



Comparison of pesticide action plans in 5 countries:

- Goal-setting**
- Stakeholder involvement**
- Research & Extension**

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FOOD
QUALITY
AND
SAFETY



Integrated Pest Management in Europe

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> A team from DE DK FR NL UK IT



- Pesticide action plans
- 5 countries: DE, DK, FR, NL, UK
- Selected elements
 - o Goal-setting
 - o Stakeholder involvement
 - o Research & extension

Single time-bound quantified target

- Volume / use
- Dosage-frequency (TFI or TI)
- Risk and impact
- ...or no single quantified target

- DK 1986-1997 Pesticide Action Plan I
 - 🕒 50% volume by 1997 relative to 1981-85
 - 👉 reached ☒
 - but...** TFI reduced by only 8% + persistent water quality problems
 - ➔ switch to dosage-frequency target in 2000
- NL 1990-2000 Multi-year Crop Protection Plan
 - 🕒 50% volume by 2000 relative to 1984-1988
 - 👉 reached ☒
 - but...** high starting point, mostly substitution
 - ➔ switch to impact target in 2003

> Dosage-frequency target

- DK 2000-2003 Pesticide Action Plan II
 - ⬇ TFI from 2.5 in 1997 to 2.0 in 2003
 - ☞ reached ☒
- DK 2004-2009 Pesticide Action Plan III
 - ⬇ TFI from 2.0 in 2003 to 1.7 in 2009
 - ☞ not reached ☐ (limits of voluntary approach, increasing farm size, weed management)
 - ➔ Switch to environmental target
- FR 2008-2018 Ecophyto 2018
 - ⬇ 50% NODU (No. of Unit Dosages) between 2008 and 2018, if possible

- NL 2003 National Agreement on Crop Protection
 - ⌚ 95% environmental burden by 2010 relative to 1998 using PEC/NEC (Predicted Exposure Concentration on aquatic organisms / No-Effect Concentration)
- DE 2008 National Action Plan on Sustainable Use of Plant Protection Products
 - ⌚ 25% risks by 2020 relative to 1996-2005 evaluated via SYNOPS (Synoptic Assessment Model for Pesticides): inherent toxicity, risk to aquatic organisms, landscape, pedoclimatic conditions, use
- DK 2010 Green Growth
 - Adopted a Pesticide Impact Index (combines use, untreated area, pressure on environment & health)

To have or not to have a single target?

- DE 2004 *Plant Protection Product Reduction Programme*
No single quantified target
➔ switch to risk reduction target in 2008
- UK 2006 National Pesticides Strategy
No single quantified target
but... have a suite of qualitative goals for each of 6 action plans.
Can communicate and educate public on:
 - o Biodiversity (birds)
 - o MRL exceedances
 - o Frequency of incidents
 - o Complexities of the problem

volume → dosage-frequency → risk / impact

> Research and extension

- Research preliminary to action plan
 - DK targeted TFI = 1.7 scenario - studies showed no economic losses for farmers
 - FR: Ecophyto R&D (evaluate “*if possible*”)
 - Significant dedicated research & extension investment
 - DK: focus on optimising use
 - DE: research explicitly for IPM
 - FR: some research on more radical “breaks” and long—term experiments planned
- ➔ Need research
- ➔ Need to identify research priorities

Not easy but necessary

- NL 2001-2003 Farmers reject “View at healthy crops”
 - NL 2003 National agreement “*covenant*” on Sustainable Crop Protection
 - o Signed legal document
 - o Shared responsibilities (farmer organisations monitor compliance)
 - o Adopt a target and a calendar
 - o Wide representation of stakeholders (incl. water boards, water companies, pesticide distributors...)
- ☞ perceived as a success

but... continuous trust-building needed (re-introduction of a previously phased out product / legal procedures against Government)

Not easy but necessary

- DE Current plan pays much attention to stakeholder involvement
 - o Potsdam forum in 2009 with 100 reps from all sectors including food retail and manufacturing
 - o Target of 25% risk ↓ and 1% max MRL exceedances
→ buy-in of environmental organisations
- UK know-how
 - o Pesticides Forum since 1996
 - o Membership in 6 action plan groups
 - o Voluntary Initiative since 2001
- FR Grenelle de l'Environnement / Ecophyto 2018

- Toward increasingly participatory approaches
 - DK: 428 “experience groups” (1 advisor + 7 farmers)
 - NL: 35 local networks (*Telen met toekomst*) (researchers, advisors, farmers, water boards, pesticide industry)
 - FR: on-farm trials
 - DE: 30 demonstration farms / on-farm research
- Using data
 - DK: data collection network for surveillance/warning
 - FR: large network of field data collection
 - DE: 100 reference farms to establish “required necessary minimum” pesticide use

- Hungary
 - o Currently developing NAP
 - o Emphasise risk reduction in the entire food chain
 - o May not adopt single quantified target
 - o Had successful IPM in 1970s-80s, had network of demonstration farms, had strong public advisory system provided by State
- Italy
 - o Currently developing NAP
 - o Have set up a National Committee on Integrated Control
 - o Past success in IPM in Emilia-Romagna region

- ENDURE will continue this work in support of IPM implementation in Europe:
 - o Comparative analyses
 - o Sharing experiences
 - o Policy briefs
- The ENDURE Network of Experts can respond to specific requests

www.endure-network.eu/about_crop_protection/national_policy_documents
