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XVI SYMPOSIUM IN PESTICIDE CHEMISTRY
**ADVANCES IN
RISK ASSESSMENT AND
MANAGEMENT**

editors

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ASSESSMENT OF ENVIRONMENTAL FATE OF NOVEL CLAY-BASED HERBICIDE FORMULATIONS

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Presenter Monica Granetto

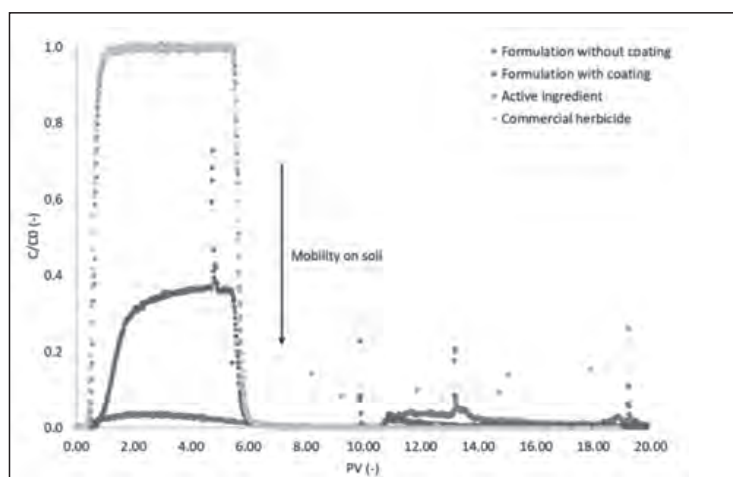
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OBJECTIVES

- Developing a novel environmental-friendly herbicide formulation using clay and biopolymers as a particle coating
- Reducing herbicide spreading on subsoil, surface water and groundwater
- Reducing herbicide spreading in air
- Testing efficacy in greenhouse test

HIGHLIGHTS

- Mobility on soil was investigated through unsaturated column transport tests.
- Mobility in groundwater was investigated through saturated column transport tests.
- The novel clay formulation showed reduced mobility both on soil and in groundwater compared to the free compound and a commercial formulation. At least 50% of the clay formulation was retained in the first cms of the columns.



Breakthrough curves for unsaturated column transport tests.

- Volatility was studied through both batch open vessel tests (with and without soil). Formulation with coating showed negligible volatilization compared to active ingredient alone.
- Greenhouse tests showed comparable efficacy to the commercial herbicide