

Managing Resistance for Sustainable Use of Plant Protection Products

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- ❧ What is resistance?
- ❧ What impact will EU re-registration have on resistance?
 - Minor and Major crops
- ❧ How effective are the available counter-measures?
- ❧ What should we do about it?

What is Resistance?

“A naturally occurring, inheritable adjustment in the ability of individuals in a population to survive a plant protection product treatment that would normally give effective control.”

European and Mediterranean Plant
Protection Organisation (EPPO)

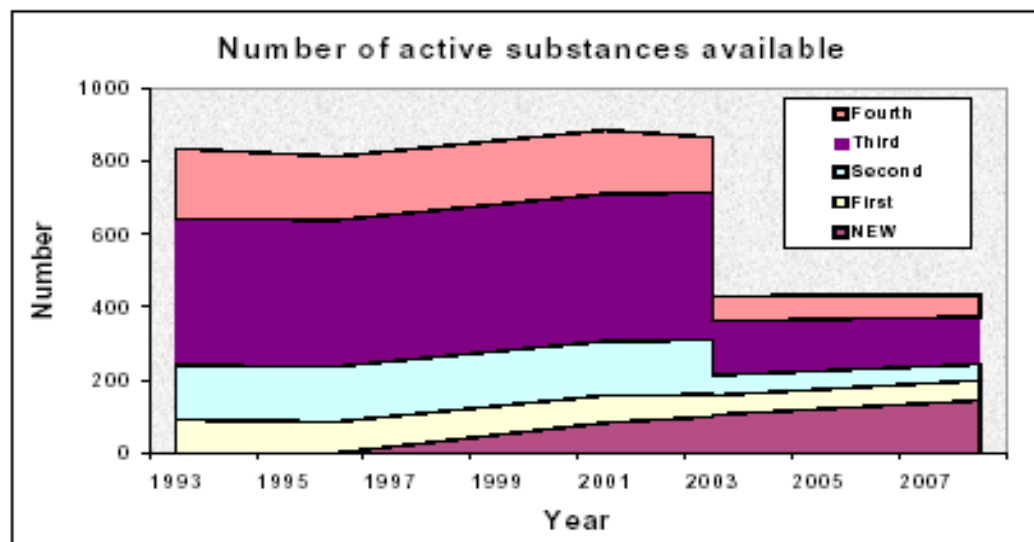
Diversity of tools is essential for resistance management



Extracted from: " Document Sanco/2692/2001 of 25 July 2001.
from the Commission to the European Parliament and the Council (p39)"

Report

Loss of Active Ingredients in the EU



“Existing Actives”

1993

**644 active ingredients on Lists
1,2 and 3
(220 *insecticides & acaricides*)**

2002

**337 already “out of the
system”
(115 *insecticides & acaricides*)**

“New Actives”

Since 1993

88 active ingredients:

July 2002

23 Annex I inclusions

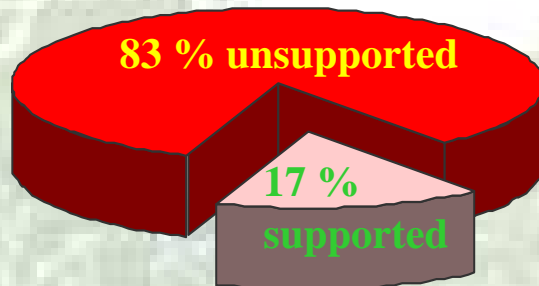
5 non-inclusions

60 in progress

Only 1 new insecticide on Annex I

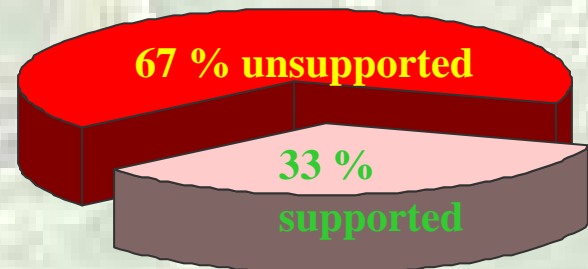
Loss of Targets following MS re-registration for a representative List I active ingredient

230 identified targets in 1995



■ 192 targets > 1 safe use
□ 38 targets = OK

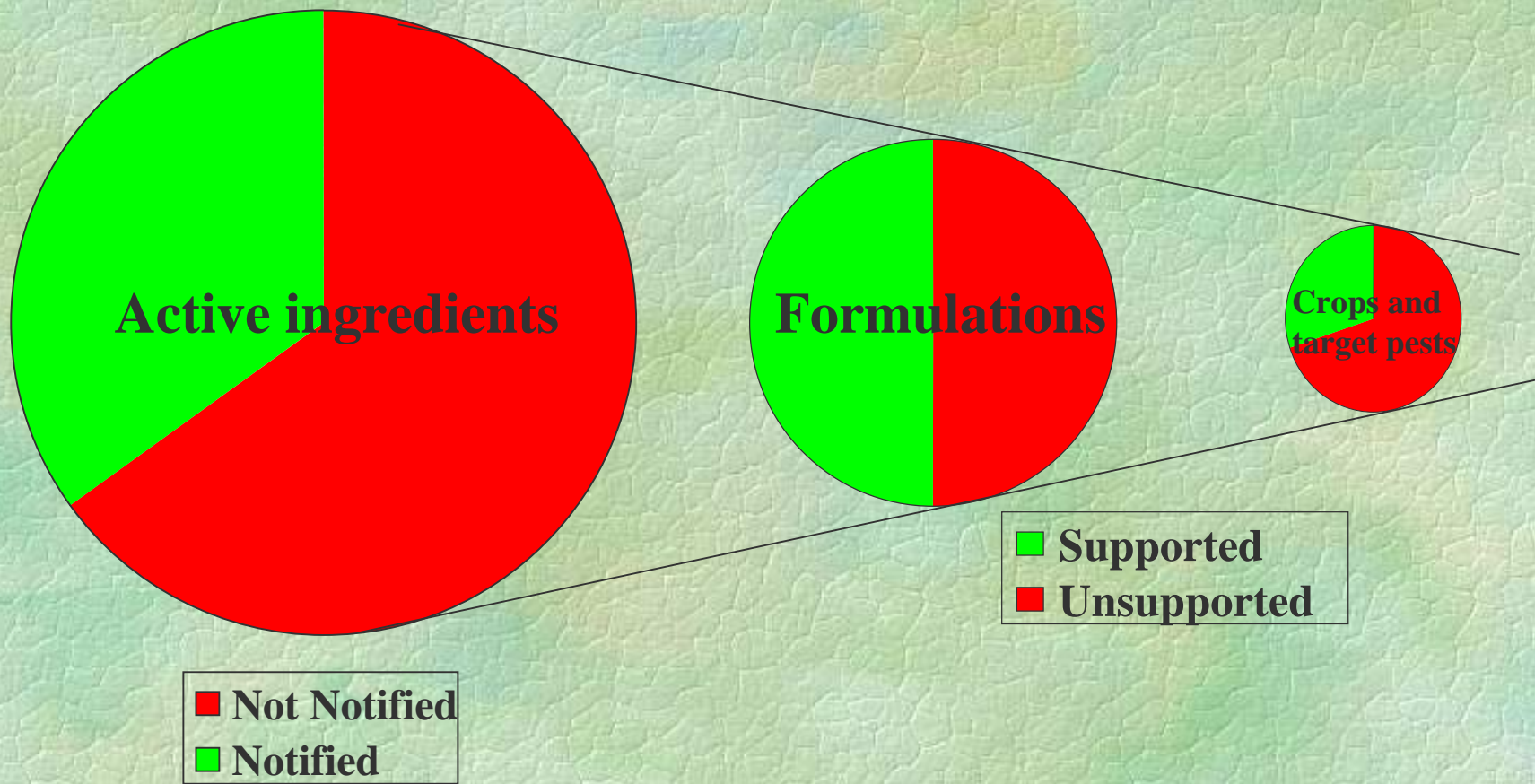
Anticipated member-state re-registration



■ 153 targets > 1 safe use
□ 77 targets = OK

+ approximately 2.5 €million for upgrading Annex III Dossier

Likely impact of active ingredient portfolio, formulation & use rationalizations on chemical diversity



Loss of Product Diversity is **NOT** limited to Minor Crops

Pyrethroids will soon be the only insecticides registered for use on oil seed rape in Germany and France

Counter-measures

☞ Essential Uses

☞ Member states requested 235 essential use derogations

- Most came from North European countries (esp. UK NL).
- Restricted - country, product and crop specific,
- limited to June 2007 and
- Could disappear earlier if alternatives are found

☞ CAUTION!

☞ Essential uses don't guarantee commercial viability

☞ One alternative is probably not sufficient for resistance management

EPPO Guideline PP 1/213(1)*

Resistance Risk Analysis

- EPPO's guideline sets out to provide guidance on (under Directive 91/414 EEC):
 - *Resistance Risk Assessment*
 - *Development of Management Strategies*
 - *Implementation of res. management strategies*
 - *Baseline and Resistance Monitoring*

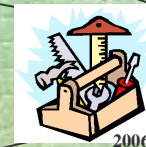
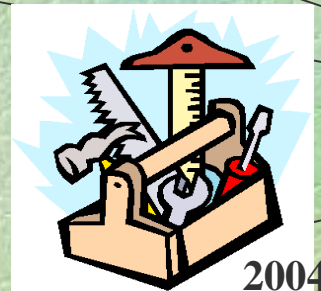
*<http://www.eppo.org/Standards/GI213.html>

Resistance Risk Analysis is Expensive

- One use of an existing product:
 - up to €200K (IRAC member companies)
 - NOT including monitoring, which cost up to €1million per annum
- **Without pragmatic interpretation of EPPO's guideline, companies will increasingly remove minor crops, products and use patterns from labels**

Essential use derogations, resistance risk analysis & resistance management will not solve the problem !

- The resistance management toolbox is getting smaller



Conclusion / Recommendation

- ❖ **Product & use diversity is essential to avoid unnecessary resistance**
- ❖ **Pragmatism is required when interpreting guidelines, or there will be further loss of product and use diversity**
- ❖ **Stakeholders need to work together to avoid further unnecessary loss of product & use diversity**