

A NEW BACKGROUND IN THE PROTECTION OF PLANTS FROM BIOTIC PATHOGENS

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Plant protection from biotic agents is part of a complicated system that constantly evolves under the influence of many factors, availability and technical features of control means, their toxicological and environmental concerns and legislative background being the most important. Control programs based on scheduled treatments, established since the beginning of modern crop protection owing to the introduction of many synthetic pesticides in the middle of the last century, moved towards flexibility in the early seventies, especially in Italy, at first through “guided control”, then “integrated control”, followed by “integrated production”. In the early nineties, Council Directive 91/414 ECC started changing the European rules for placing plant protection products on the market, with the aim of strengthening health and environmental safety. New changes in legislative background were recently introduced by European authorities, concerning both the authorization and utilization of agrochemicals, through many measures such as Regulation (EC) No. 396/2005 on pesticide residues in food, new Regulation CE 1107/2009 on the marketing of plant protection products, and Directive 2009/128/EC on the sustainable use of pesticides. Regulation (EC) No. 396/2005 (which became effective on 1 September 2008) has completed the harmonisation and simplification of pesticide maximum residue levels (MRLs), with the aim of protecting consumers from exposure to unacceptable levels in food and feed. Regulation CE 1107/2009 (that will come into force as of 14 June 2011) revises Directive 91/414, modifying the criteria for approval of plant protection products to ensure a high level of safety for humans, animals and the environment and establishes a mechanism for the substitution of the most toxic pesticides. Directive 2009/128/EC (that must be acknowledged by Member States by 14 December 2011 and will come into force between 2012 and 2016) has the objective of achieving the sustainable use of pesticides by reducing their use and risks, improving the quality and efficacy of their application, ensuring better training and education of users, and promoting Integrated Pest Management (IPM) and the use of non chemical control means. In particular, among the many measures, this Directive makes IPM compulsory as of 1 January 2014 (it is now implemented on a voluntary basis). The control of diseases, especially of fungal pathogens, is strongly involved in the new approach to plant protection, because the main principle of IPM concerns the correct choice of intervention timing, which is often more complicated for pathogens than for other biotic agents. This new legislative and political background implies the need to implement a general system for taking, managing and sharing decisions, and, specifically for plant pathology, makes it even more necessary not to overlook, among research topics, biological and epidemiological aspects which can provide useful information in rationalizing intervention timing.