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diversifying crop protection

SIXTH FRAMEWORK PROGRAMME

FOOD QUALITY AND SAFETY

Comparison of risk reduction programmes

Bologna, 6 nov. 2009

Marco Barzman, INRA

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About this comparison

- Context is “Pesticides Package” and Article 14 of Framework Directive in particular
- ENDURE can help share national experiences across Europe
- Some highlights & comments on pesticide reduction programmes from DK, FR, DE, UK, NL provided
- Compiled from materials provided by the ENDURE group on Scientific Support to Policy

Framework Directive

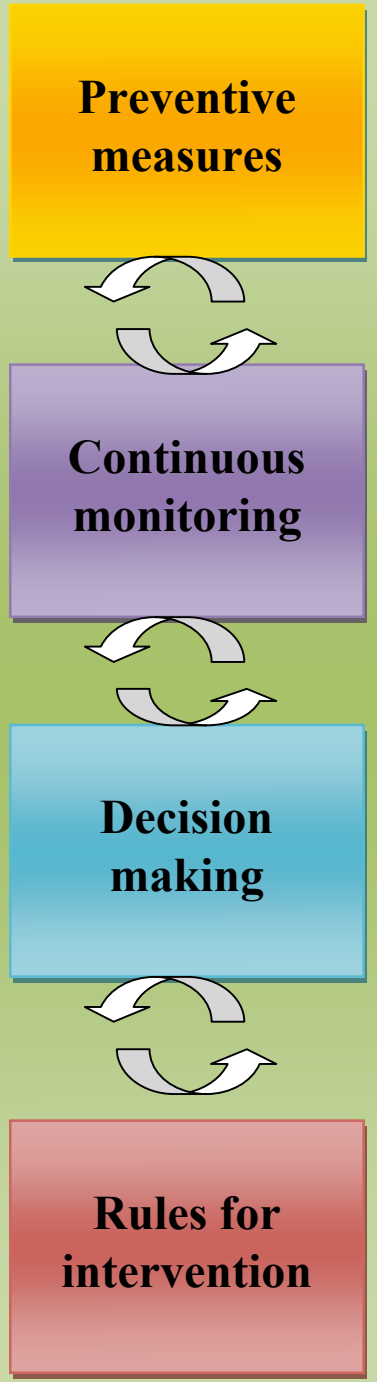
Article 4

National Action Plans

1. Member States shall adopt National Action Plans* to set up **their quantitative objectives,** targets, measures and timetables to reduce risks and impacts of pesticide use on human health and the environment and to encourage the development and introduction of integrated pest management and of alternative approaches or techniques in order to reduce dependency on the use of pesticides.

* *by* 2013

IPM



- Crop rotation
- Adequate cultivation techniques
- Resistant/tolerant cultivars, certified seed
- Balance fertilisation
- Hygiene measures
- Beneficial organisms

Observations in field, pest forecast, diagnosis systems

Threshold level

× Need for action

✓ No need for action

IF need for action ×

- Preference for non chemical methods
- Pesticides with minimum side-effect
- Limitation of intervention
- Anti-resistance strategies
- Check of success

from DG ENVI

Denmark - highlights

- **3 Pesticide Action Plans 1986-97, 2000-04, 2004-09**

  Initial objective = 50% volume reduction easily achieved with low-dose pesticides but TFI reduced by 8% only.

  1994 Ban 135/213 pesticides

  1996 Tax: 54% on insecticides and 33% on fungicides and herbicides to fund research, warning system and conversion to organic

  2004 objective of TFI below 2.0

  2009 objective of TFI of 1.7 not achieved

- **Now: Green Growth → moving toward impact**

Denmark – comments

- Volume reduction → TFI → impact
- Voluntary approach
- Farmer-funded advisory system / reaches 85% of farmers
- Resistant varieties - reduced fungicide dosages – warning syst.
- Challenge of weed management
- Large scale of farms

→ DK = an illustration of opportunities and limits of optimising existing systems

France - highlights

- **Very little until 2005 – Collective scientific assessment = National recognition of problem and challenges**
- **2006-2009 Inter-ministerial plan on risk reduction**
  - Ecophyto R&D
- **2007 "Grenelle de l'environnement" and Ecophyto 2018**
  - 8 sets of measures to "Manage risks and monitor impacts" and "reduce cropping system dependence on pesticides"
  - reduce by 50% the use of pesticides by 2018, if possible
  - TFI is NODU proportional to the number of full doses of AI sold
  - Organic surface 2% ➔ 6% 2012 ➔ 20% by 2020
  - 50% of farms certified "High Environmental Value" by 2012

France – comments

- **Succesful stakeholder process… even in France**
- **Explicit about will to move away from reliance on pesticides**
- **Systemic change addressed**
  - Ecophyto R&D imagines several levels of change combining optimisation, prevention (incl. rotation) and alternative methods.
  - HVE is at whole-farm level

Germany - highlights

- **National Action Plan on Sustainable Use of Plant Protection Products adopted April 2008 (builds on 2004 PPP Reduction Programme)**
- **June 2009 amendments on training, maximum residue levels, biodiversity and water**
- **Objective is 25% reduction in risk by 2020 relative to 1996-2005 baseline.**

  Main indicator is SYNOPS = measures risk to aquatic and terrestrial ecosystems in association with NEPTUN surveys on using Treatment Index (≈TFI) with data from network of reference farms
- **Concept of necessary minimum**

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Germany - comments

- Explicit about complying with FD
- Focus on risk reduction (ref. to IPM development: non-chemical measures, forecasting and decision support, application technique)
- First time broad stakeholder base agrees on quantitative target
- Complex relations between national and Länder governments (reference farms, training under Länder responsibility)

United Kingdom - highlights

- **National Pesticides Strategy initiated 2006, 6 action plans: biodiversity, water, availability of products and techniques, amenity use, amateur use, health**
- **Emphasis on voluntary approaches (Voluntary Initiative, Assured Produce, LEAF)**
- **Pesticides Forum**
- **Monitoring impacts**
- **Chemicals Regulation Directorate initiated programme to cover the Framework Directive, 10 projects, among which:**
  - Best practice and control measures, focussing on training and certification, equipment testing
  - Minimising impact, focussing on measures to reduce risk associated with pesticide use including development of national action plans, measures for protection of water and specific areas and indicators

United Kingdom - comments

- **Role of voluntary buy-in**
- **Role of training**
- **Involvement of private sector**
- **No quantitative targets**
- **no obvious progress:**
  - Use (total volume) not decreasing (1995-2007)
  - Trends on impacts not favourable in terms of MRL exceedances, water pollution, bird populations

  ➔ But need to take context into account

➔ **UK = an illustration of what can be done outside of government (farmer organisations, supermarkets)?**

The Netherlands - highlights

- **1980s: highest use of AI/ha / resistance / water pollution / fear of losing exports**
- **Multi Year Crop Protection Plan 1990-2000**
  - Objective 50% volume reduction, emission reduction to air, water and ground (ref. 1984-88) …

  →Practice networks

  Shift from volume reduction to impact reduction (water in particular)
- **2001 – 2010 National Agreement**
  - Objective of 95% impact reduction

  → In 2006 86% impact reduction achieved via buffer zones, improved nozzles, lower impact pesticides

The Netherlands - comments

- Significant reductions easy to achieve initially
- Focus on water
- Switch from volume reduction to env. impact
- Contribution of soil disinfectant to reduced impact
- Broad stakeholder involvement process (Ag & Env. Min., Farmer Union, pesticide industry & distributors, Water Boards & companies)
- “Practice networks”: researchers & advisors testing IPM strategies in interaction with farmers, input suppliers and supply chain partners.
- Reducing reliance rejected as an objective

Conclusion

Many ways to go about it…

- **Objective: quantified / unquantified target**
- **Target: risk, volume, TFI, environmental impact, health impact, focus on agricultural practices vs food, organic acreage**
- **Means: bans, taxes, incentives, training, research, advisory support…**
- **Process: involving stakeholders**

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