XVI Symposium in Pesticide Chemistry

**Studying the effects of trifloxystrobin and its main soil metabolite on soil microbes using advanced culture-independent approaches**

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**OBJECTIVES**

* address associated knowledge gaps concerning the potential toxicity of trifloxystrobin (TFX) and CGA 321113 on the soil microbial community;
* assess soil microbial enzymatic activities after TFX application;
* assess TFX dissipation and CGA 321113 formation/degradation in soil.

**HIGHLIGHTS**

* Identification of TFX and of its metabolite CGA 321113 was carried out via high resolution mass spectrometry
* Confirmation of TFX and of its metabolite CGA 321113 was carried out by tandem mass spectrometry and molecular structure correlation;
* Dissipation assessment revealed that DT50 of TFX in soil was less than 5 days
* The highest formation rate of the metabolite was in the first 15 days;
* TFX was correlated positively with the potential nitrification activity;
* No effect of TFX on other measured extracellular enzyme activities were observed;



*Dissipation of TFX in soil at an application rate equal to 100 times higher than the recommended dose.*