Overview of the PURE project

Pesticide Use-and-risk Reduction in European farming systems with Integrated Pest Management (FP7, 2011-2014)

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Project objectives

• To provide practical IPM solutions to reduce dependence on pesticides (farming system-specific)
  – Design and test in real conditions for selected farming systems and pest situations
  – Goal is robustness

• Scientific knowledge to design future solutions (generic)
  – Based on innovative research in challenging fields

• Toolbox of approaches, methods and tools for implementing efficient IPM solutions (flexibility)
Guiding principles (1)

• Solutions concretising the « I » of IPM
  – Solutions=combinations of tactics and strategies
  – Systems approach

• Specificity and genericity
  – Specific and generic activities
  – Pests = pathogenic agents, micro-organisms, invertebrates and weeds: no specialisation
  – Farming systems:
    o Annual (winter wheat based rotations, maize-based rotations, field vegetables)
    o Perennial (grapevine, fruit crops)
    o Protected (vegetables under cover)
    o North and South
  – Sharing across farming systems
Guiding principles (2)

- Diversity of contributions
  - Disciplines (researchers)
  - Linking academic and industrial research (industries)
  - Points of view (stakeholders)
  - Approaches to on-farm implementation (advisers)

- Design-evaluation-adjustment process
DEXiPM (ENDURE), a central assessment tool for PURE

Prototypes adaptation

Pest management system design

System Description
- Current System (CS)
- Alternative system (AS)
- Innovative System (IS)

Set values for Input criteria
- a) Qualitative
- b) Quantitative

Quantitative Assessment Methods

Social assessment
- Environ. assessment
  - Life Cycle Assessment (LCA)
  - INDIGO
  - Other methods

Input attributes

Aggregated attributes

Multi-criteria assessment

Overall sustainability
- Environment
- Economy
- Social

Qualitative aggregation based on decision rules/weights

Context

Cropping system
Task 2
Ex-ante assessment including stakeholder input

Task 3a
On station experimentation

Task 3b
On-farm experimentation

Task 1
IPM design with stakeholders

6 x WP
- Wheat based
- Maize based
- Field Vegetable
- Pomefruit
- Grapevine
- Protected vegetables

Task 4
Ex-post assessment including stakeholders input

Pillar 1
Design-Assessment-Adjustment cycle
PURE dynamics

Pillar 1
Design-Assessment-Adjustment cycle

Task 1
IPM design with stakeholders

Task 2
Ex-ante assessment including stakeholder input

WP12 Dissemination

WP13 Co-innovation

Task 3a
On station experimentation

Task 3b
On-farm experimentation

Task 4
Ex-post assessment including stakeholders input

6 x WP
-Wheat based
-Maize based
-Field Vegetable
-Pomefruit
-Grapevine
-Protected vegetables

Pillar 3
Dissemination and Co-innovation
Links between PURE and ENDURE

**PURE**
- All WPs
- WP2 to WP7 and WP13

**ENDURE ERG**
- Research support
  - Research tools
  - Research agenda
- Extension support
- Policy support

- Tools and resources
- Suggestions of research priorities
- Advisors input
- Dissemination of results
- Support to policy implementation