PURE
Pesticide Use-and-risk Reduction in European farming systems with Integrated Pest Management

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Collaborative Project
SEVENTH FRAMEWORK PROGRAMME

D12.14
Awareness and wider societal implications

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Start date of the project: March 1\textsuperscript{st}, 2011  
Duration: 48 months

Workpackage concerned: WP 12

Concerned workpackage leader: Philippe Delval

Organisation name of lead contractor: ACTA

<table>
<thead>
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<th>Dissemination Level</th>
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<tr>
<td>PU Public</td>
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<td>PP Restricted to other programme participants (including the Commission Services)</td>
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<td>RE Restricted to a group specified by the consortium (including the Commission Services)</td>
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<td>CO Confidential, only for members of the consortium (including the Commission Services)</td>
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Project co-funded by the European Commission within the Seventh Framework Programme (2007 - 2013)
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1. Summary

In this report, the awareness and the wider societal implications of the PURE project are described. The dissemination issues in the project are addressed and how they contributed to the creation of awareness about the project activities. Also, it is illustrated how the different stakeholders groups were involved and contributed to dissemination.

2. Objectives

WP12 makes a discerning analysis of the research and technical outputs of the project (from Pillar 1, 2 and WP13), and ensures that they are effectively disseminated among the following stakeholder groups:
   i) farmers and extension services,
   ii) industries active in the field of IPM,
   iii) consumers,
   iv) scientists,
   v) regulatory and policy authorities.

3. Deliverable procedure

The contact between the PURE community and different stakeholders groups was built to get a two-way flow of information:
   • From stakeholders to the PURE community: cropping systems (e.g. field visits) and co-innovation workpackages
   • PURE information and results from PURE members to stakeholders: all activities

Involvement of stakeholders

WP 2 to 7 cropping systems

A first step was to design IPM solutions through interactions with relevant stakeholders. In every cropping system all relevant stakeholders were involved in the choice of IPM solutions.

The composition of stakeholders groups was different amongst the cropping systems WP: farmer’s organisations, advisory services, decision makers and regulatory authorities, supply chain organisations, representatives of industries and consumers associations, organisations buying crops, SMEs providing services or tools that can be implemented in IPM solutions, members of the IOBC Working Group.

Special care was taken in the choice of the stakeholders to ensure that they do not focus only on short term solutions but have a broader perspective.

The consultations with stakeholders were conducted at the regional level:
To firstly define a standard practice to which IPM solutions should be compared.

To ensure that the IPM solutions address the major pest problems of the region and consider the specific growing conditions of the region.

The major stakeholders were, time to time, involved throughout the design-assessment-adjustment process in giving their feedback and advice on the design process of these multiple combinations. On-farm experimentation of candidate IPM solutions jointly conducted by researchers, advisers and farmers are concrete examples of the stakeholder involvement. This participatory process served as training of the stakeholders who are the closest to the future implementation of IPM solutions and who are therefore likely to participate in future dissemination.

WP 13 – co-innovation

Four pilots in France and Denmark (for wheat – WP2) and in the Netherlands and Germany (for field vegetables – WP4) were selected based on the willingness of farmers to innovate as part of local innovation networks, the types of changes they are interested in implementing to reduce pesticide dependency and the status of the farmers in the farming community. The pilots were completed by the farmers, extension agents and PURE members in each WP concerned (WP2 and WP4). Facilitation support from WP13 improved the quality and degree of involvement of stakeholders. In addition to farmers, in each pilot, a stakeholder forum was set up with representatives involved into innovative activities that were expected to exert key influences on the viability of proposed changes in pest management.

Frequent interactions took place during the growing season among the farmers, extension agents and/or scientists in all the pilots, up to every fortnight in one case. Yearly reflection meetings aimed to assess progress towards the goals and to assess the need for changes in both the technical plans and the process tools that are mobilized. Members of local growers associations and advisory services supported these experiments, provided input to adjust them to local needs and requirements, and discussed the results. Broader discussions that also include supply chain actors were facilitated during open field days (see page 5).

WP12 – Support to policy implementation

In WP12 a task was specifically dedicated to the support to policy implementation. The aim of this task was to facilitate interactions with Member State and European stakeholders directly or indirectly involved in the policy-making process. The objective of these interactions was to take findings from the PURE experimentations and decision process in terms of IPM implementation opportunities and bottlenecks to the policy sphere. Members of PURE are actively involved in the European Member State Expert Group on the implementation of the Directive 2009/128/EC. The involvement also involves discussion on how to achieve and ensure IPM implementation on European scale. A discussion forum on the option and opportunities as well as the bottlenecks took place in May 2014 with representatives from EU MS and COM (DG SANCO). Experiences and lessons learnt from the PURE project were discussed. In return, policy stakeholders shared their points of view.
regarding the desirability and feasibility of the IPM solutions proposed by PURE, especially with respect to water quality and residues in products. Additionally close interaction and networking exists between the former Network of Excellence ENDURE (now ERG ENDURE) and the newly initiated ERA net C-IPM (Collaborative IPM). Those networking activities enable the PURE network to feed the newest research findings as well as the remaining challenges into the current and future research programming.

Dissemination activities

We used two ways to disseminate the PURE results:
- “face to face”: meetings, conferences, congresses
- “web”: news, documents to download

“Face to face” dissemination

Farm field days

Farm days were one of the main tools used for the direct dissemination of project outputs among farmer communities in each country. These farm days allowed transfer to farmers and extension services of innovative IPM solutions designed by Pillar 1 and also innovative tactics designed by Pillar 2 to be included in IPM solutions.

The number of farm days organised per country during the project is summarized into the following table.

<table>
<thead>
<tr>
<th>Country</th>
<th>Danemark</th>
<th>France</th>
<th>Germany</th>
<th>Hungary</th>
<th>Italy</th>
<th>NL</th>
<th>Poland</th>
<th>Spain</th>
<th>UK</th>
</tr>
</thead>
<tbody>
<tr>
<td># of FFD</td>
<td>27</td>
<td>5</td>
<td>4</td>
<td>2</td>
<td>6</td>
<td>9</td>
<td>2</td>
<td>2</td>
<td>2</td>
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</tbody>
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Congresses

PURE congresses specifically targeting stakeholders were organised in years 2 and 4 of the project, respectively in Italy and Poland. The purpose of these congresses was to provide a forum for: (a) the dissemination and discussion of results from the PURE project, (b) the presentation and discussion of results from other IPM projects, so that PURE activities can be presented and reviewed in the context of other R&D programmes (c) workshops on the topics addressed by Pillar 1 and 2 working groups.

The following locations have been proposed for the 2 PURE congresses:
1. 1st Congress (project year 2 - 2013) Trento / Riva del Garda, Italy (under the responsibility of a local committee from FEM)
2. FINAL Congress (project year 4 - 2015) Poland (under the responsibility of a local committee from IOR)
The organisation of the congresses was under the responsibility of FEM, with support from the local organising committee. The programme of each congress was prepared by the PURE Executive Committee and the congress organising committee. The proceedings from each PURE congress were published on a specific website, in order to make use of existing editing facilities and substantially reduce publishing costs.

- **FUTURE IPM IN EUROPE- Riva del Garda (Italy) March 19-21 2013**

  The congress attracted more than 500 participants (i.e. academia and stakeholders) from Europe and all over the world (37 countries). The main represented countries were: Italy (200), France (60), Germany (30), UK (25), Switzerland (25) and Sweden (20).

  160 posters were presented, and about 100 oral presentations were done over the three days, showing that our PURE event was a great success.

  The website dedicated to this congress [http://futureipm.eu/](http://futureipm.eu/), was available until March 2014, after which all documents were transferred to the PURE public website.

  The abstracts are available on the PURE website:

  Abstracts in relation with:


  WP 9 – biocontrol: [http://www.pure-ipm.eu/node/327](http://www.pure-ipm.eu/node/327)

  WP 11 – application techniques: [http://www.pure-ipm.eu/node/329](http://www.pure-ipm.eu/node/329)


  Others:

  physical methods [http://www.pure-ipm.eu/node/323](http://www.pure-ipm.eu/node/323)

  preventive measures [http://www.pure-ipm.eu/node/325](http://www.pure-ipm.eu/node/325)

- **IPM innovation in Europe - Poznan (Poland), January 14-16 2015**

  The congress attracted more than 194 participants (i.e. scientists and stakeholders) from Europe and all over the world (23 countries). The main represented countries were: Poland (44), France (32), Italy (22), The Netherlands (20) and Germany (13). Nevertheless, other participants went from Baltic and Eastern European countries.

  81 posters were presented, and about 86 oral presentations were done over the three days. More details about contributions and abstracts submitted by participants are available in the book of abstracts that is available on the congress website and on the PURE website.

  The website dedicated to this congress: [www.ior.poznan.pl/pure2015](http://www.ior.poznan.pl/pure2015) will be available until April 2015, after which all documents will be transferred to the PURE public website.

  The abstracts are available on the PURE website:
Complete abstracts: [http://www.pure-ipm.eu/node/427]

**Abstracts in relation with:**
- WP 1: [http://www.pure-ipm.eu/node/443]
- WP 2, 3 & 4 – annual crops: [http://www.pure-ipm.eu/node/474]
- WP 5 & 6 – perennial crops: [http://www.pure-ipm.eu/node/475]
- WP 7 – protected crops: [http://www.pure-ipm.eu/node/476]
- WP 8 – pest evolution: [http://www.pure-ipm.eu/node/442]
- WP 9 – biologicals: [http://www.pure-ipm.eu/node/441]
- WP 10 – ecological engineering: [http://www.pure-ipm.eu/node/440]
- WP 11 – new technologies: [http://www.pure-ipm.eu/node/441]
- WP 12 – perspectives and challenges: [http://www.pure-ipm.eu/node/436]
- WP 13 – co-innovation: [http://www.pure-ipm.eu/node/437]

**Participation at conferences**

PURE partners participated at conferences to present the project or results get during the project. The following list gives information on titles and locations of these conferences.

**In Europe:**

- AFPP, 4th and 5th international conference on alternative methods for crop protection, Lille, France
- 9th International IOBC/WPRS Workshop on Pome Fruit Diseases, Hasselt, Belgium
- Conference of the Association of Applied Biologists, Wageningen, Netherlands
- 12th Congress of the European Society for Agronomy, Helsinki, Finland
- IOBC/WPRS Working Group “Pesticides and beneficial organisms”, Marbella, Spain
- EFPP, Wageningen, The Netherlands
- AFPP, 22nd COLUMA Conference International Meeting on Weed Control, Dijon, France
- 9th European Conference on Mathematical and Theoretical Biology, Gothenburg, Sweden
- 21st International Symposium on Mathematical Theory of Networks and Systems (MTNS), Groningen, the Netherlands
- EWRS Symposium on Herbicide resistance in Europe, Frankfurt am Main, Germany
- German Crop Protection Conference 2014, Freiburg, Germany
- Slovenian Crop Protection Conference 2014, Ptuj, Slovenia
- Grapevine Downy and Powdery Mildew international Workshop, Vitorio-Gasteiz, Spain
- EcoViti seminar, Montpellier, France
- Vegepolys Symposium, Angers, France
- 47th annual meeting of the society for invertebrate pathology and International congress on invertebrate pathology and microbial control, Mainz, Germany
7th NORBARAG meeting, Copenhagen, Denmark

Outside Europe:

- 8th International Conference on Integrated Fruit Production, Kusadasi, Turkey
- 16th European Weed Research Society Symposium, Turkey
- 7th and 8th international IPM symposium, Salt Lake City Conference (USA)
- 2nd International Wheat Stripe Rust Symposium, Izmir, Turkey
- Plant and Food research, Lincoln, New Zealand

“Web” dissemination

The website was the main tool to disseminate information and documents from the PURE community (www.pure-ipm.eu).

The screenshot shows the different information on the homepage:

- Access to Project information, WPs, publications, information on countries and partners, links to other European projects.
- Latest News and events

This website opened on June 2011 and the next figure shows the number of visits per month during the whole project.

We can see that the average number is between 2500 to 3000 visitors per month with a peak at every newsletter launch.
The main pages consulted by web visitors are distributed according to different categories as shown on the next figure:

![Website visits](image)

General information (wps, partners) has been accessed up to 30% as the technical information (publications, congresses, others up to 40%. The last part is from news (events = agenda, news) from the project. The access is near 30%.

It was decided not to segment the information for the different stakeholders groups. All the information was free to access.

**Information about PURE activities**

![Cropping systems](image)

Complete information about the project was available on the website, presenting the main objectives, methodology and governance and giving links to a starting-brochure and a website leaflet.

Information about the WPs activities can be easily found on the website and was well consulted. For each WP, a direct access to publications, events and news makes access to the information easy.
For the cropping systems activities, access to information and details on experimental sites located all around Europe was added.

This information was very popular mainly on cropping systems, dissemination and some “new knowledge and technologies” activities.

Information about Partners and countries

A direct access was put on the homepage.

A description of every of the 10 countries with a map of experimental sites shows easily what the studies in the country are about. A precise description of each experimental site can be found on this page. A link on local partners, events and news was provided.

A complete description of each of the 24 partners was available with links to a contact and a website.
Information about events and congresses

This information was very popular among the PURE website visitors. This includes:

- direct information about the two PURE stakeholders congresses (first information, circulars with more details about contents, ...)
- information about other events, mainly conferences to which PURE people participated or presented results.

The events were distributed in the different countries participating in the project. France provided the most important of information on their national events.

Information about news
The total number of news produced at the end of the project is 65. The following figure shows the balanced distribution between the different activities of the project:

\[
\text{CS WPs} = \text{cropping systems activities (WP 2 to 7)} \\
\text{NKT WPs} = \text{new knowledge and technology activities (WP 8 to 11 + WP1 + WP13)}
\]

The project lasted 48 months, so the posted rate of news was, on average, 20 days. It is expected to continue producing news during 2015 to inform web visitors about PURE results.

**Newsletters**

The newsletters were produced:
- Annually: with an annual summary of the project
- Periodically: news and events in brief about the project

The main objective of the annual newsletter was to:
- give a summary of the work,
- provide links to documents on the website,
- and allow the reader to immediately get the topic of interest.

Each newsletter was available on the website and sent by email via a mailing list. This mailing list, common within the Endure network, has grown during the project.
The first annual newsletter was produced in June 2012 and sent in August 2012. The second one was produced in June 2013 and sent in August 2013. The third one was produced in February 2014 and sent in March 2014.

**Booklets**

Three series of booklets were produced and made available on the project website to create a continuous flow of information from the project to the public. A complete booklet gathered all information and a special document were produced for each workpackage from the complete booklet.

Main issues developed in booklets:

- 2013 = cropping systems activities → approach (IPM design and assessment methodology), first results, next steps.
- 2014 = new knowledge and technologies for IPM → approach, first results, interaction with cropping systems activities, next steps.
• 2015 – Results and lessons from PURE → approach, pests, technical results, sustainability of IPM solutions, innovative methods, limits and conditions of success and adaptations.

Deliverables:
There are two ways to find deliverables. First a list is available on the “Publications” section. When you click on the title, you have access to the summary and then you can download the deliverable. The other way is to go on the “publications” section on the workpackage page.

At the end of the project, 61 public deliverables are available on the website.

Virtual visits

Dissemination also places extra effort on innovative learning methods and the active involvement of a diversity of stakeholders. The latter approach includes participatory farm days and virtual field visits conducted in a participatory approach for farmers and advisors. Virtual field visits in each farming system, under the co-ordination of WP2-7 leaders, were made available on the website. Selected key points from one or several farm sites structured these virtual visits. Each virtual visit includes pictures with legends and a complete file describing the field tests. These virtual visits are in English and in local language. Using English gives to stakeholders from a country the possibility to visit experimental fields from another country, and using the local language facilitates accessibility to information for local stakeholders who do not understand English.

Pomefruit activity example
16 virtual visits are available on the website. Visits about maize cropping systems in have been largest in number. Neither all cropping systems nor all countries provided virtual visits.

Written dissemination

Scientific and technical publications:
This section brings together all other types of documents: scientific or technical articles, internal deliverables, and abstracts and slideshows from congresses.

At the end of the project, 50 documents are available on the website and 63 peer-reviews are officially published or are in press.

e-learning

The e-learning material is dedicated to trainers and was produced during the project covers all the WPs activities. The objective is to provide easy-to-use material by this target stakeholder group about the main results obtained during the project lifetime. This material gives the possibility to have more information via tool tips and links to complete information available on the PURE website (deliverables, booklets, scientific publications, etc.).
When the project started, 6 sheets based on the PURE cropping systems were updated or created to complete the Endure IPM training guide. This training guide, which provide information (arguments, methodology, tools) for trainers was designed during the Endure network of excellence and was available in 2010. It covered only four of the six cropping systems studied in PURE. So, it was decided to update the previous sheets about the four cropping system and to provide two new ones.

At the end of the project, the idea was to produce at least one e-learning material for each cropping systems activity using the “Results and lessons from the PURE booklets. It is a “translation” in interactive slideshows of the documents produced in each pillar 1 workpackage. Some workpackages provided additional e-learning material to show some technics or methods.

4. Conclusion

Dissemination activities used different ways to give access to trials and results from the project. This includes:

i) For farmers and extension services: field visits, virtual field visits, co-innovation, booklets, e-learning, IPM “guidelines” (results and lessons from PURE°, congresses

ii) For industries active in the field of IPM: co-innovation, IPM “guidelines” (results and lessons from PURE)

iii) For consumers: news

iv) For scientists: scientific publications, congresses, deliverables

v) For regulatory and policy authorities: dedicated meetings