ZONING PROJECT: ANALYSIS OF THE RESULTS AND POSSIBILITIES FOR DEVELOPING COUNTRIES

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The Zoning Project, carried out along with the Organization for Economic Co-operation and Development (OECD) and Food and Agriculture Organization (FAO), and terminated in 2002, aimed developing the concept of a global zoning scheme to define areas in the world having similar weather, where pesticide residue field trials could be comparable and, therefore, where such trials would be used within each zone to establish MRL (Maximum Residue Level) proposals, regardless each country's border, being acceptable for regulatory purposes [1]. Based on this project, and taking into account the main factors that influence the residues, it is important to emphasize the need of additional work to guarantee the recognition of residue trials, independent of the place where the study was conducted. The purpose of this study is to analyze the recommendations resulting from OECD/FAO Zoning Project and to demonstrate the importance of maintaining this work for the global scenario of food production. The methodology applied was the literature review. The Zoning Project results indicated that it was not possible to quantify a consistent relationship between climatic zones and residue behavior; therefore, the weather-based geographic zoning could not be validated. Application parameters such as water rate, spray concentration, number of application and pre-harvest intervals can explain a large portion of variation in the residues at harvesting (up to about 70%). The additional effect of the pre-harvest climatic conditions are relatively small and the other factors, such as different treatment intervals, formulation type, application techniques used in the trials, sampling methodology, laboratory techniques and agronomic practices in diverse places appear to be related to a significant proportion of the variation in residues at harvest (up to about 40%) [1]. Based on the conclusions of the OECD report, one recommendation is that residue assessors and data-generators in developing countries should take into account the Zoning Project results (that climate is not the main factor that can influence residue behavior in comparable residue trials) and consider, therefore, the submission of residue data from comparable residue trials, carried out in different regions of the world for the national regulatory authorities and for the JMPR (Joint Meeting Pesticide Review). Thus, it is recognized the potential advantage of accepting residue trial data from a global database, with a larger number of comparable tests, including studies conducted in other countries or regions, and that there are significant advantages in the extension of this acceptance, particularly with respect to the establishment of MRLs for imported products, for minor crops and for the elaboration of Codex MRLs [1]. The creation of a worldwide database containing information on residues trials in several countries of the world allows authorities to make decisions based on a larger number of data and, therefore, statistically more consistent. In FAO's 2004 Annual Report, JMPR suggested that hypothetical zones (not geographic zones) could be developed based on the types of crops and variations in agricultural practices [2]. The establishment of international zones could hugely facilitate the development of residue data for both major and minor crops, as well as avoid trials duplication in several countries, optimizing the resources in a global level. This approach could also drastically reduce the time spent on data review by regulatory agencies, allow the adoption of harmonized MRLs, and ultimately, provide the producers with more efficient solutions for pest, disease and weed control. Considering all these factors, the global zoning for residue trials is certainly an area that needs further discussion, involving both the public and private sectors for a joint decision to be taken and to reach a greater global alignment [3].

References:

[1] Report of OECD/FAO Zoning Project. 2002. OECD Series on Pesticides, number 19. Environment Directorate, Paris.
[2] Pesticide residues in food. 2004. FAO Plant Production and Protection Paper, number 178. WHO and FAO, Rome.
[3] Ohkawa, H., Miyagawa H. and Lee, P.W. 2007. Pesticide Chemistry, Crop Protection, Public Health and Environmental Safety. Wiley-VCH Verlag GmbH & Co. KGaA. Weinheim.