

iPLANTA Webinar 2:

RNAi based pesticides: Environmental biosafety issues,

Monday 7th December 2020 at 4.00pm (CET)

Minutes

This webinar on the Specific Environmental Biosafety considerations for RNAi Pesticides was introduced by Bruno Mezzetti (iPlanta Chair) and chaired by Salvatore Arpaia (ENEA).

The first presentation on the selection of non-target organisms and considerations of the receiving environment, uptake mechanism and susceptibility to RNAi was presented by Salvatore Arpaia. He discussed the importance of routes and levels of exposure and the sensitivity of species in determining potential hazards. This led into the second presentation by Olivier Christaens (Univ. Gent) on the role of bioinformatics in determining the specificity and potential for off-target effects and the selection of non-target organisms (NTOs). He emphasised that while bioinformatics can be a useful indicator of sensitivity it should not be used alone in determining potential impacts on NTOs.

Michael Wasseneger (AIPlanta - Institute for Plant Research) discussed the research in his group on application methods in relation to plant uptake and systemic activity in plants. He discussed the merits of different application methods, the resulting activity and mobility of sRNA in cells and whole plants. Joshua Fischer (Bayer CropScience) discussed the persistence of dsRNA in the environment and how different formulations affect persistence. He discussed the data from both plants expressing dsRNA and from dsRNA sprays. Generally RNA does not persist for long in the environment from both sources but certain formulations can extend its life span of activity.

Throughout the webinar, questions had been posted on Zoom and some were addressed at the end of each presentation while others were discussed by all presenters in a general discussion session on biosafety factors at the end of the webinar programme.

The video of the meeting, the presentations and the report can be found at the following links:

<https://iplanta.univpm.it/node/80>

<https://www.iplantawebinars.com/event/5fbea30d64f9a93dad07289>

