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The stakeholder-consultation process in developing training and awareness-raising material within the framework of the EU Directive on Sustainable Use of Pesticides: The case of the EU-project BROWSE

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HIGHLIGHTS

- ► Training and raising awareness play key roles in achieving the sustainable use of pesticides.
- ► A stakeholder-consultation was made to find priorities for new training and communication material.
- ▶ The priorities will be to explain risk-identifying mitigation measures to reduce exposure.
- ► The focus will be to train operators and inform people living in rural areas.
- ▶ Videos are considered the most suitable technique to deliver this information.

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ABSTRACT

In September 2009, the Council of the European Union adopted the Directive on Sustainable Use of Pesticides (SUD). The core idea is that in order to achieve sustainable use of pesticides, it is necessary that everyone is conscious about the risks to both human health and the environment associated with the use of plant protection products. Therefore, in the SUD, training and raising awareness play key roles in order to achieve the objectives of the directive. In this sense, the European-founded project BROWSE (Bystanders, Residents, Operators and WorkerS Exposure models for plant protection products) has, as one of its main objectives, to contribute to the implementation of the SUD through the development and dissemination of communication materials for training and raising awareness. For this reason, a consultation process was implemented involving all relevant stakeholders in order to identify their opinions regarding the subjects to be prioritised, the factors influencing pesticide exposure to be focused on and the most suitable formats to develop training and awareness-raising material as well as identification of target groups. To collect the required information, participants were asked to answer an electronic questionnaire (giving the possibility through several debates for additional comments). The collected findings and the ensuing debates are described in this article and are going to be taken into account in the development of the BROWSE training and communication material for the raising of awareness.

tively by the end of 2011.

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1. Introduction: the Sustainable Use Directive (SUD)

In September 2009, the Council of the European Union adopted the Directive on Sustainable Use of Pesticides (2009/128/EC). The Directive establishes a framework for achieving the sustainable use of pesticides by reducing the risks and impacts of pesticide use on human health and the environment, promoting integrated pest management and introducing effective non-chemical alternatives. Thus, Member States are now committed to implementing strategies to transpose and fulfil the objectives of the Directive into national legislation taking into account the local circumstances and experiences.

There are many definitions in the literature concerning training, and several modifications have been made in the last decades

The transposition process should be completed within 2 years, effec-

pesticides, it is necessary that everyone is conscious about the risks

both to human health and the environment associated with the use

of plant protection products. "Appropriate training" will be needed

for professional users and "appropriate communication material for

awareness-raising" for the general population. That is why, in the

SUD, training and raising awareness play a strategic role.

The main idea is that, in order to achieve the sustainable use of

^{1.1.} Training within the framework of the SUD

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regarding approaches, methods and techniques. Indeed, "training in agriculture cannot be considered only in terms of an educational process; it must also be taken as part of a wider socioeconomic environment in which complex, worldwide factors interact with each other" (Halim and Mozhar, 1997). The problem is that nowadays objectives are quickly changing and thus "agricultural training needs to take into account new subject areas and their socio-economic consequences" (FAO, 2006). Thus, approaches, methods and techniques in agricultural training need to be constantly updated taking into account current trends and influences if they are to meet needs of societies to achieve sustainable development.

Regarding the SUD requirements for training, Member States shall ensure that all the so-called professional users, distributors and advisors (including operators, technicians, employers and self-employed in agriculture and other sectors) have access to "appropriate training by bodies designated by the competent authorities" (Art. 5). Thus, training should be implemented taking into account the various roles and responsibilities and should ensure that such users, distributors and advisors acquire sufficient knowledge regarding the subjects listed in Annex 1. In particular, training for professional users (Art 5, 9, 13) will be focused on risks for operators, residents, bystanders, people using treated areas; measures to minimise risks for humans; procedures for storage, handling and disposal of pesticides; procedures for preparing pesticides application equipment; and use of equipment. Training for operators (Art 8) will include hand-held equipment and knapsack-sprayer maintenance, specific risks and the proper use of plant protection products (PPPs).

1.2. Raising awareness within the framework of the SUD

Operationally, awareness-raising is promoted through campaigns defined as "a broadly organised effort to inform and educate people about a topic or issue with the intention of influencing their attitudes, behaviours and beliefs towards the achievement of a defined purpose or goal" (Sayers, 2006).

As described in the SUD, "Member States should inform the general public and facilitate awareness-raising programmes and the availability of balanced information (Art. 7). Information should be related to pesticides and in particular regarding the risks and the potential acute and chronic effects for human health, non target organisms and the environment" (Art. 7). Furthermore, Member States should ensure that in case of aerial spraying when derogations from the ban are given, persons who could be exposed (such as residents and bystanders) are warned (Art. 9). Thus, Member States will have to develop awareness-raising campaigns conveying clear messages, using appropriate strategies for each type of audience.

2. Objectives

BROWSE (Bystanders, Residents, Operators and WorkerS Exposure models for plant protection products) is a multi-institutional project started in January 2011 (it will be in place for 3 years) between eight institutions implemented by the European Commission under the 7th Framework Programme. Its main objective is to improve the assessment of risks to operators, workers, residents and bystanders by delivering new and improved models of exposure, thus improving the basis for the targeting of risk-reduction policy. The partners are The Food and Environment Research Agency (United Kingdom), Alterra (Centre for Water and Climate, Wageningen, The Netherlands), Benaki Phytopathological Institute (Greece), The Arable Group (United Kingdom), TNO (Netherlands), University of Gent (Belgium), Università Cattolica del Sacro Cuore (Italy) and the University of Newcastle (United Kingdom). BROWSE is implementing many different activities and one group aims to use the new and improved exposure models to contribute to the implementation of the Thematic Strategy on the Sustainable Use of Pesticides. This paper is based mainly on the development and dissemination of communication material for training and awareness-raising following the requirements of the SUD.

To make a real contribution, ensuring that the ready-to-use outcomes of the project will fit the needs for implementing the SUD, the communication material for training and awareness-raising developed by BROWSE will be prepared based on the feedback from a stakeholder-consultation process. The exaptation of the process was to obtain important information regarding the audience, purpose and design of the materials and also regarding how they can be designed to integrate efficiently with existing materials and initiatives, and how their take up by organisations delivering training and communication can be facilitated.

3. Material and methods

Public consultation can be defined as "a flow of information conveyed from members of the public to the sponsor of the initiative following a process initiated by the sponsor" (Rowe and Frewer, 2005). Of course there are a large and growing number of possible mechanisms that can be adopted for this purpose. However, in order to be as efficient as possible and taking into account the kind of information that we want to obtain, it was decided to adopt a mixed approach including two kinds of consultation mechanism: the *opinion pool* together with the *focus group*.

The *opinion pool* approach (sometimes called also referendum or survey or telepolling/voting) is a "highly controlled way of acquiring answers to specific questions from large samples" (Rowe and Frewer, 2005) where responses are limited and there is no interaction between stakeholders. In this method, stakeholders are requested to answer questions by choosing from a limited number of provided answers. Because there are only multiple-choice questions, it represents an efficient way to obtain sufficient data in a short time. However, there is a risk that the quality may be low because, as a passive consultation method, it "does not permit deeper discussion and might be dominated by more organised interests" (Scott, 2010).

This is an instrument often used in the quantitative research because it allows for meaningful comparison of responses across participants and study sites. However, it requires a thorough understanding of the important questions to ask, the best way to ask them, and the range of possible responses (Mack et al., 2005).

On the other hand, the *focus group* approach is another instrument "with effort expended to facilitate the information elicited with face-to-face interaction" (Rowe and Frewer, 2005). Because the responses are open (it is also defined as "a dialogue-based method" (Scott, 2010)) and there is an unstructured aggregation, the quality of information is generally considered high in spite of having the risk of a lack in terms of quantity of obtained information. Qualitative methods are typically more flexible than the quantitative ones and allow greater spontaneity and adaptation of the interaction between the researcher and the study participant. Participants have the opportunity to respond more elaborately and in greater detail than is typically the case with quantitative methods. In turn, researchers have the opportunity to respond immediately to what participants say by tailoring subsequent questions to information the participant has provided (Mack et al., 2005).

Thus, in order to have the advantages of both instruments and to compensate for their relative disadvantages, it was decided to develop a consultation process using this mixed approach in two phases.

A first consultation with stakeholders was conducted as part of the initial BROWSE stakeholder workshop (Brussels, 14/15 April 2011). The workshop was organised to collect relevant information for the entire BROWSE project. However, it included a specific session aimed at gathering stakeholder views on priorities for assisting implementation of the Sustainable Use Directive and in particular referring to training and raising awareness.

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