European and Mediterranean Plant Protection Organization

Organisation Européenne et Méditerranéenne pour la Protection des Plantes

Description of EPPO (see document entitled EPPO -Profile of an International Organization)

HIGHLIGHTS ON EPPO's ACTIVITIES IN PLANT PROTECTION PRODUCTS

One of the aims of EPPO is to promote the use of modern, safe and effective pest control methods. In order to achieve this goal, the EPPO Working Party on Plant Protection Products has produced a large number of standards which are intended to be used by National Plant Protection Organizations (NPPOs), in their capacity as authorities responsible for registration of plant protection products and related advisory services. These standards are also relevant for agrochemical companies which apply for registration of their products. In addition to the development of standards, EPPO regularly organizes Conferences and Workshops on themes related to plant protection (e.g. minor uses, resistance, comparative assessment, zonal recognition).

Efficacy evaluation of plant protection products

These standards describe the conduct of field and glasshouse trials carried out to assess the efficacy of plant protection products (insecticides, acaricides, fungicides, herbicides, plant growth regulators ...) against specific pests by comparison with reference product(s). Each guideline gives details on experimental conditions, application of treatments, mode of assessment, recording and measurements, and on how to report results.

At present, more than 260 standards have been prepared by several Panels (Panels for the efficacy Evaluation of fungicides and insecticides, of herbicides and plant growth regulators, General standards, Rodent control, and the ad hoc panel on resistance risk assessment) and officially approved by the EPPO Council.

- *Minor uses issue: extrapolation*

EPPO countries presently face problems in terms of crop protection product availability for minor crops. The processes of the current EU review of active substances and the rationalization of uses supported by approval holders are removing more and more useful products from the market. As a consequence, there are few products available even for some major uses. Therefore, from the EPPO perspective, minor uses are those uses of plant protection products (defined in relation to crops and pests) in which either the crop is considered to be of low economic importance at national level (minor crop), or the pest is of limited importance on a major crop (minor pest). It should be noted that a minor use in one country may be a major use in another country (each country is responsible for defining its minor uses).

The focus of the extrapolation work initiated in EPPO aims to mitigate these limitations.

In 2003, EPPO published a standard (PP 1/224) describing the principles for determining the requirements for efficacy evaluation for minor uses of plant protection products in a registration procedure. The standard provides a definition of minor uses and guidance on where to seek data to demonstrate effectiveness and crop safety, in order to simplify the registration process. The Standard does not cover other minor use considerations such as residues and ecotoxicology.

Minor uses have also become an international issue and cooperation between countries has increased remarkably in recent years. However, coordination between all interested parties still needs to be facilitated and improved. In October 2006, EPPO organized a Workshop on Mutual Recognition of Minor Uses. The workshop addressed problems related to the authorization of minor uses and explored the opportunities for solutions based particularly around different forms of international cooperation, such as mutual recognition of authorizations and cooperation in data generation.

One of main strategies proposed in order to address efficacy data requirements is to extrapolate from existing registered uses, and this was elaborated in a new EPPO standard (PP1/257). The document proposes specific efficacy and crop safety extrapolations in the form of tables. A major area of work for the Plant Protection Products Panels is the development and review of extrapolation tables to accompany this standard. To date 32 tables have been developed for a range of crop groups)
http://www.eppo.org/PPPRODUCTS/extrapolation/tables.htm)

Mutual recognition and zonal assessment
In the framework of the new EC Regulation 1107/2009 (replacing 91/414/EEC), mutual recognition and zonal authorizations are core principles of dossier submission for the authorization of plant protection products. Many of the technical details for conducting zonal authorizations still need to be addressed, agreed and harmonized among EPPO member countries. EPPO is organizing a Workshop to present and discuss problems related to efficacy assessments at zonal level.

Some of the issues that the Workshop aims to address include:

- Provide guidance on a common format and content of the efficacy components of the dRR (draft Registration Report);
- Provide guidance on how to produce a zonal BAD (Biological Assessment Dossier);
- Agreement on core dossier requirements and which areas should be addressed by national addenda;
- Zonal data sets (number and location of trials for a zonal submission) and extra-zonal data (i.e. data from outside the zone);
- Authorization of minor uses through mutual recognition (present and future situation);
- Understanding of general dossier submission procedures;
- Identification of the need to adapt existing EPPO standards and the need for new ones.

Comparative assessment
In authorizing the use of PPPs, aspects such as sustainable pest control and safe use are considered. In the authorization process, comparison with safer alternatives may be considered and when a safer and effective alternative is available, substitution may be considered. In the European Union, comparative assessment will be required for authorization of Plant Protection Products, which contain an active substance that has been identified as a candidate for substitution (Regulation (EC) No1107/2009, Articles 24 and 50). It was consequently agreed that EPPO should develop a standard to address this issue. A draft standard has been prepared and sent for Country Consultation at the end of 2010 and it is expected that it will be adopted in 2011. The objective of the standard is to provide guidance to determine whether the substitution of a plant protection product is appropriate in view of agronomic considerations. It covers comparison with chemical and non-chemical pest control alternatives but does not directly address comparative safety from the human and environmental perspective. It therefore provides specific technical guidance with the objective of meeting the requirements of this EU Regulation.

EPPO activities related to honeybees
Currently in the EU, regulatory evaluations for the effects of pesticides on honeybees are based on the EPPO/Council of Europe risk assessment scheme for honeybees (EPPO Series PP 3 Environmental Risk Assessment Scheme for Plant Protection Products – Chapter 10: Honeybees) and on the standard on the conduct of trials for the evaluation of side-effects of plant protection products on honeybees (PP 1/170). The ICPBR 'Bee Protection Group' provides the technical input for both EPPO Standards. As part of their ongoing review of pesticide risk assessment for honeybees they identified a number of issues that require further consideration and in response a revision of both standards was undertaken. The final versions of the revised EPPO standards were prepared and sent to EPPO Member Countries for comment in early 2010. The standards were agreed by the Working Party on Plant Protection Products in May 2010 and finally approved by the EPPO Council in September 2010.

Other
Other areas for which standards have been developed are environmental risk assessment of plant protection products and good plant protection practice.

HIGHLIGHTS ON SOME EPPO ACTIVITIES IN PLANT QUARANTINE

One of the aims of EPPO is to help its member countries to prevent entry or spread of dangerous pests (plant quarantine). The Organization has therefore been given the task of identifying pests which may present a risk, and of making proposals on the phytosanitary measures which can be taken. In recent years, the identification of risk has been formalized, because transparent justifications of phytosanitary measures are required and phytosanitary measures have to be commensurate with the risk. Several EPPO Standards on Pest Risk Analysis (PRA) are now available. To perform these activities, much information on pests presenting a risk to the EPPO region is required and is collected by the Organization and made available to its member countries. As identifying the pests is important a programme on diagnostic has been established.

Emerging plant diseases:

Human societies have throughout their histories faced the emergence of new plant diseases which damaged crops or the environment. In plant pathology, the classical example remains the disastrous consequences of the introduction of potato late blight which caused famine in Ireland in the 1840s and now causes problems in potato production worldwide. In more recent history, many new plant diseases have emerged in different parts of the world, and this phenomenon seems to have accelerated. Although there is no agreed definition of what is an emerging plant disease, it can correspond to an already known disease whose incidence or geographical distribution is notably increasing but it may also be caused by newly described pathogens. The causes of plant disease emergence are multiple and quite complex, but it is generally accepted that human activities (e.g. trade of plants, accidental introduction of vectors, modifications of agricultural practices or land use) play an important role.

In the European and Mediterranean region, agriculture is an economically important sector covering a large variety of plants which are subject to an ever increasing trade and at the same time potentially threatened by a wide range of pests and diseases. Therefore, it is essential for Plant Protection Services to avoid the introduction and spread of new pests via commercial exchanges. Over the years, EPPO has made recommendations to its fifty member countries on phytosanitary measures which should be implemented to avoid the introduction of damaging pathogens (e.g. *Xanthomonas citri* pv*. citri, Liberibacter* species associated with citrus huanglongbing which are currently emerging in the Americas) or to prevent further spread of diseases which already occur in the region (e.g. *Citrus tristeza virus, Plum pox virus*). However, these existing phytosanitary measures can be challenged by the emergence of new diseases. In the EPPO strategy, it is felt essential to assess the risks associated with emerging diseases and, whenever appropriate, to propose management measures (i.e. restrictions on trade) against them. EPPO has elaborated a Pest Risk Analysis (PRA) scheme which will be presented. When new diseases are emerging, it is also important to provide early warning to Plant Protection Services so that they can put into place import inspections and surveillance programmes on their territories. Since 1998, EPPO has set up an Alert List on its website (www.eppo.org) to provide data on emerging diseases (e.g. '*Candidatus* Phytoplasma solanacearum', *Chalara fraxinea, Fusarium oxysporum* f.sp. *lactucae, Phytophthora kernoviae, Pseudomonas syringae* pv*. actinidae,* viroids of solanaceous plants, new tomato viruses). Some of these emerging pathogens may later be submitted to a PRA and eventually be recommended for regulation as quarantine pests. When a quarantine status is considered appropriate for an emerging pathogen, EPPO Standards can also be developed in order to provide guidance on diagnostics, certification schemes, eradication and containment programmes.

Diagnostics

Since 1998, EPPO has established a work programme in the area of diagnostics to harmonize procedures across the region. The different activities conducted in the framework of this programme are presented.

Diagnostic protocols

In 1998, a programme was initiated to develop diagnostic protocols for as many as possible of the pests of the EPPO A1 and A2 lists (Zlof *et al.*, 2000). The preparation of protocols involves close collaboration between different Panels composed of diagnostic experts: the Panels on Diagnostics (coordination role), Bacterial Diseases, on Nematodes, on Certification of Fruit Crops and the European Mycological Network. Each first draft is prepared by an individual expert according to a common format and should contain all the information necessary to detect and positively identify a particular pest. The draft is then reviewed by relevant Panels. 92 diagnostic protocols for

specific pests and 3 horizontal standards have now been approved as (see www.eppo.org). 15 protocols are in different stages of preparation.
A survey on the use of the protocols was conducted in 2008 on a selection of 58 protocols in all disciplines of plant health diagnosis (Petter & Suffert, 2010). Laboratories registered in the EPPO database on Diagnostic Expertise (see below) were asked to indicate the number of samples that they tested in 2007 and which test they used. From this survey it can be concluded that many of the tests for detection mentioned in EPPO diagnostic protocols are widely used in laboratories in the EPPO Region.

Accreditation and quality management
In 2003, a separate Panel was created to develop standards on quality assurance (two standards have been developed so far OEPP/EPPO, 2007 & 2010). A joint communiqué between EPPO and EA (European Co-operation for Accreditation, the European network of nationally recognised accreditation bodies) states that "*EA will recommend that assessors from Accreditation Bodies take note of EPPO documents when evaluating plant pest diagnostic laboratories".* It is also envisaged to create a database where validation data from laboratories could be shared between EPPO countries. EPPO also organized two workshops on quality assurance in 2007 and 2009, to allow experts to share their experience on quality assurance and accreditation.
EPPO database on diagnostic expertise
In 2004, EPPO Council stressed that the implementation of phytosanitary regulations for quarantine pests was jeopardized by decreasing knowledge in plant protection. The Panel on Diagnostics proposed that an inventory should be made of the available expertise on diagnostics in Europe. The database on Diagnostic Expertise was created (Roy *et al.,* 2010) to allow identification of experts who can provide diagnosis of regulated species and those who can help in the identification of new or unusual species. EPPO member countries were contacted and as of May 2010, 70 laboratories from 25 countries have provided data corresponding to more than 500 experts). These results are available in a searchable database on the EPPO website. The database can also help national accreditation bodies identify auditors for pest diagnostic laboratories for accreditation.
The EPPO Secretariat considers that these initiatives and future plans will aid the optimization of diagnostic activities in laboratories in the EPPO region.

References

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