Annex III to Directive 2009/128 General principles of IPM

Paragraph 4 **Biological** and non-chemical methods must be preferred to chemical methods

Paragraph 5 „The pesticides applied shall be **as specific as possible** for the target and shall have the least side effects” (!!! )



# Annex III to Directive 2009/128

## General principles of IPM

- Paragraph 6 „Keep the use of pesticides (...) to levels that are necessary, e.g. by **reduced doses**, reduced application frequency or partial applications, considering that (...) they do not increase the risk for development of resistance in populations of harmful organisms.”



## Annex III to Directive 2009/128 General principles of IPM

Paragraph 7 In case of **resistance risk**  
„available anti-resistance strategies  
should be applied to maintain the  
effectiveness of the products. This may  
include the use of **multiple pesticides  
with different modes of action.**”

Paragraph 8 Check the success of the  
application



# Agenda

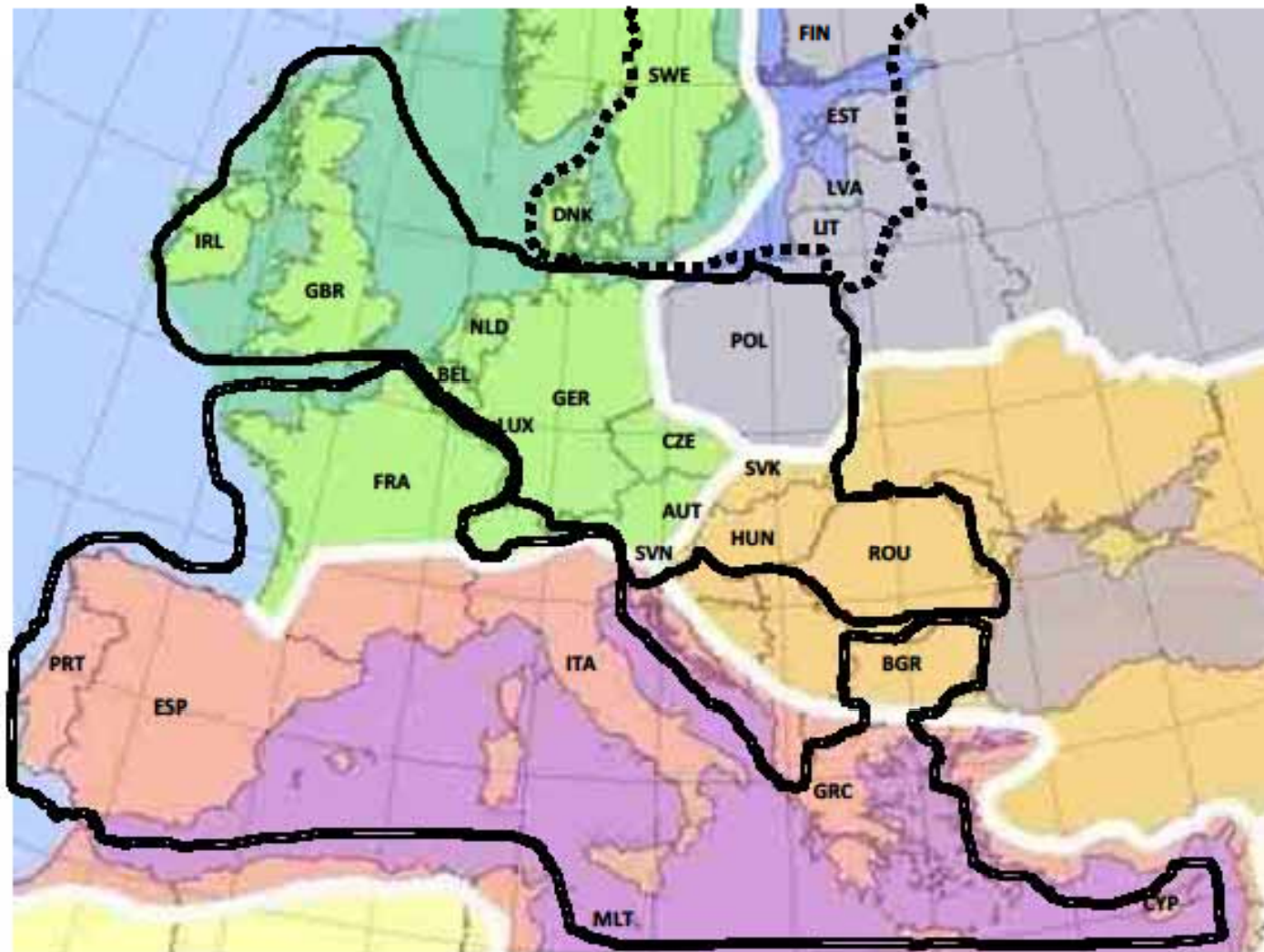
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# Which requirements of IPM to be considered during registration?

1. Application on the basis of monitoring results and threshold levels
2. The product is to be as specific as possible and have no side effects
3. Priority for biological plant protection products
4. Possibility of doses reduction
5. Resistance risk

Representation of EPPO climatic zones (in colour: EPPO Standard PP1/241, *Guidance on comparable climates*) superimposed with the three European zones (EC Regulation 1107/2009).





# Problems

- Recommended doses
- How to establish threshold levels for specific areas, crops and particular climatic conditions?
- How to put them on the label without making it illegible?
- If product is not sufficiently specific and is withdrawn - how to replace it?



# Problems

- Few biological plant protection products on the market
- For most problems no biological methods available
- The resistance risk is different for different places, crops, organisms etc. and the information about resistance often not up-to-date



# Problems

- How can the farmer (or advisor) get the full information about resistance?
- For many crops „multiple pesticides with different modes of action” are not available



## EPPO activities

Workshop on Zonal Efficacy Assessment  
Berlin 2011-04-05/06

need for a number of new standards among others:

- Guidance + on-label recommendations for IPM compatibility
- Update or develop the EPPO standards for Good Plant Protection Practice



## EPPO activities

Planned modification of a number of standards, among others:

- PP 1/239 Dose expression for plant protection products
- PP 1/225 Minimum effective dose



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## Conclusions

- In the light of Regulation 1107/2009 IPM guidelines should be considered for zonal efficacy assessment
- The main source of problems: the zones are huge and in IPM the decisions are individually taken for very small areas
- National Addenda?



Thank you for your attention

**Plant Protection Institute – National Research Institute, Poland**