Session: Modelling and Monitoring of Pesticides Fate and Exposure in a Regulatory Context (P)

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Development of a Harmonized Protocol for Measurement of Foliar Wash-off Coefficients: First Results

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The foliar wash-off coefficient is a parameter in FOCUS ground and surface water modelling which can refine the soil loading after a sprayed application of pesticides. EFSA accepts that the modelling default can be superseded by experimental data with plants under a range of relevant conditions. Previous attempts to generate such data have suffered from the lack of a harmonised protocol for the study conduct. Specifically, the selection of crop types and growth stages was not deemed suitable to cover the submitted GAP. Furthermore, the analytical methods were not always validated appropriately. An ECPA workshop in 2015 proposed that the most suitable first step in development of a harmonised protocol would be to agree the design of a "single test" (i.e. a single crop/growth stage/Al/formulation) and conduct a ring test on this design. The purpose of the ring-test would be to establish the robustness of the design in several laboratories and, importantly, to understand the impact of the specific rainfall delivery system used; i.e., whether a highly sophisticated system is necessary or whether a simpler system could be adequate.

The concept of the proposed design is that whole plants are used (rather than individual leaves) to retain as much realism as possible. The wash-off coefficient is then determined by comparison of compound residues in two sets of plants (with and without a defined rainfall event) measured using a GLP validated crop residue method. Appropriate control sets will be employed to determine the extent of other dissipation processes. This initial ring test is under way using tebuconazole (Folicur EW 250) sprayed at 100 g ai/ha onto tomato plants at BBCH25. Each participant will measure the residues before and after a rainfall event of 20 mm/hour for 1 hour and will calculate the wash-off coefficient from these data. Rainfall droplet size distribution and intensity will also be measured using a Laser Precipitation Monitor (LPM) to aid understanding in the case that significant differences are observed. This poster will summarise the results obtained from the initial ring test.