European rice crop: worst case for the risk analysis or a model for the process improvement?

Ettore Capri and Maura Calliera, OPERA Research Center - Università Cattolica del Sacro Cuore*

Corrisponding author: maura.calliera@unicatt.it

Current rice production is heavily reliant on agricultural science and technology and features more intensive production methods than traditional rice cultivation. Plant protection products (PPPs) are extensively used in rice cropping systems in combination with other modern agricultural technologies and practices and their use is therefore a key issue in evaluating the sustainability of rice production.

OBJECTIVES OF THE RISK EVALUATION PROCESS FOR PPPs

- to develop an evidence-based approach which, at the end of the process, **provides solid facts**
- to **provide answers** based on appreciation of the ethical, social and behavioural aspects of a situation as well as appreciation of features such as the economic significance of the issue.

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But…….Rice culture is particularly complex due to diversity of rice production situations worldwide, and the intrinsic specificity of this crop where aquatic and terrestrial communities are mixes in a human-managed wetland type agro-biosystem that provide multiple goods and services, often beyond farm boundaries.

LESSONS LEARNT: PPPs R.A. FOR RICE SUBSTANTIAL CHALLENGES

Since 2003 MED-Rice group concluded that the development of various well-defined national rice scenarios would in fact be more appropriate than the development of a single pan-European scenario.
Not many progress has been made in this direction. The scenarios actually used in risk assessments are not always relevant to the contexts in which they are applied, and fail to represent important features of the real agricultural situation. The currently available models and computational tools still have limited flexibility in representing different, real-rice scenarios. User knowledge of models and computational tools is also limited, resulting in problems both in the choice of methodology for a particular situation and the execution of the risk assessment.

It is often difficult for farmers to adopt the ideas and technologies proposed by scientists, and it is also difficult for scientists to fully appreciate the individual characteristics of particular rice production areas, and the significance of these differences between sites[1].

Despite human resource constraints, the demand for RA remains high, regulatory timeframes remain ambitious and assessments are getting increasingly complex. The growing complexity and the multidisciplinarity of RA sciences, are creating major capability issues which are amplified by the lack of adequate training programs[2]

One of the critical success factors in carrying out an adequate risk assessment is the availability and accessibility of the necessary data. It is globally recognised that regulatory science is moving forward very slowly compared to other scientific disciplines[3]

When performing a risk assessment and developing strategies to limit the exposure risks caused by pesticide use, it is important to take into account socio-behavioural aspects of the situation where possible. (Rios Gonzales, 2013). The evaluation should focus more on real-life conditions, people's own experiences and local forms of knowledge transmission. Such factors, once identified, could be useful in determining whether adjustments and eventual revisions of local risk assessment policy and processes are needed[4]

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