INTEGRATED PEST MANAGEMENT (IPM) for sustainable crop protection

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-has IPM now 'come of age' because of pressures (societal, food supply chain, pesticide resistance, regulatory...?)

Will IPM help to reduce pesticide risk and use?

Regulatory context (EU): mandatory; general principles of IPM set out in Annex of 'Sustainable Use' Directive (2009/128/EC)

Implemented by National Action Plans: aim in UK has been for voluntary approaches adopted by stakeholder partners

Overseen by CRD for Defra 'Pesticides Policy', reflecting:

- Need to keep regulatory burdens on businesses to a minimum
- Arable and horticultural sectors already using IPM procedures
- VI in place to promote responsible pesticide use/IPM uptake

Future: need for continuation, in similar form, but within any new Post-Brexit UK Agricultural Strategy under development

Vision: More (safe, nutritious, affordable) food with fewer pesticides

Do we need IPM where effective pesticides may no longer be available (withdrawn, resistance etc)?

- **Long history of R&D** supporting IPM approaches
- Funded by Government, frequently **in collaboration**
- [At time of Defra LINKs, total IPM related ~ £9M p.a; 120 projects]
- Effective control through combinations (resistant varieties; biocontrol/biopesticides; reduced/more targeted chemical inputs)
- New partnerships (Agri-Tech Centres); & EU C-IPM ERA-Net, building on SCAR Working Group, ENDURE network, PURE project
- To address the **increasing gaps** in crop protection toolbox
- Also potential role in new **plant biosecurity** strategy and in protection of **pollinators**

Does IPM need a 'systems approach' rather than being seen simply as an alternative technology?

- Concept originated from use of **economic thresholds** to restrict use of pesticides and their replacement with **biological and other non-chemical** control methods
- IPM 'packages' perceived as direct replacement to a pesticide
- Grower/farmer concerns about time and expense of IPM implementation and risk of higher level of crop damage
- Combinations often situation-specific (+ pesticide if needed)
- Optimisation: **Greatest compatibility, ideally synergy, and least antagonism between the approaches being integrated**!
- e.g. joint plant breeder/biocontrol expert collaboration in developing varieties best suited to BCAs and natural enemies