Share knowledge for a Sustainable Management of the Agricultural Productions: an Italian experience in the Sustainable Use Directive perspective

Maura Calliera - Catholic University of Piacenza
Index

- Working group and context
- Project evolution
- Structure of the tool
- Conclusion
Background

- Scientific knowledge represents one of the key aspects for the design of new policies and the review of the existing one.

- The European Commission, in the Sixth Environmental Action Programme, underline this consideration and clearly ask for collaborative action and planning among different range of actors for a common understanding and interaction with decision-makers.
The normative context

- This project is in a context of great normative changes: in 2009 the European Parliament approved the Directive 128 for the Sustainable Use of Pesticides
- Until the end of 2011 each State Member have to receive the Directive and to make specific National Action Plans

Article 13

Handling and storage of pesticides and treatment of their packaging and remnants

1. Member States shall adopt the necessary measures to ensure that the following operations by professional users and where applicable by distributors do not endanger human health or the environment:
In Italy the Catholic University of Piacenza, in collaboration with other stakeholders, started a project to assess the impact of the directive at national level and to analyze the level of implementation of different measures included in the existing national legislation.

The basic concept is that the collaboration between different stakeholders helps to develop common views and to achieve solutions for practical and effective techniques, which reduce or mitigate risks and increase the quality of the production and safe food with sustainable agriculture.
From the beginning…

- This project started in October 2007 from a collaboration between many different actors working together for the development of a culture of sustainable use of pesticides.

- Those actors are experts from the fields of agriculture, industry, regulators, academia, environmental and consumer protection:
  - Università Cattolica del Sacro Cuore
  - Syngenta Crop Protection
  - Emilia-Romagna Region
  - Horta S.r.l.
Index

- Working group and context
- Project evolution
- Structure of the tool
- Conclusion
Three steps to develop a new tool

Step 1
- Preliminary Investigation

Step 2
- Guideline for a Sustainable Use of Plant Protection Products

Step 3
- Software
The screening phase

- The operative phase started from a screening phase based on a questionary submitted to 100 farmers
- Selected survey operators conducted a face to face questionnaire
- The test was composed of questions on:
  - pesticides transport
  - conservation in a suitable place
  - efficiency check of machineries for pesticide application
  - label comprehension
  - pesticide treatment planning
  - application
  - machineries cleaning operations
  - waste products disposal
The screening phase

● The survey highlights that in Italy the implementation process of some measures is started even if more work is needed to achieve the directive objectives.

● The results identified a number of knowledge gaps and challenges that might be considered to prevent point source pollution at farm level and to mitigate the risk for humans and water contamination from farming operations.

● The survey further indicate that due to the high geographical variability, farm structure and cropping pattern of Italy, farmers need specific sets of risk management tools, depending on their risk attitudes.
Project development

- The data collected were analyzed with a statistical software and the output helped us to understand the topics which need to be deepened more.
- After the data collection from questionnaires and their analysis we understood that was important to develop an operative sustainable use guideline.
- In the project evolution we decided to develop also a free online software.
Index

- Working group and context
- Project evolution
- Structure of the tool
- Conclusion
The guideline is composed of an operative guide and of a free online software which help an efficient comprehension of the main concepts.

They consider the main topics regarding the sustainable use which are:

- Purchase and Transport
- Conservation
- Treatment planning and mixture preparation
- Transport to application field
- Cleaning and waste products disposal
- Treatment making
Aims

- Training, informing and updating professionals which interact with final pesticides users
- Identify the critical elements in the product management to prevent environmental contaminations and to assure high standard of safety for operators
- Give instructions and suggestions in order to improve the best pesticide practices to minimize potential contamination risks
Aims

- Training, informing and updating professionals which interact with final pesticides users

- Identify the crucial elements in the product management to prevent environmental contaminations and to assure high standard of safety for operators

- Give instructions and suggestions in order to improve the best pesticide practices to minimize potential contamination risks
Tool for training and updating professionals

- It is a tool for train technicians and an operative guide to provide an innovative assistance service with the aim to improve the safe, responsible and sustainable use of pesticides
Aims

- Training, informing and updating professionals which interact with final pesticides users
- Identify the crucial elements in the product management to prevent environmental contaminations and to assure high standard of safety for operators
- Give instructions and suggestions in order to improve the best pesticide practices to minimize potential contamination risks
Tool for identification of crucial points in a specific farm

- Free online software for a rapid identification of crucial elements in the pesticide use

**STEP 1**
Compilation of a check list on good agricultural practices for a sustainable use of pesticides

**STEP 2**
Individuation of critical elements
Aims

- Training, informing and updating professionals which interact with final pesticides users
- Identify the crucial elements in the product management to prevent environmental contaminations and to assure high standard of safety for operators
- Give instructions and suggestions in order to improve the best pesticide practices to minimize potential contamination risks
Suggestions …

- Practical tool containing easy and operative suggestions applicable in all agricultural context
- It helps to identify the crucial elements in the pesticide management, but it is mainly oriented to solve that criticity in order to:

  - Minimize potential risks of contamination for environment
  - Improve the operators safety
Index

- Working group and context
- Project evolution
- Structure of the tool
- Conclusion
Conclusion …

This tool could be strategic in the Sustainable Use Directive context:

- It’s a simple tool to guarantee a sustainable, responsible and safe pesticides use
- It’s a tool for training the professional operators
- It can evaluate how the pesticides are managed in a specific farm
- It can underline critical point in the life cycle of pesticides
- It can suggest how to improve the pesticides management
- It can be useful also for Authorities: from a statistical to an economical point of view (i.e. economical subsidies)
Thanks for the attention …

M. Calliera, E. Capri (Università Cattolica del Sacro Cuore di Piacenza), R. Bassi, A. Bernard, F. Berta (Syngenta Crop Protection S.p.A.) - T. Galassi, F. Mazzini, R. Rossi (Servizio Fitosanitario Regione Emilia Romagna) - P. Meriggi (Horta s.r.l.)