

What does dislodgeable foliar residue 'DFR' mean ?

Dislodgeable foliar residue (DFR) is the amount of pesticide residues which are deposited on plant leaves and may dislodge after pesticide application by people during the performance of various tasks and can subsequently deposited on human skin and clothes that may cause potential risk .



What is The current challenge of DFR to the industry ?

The default values of DFR and other parameters in the risk assessment become more precautionary in the regulatory landscape , the requirements for specific DFR studies are increasing. These studies are costly, time consuming and limited by the crops seasons due to the unacceptability of extrapolation between DFR studies among crops .

Dissipation data resulting from DFR studies are used to evaluate the risk associated with post application exposure to pesticides and to establish chemical transfer coefficient (TC) to determine restricted – entry intervals of cultivated crops .



Factors that may affects DFR

Application rate

Addressing the relation between the application rate and deposition rate, which may increase the potential accumulations of residues on leaves

Rain fall

Pesticides residues on plant leaves may be influenced by different precipitation intensities

Formulation type

The role of different formulation types and co-formulants with different range of active ingredient particle sizes may have an impact on dislodge-ability

Temperature

The effect of temperature on foliar persistence of pesticides as a factor

Leaf texture and shapes

Different leaf shapes (ovate, oblong, linear, cordate, Reniform etc.) and textures from smooth to hairy may have an impact on different dislodge-ability

Developing a Lab method for testing the effect of formulation types on DFR

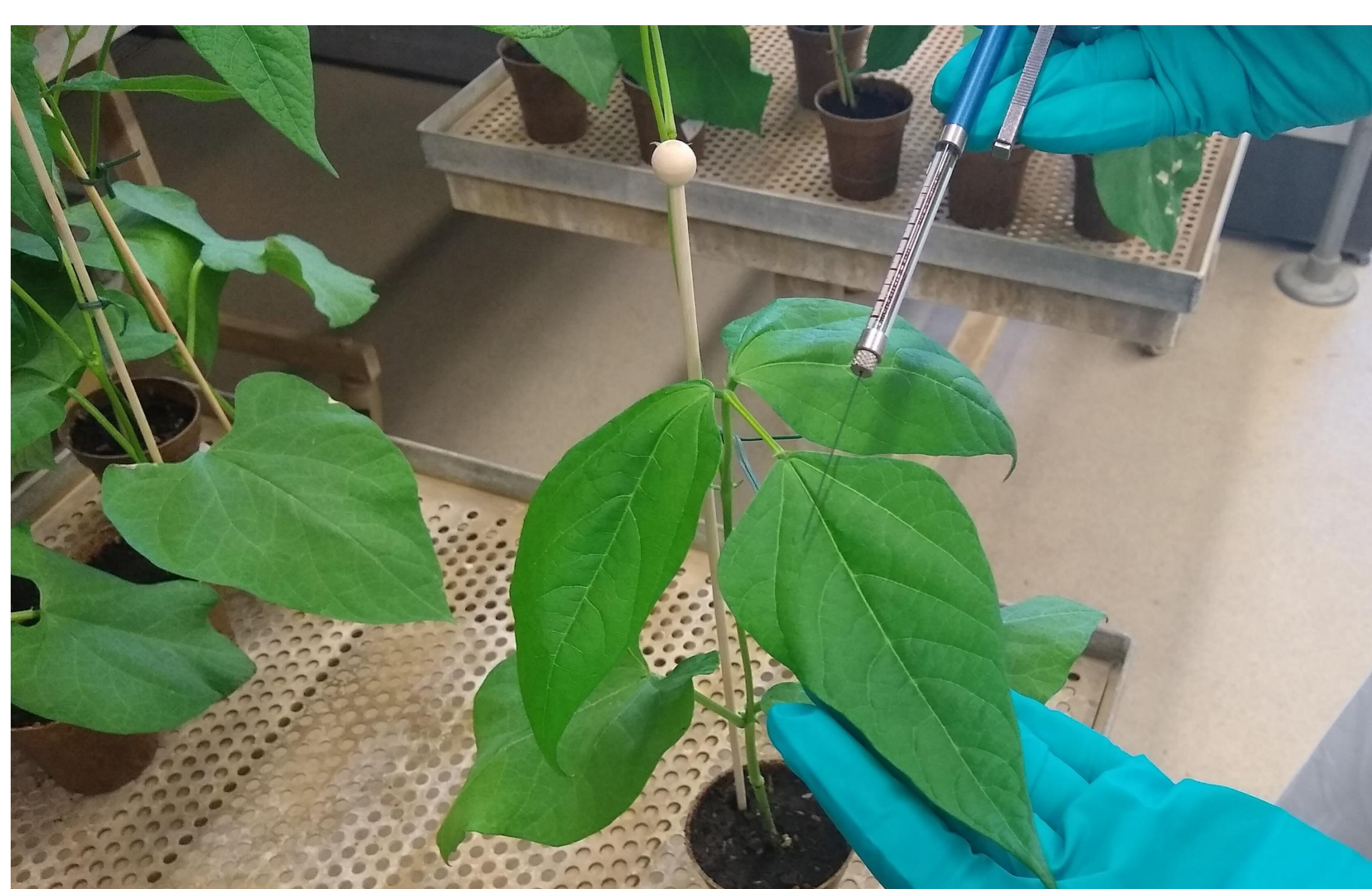
EC Formulation

EC +Adjuvant
EC+ co-formulants

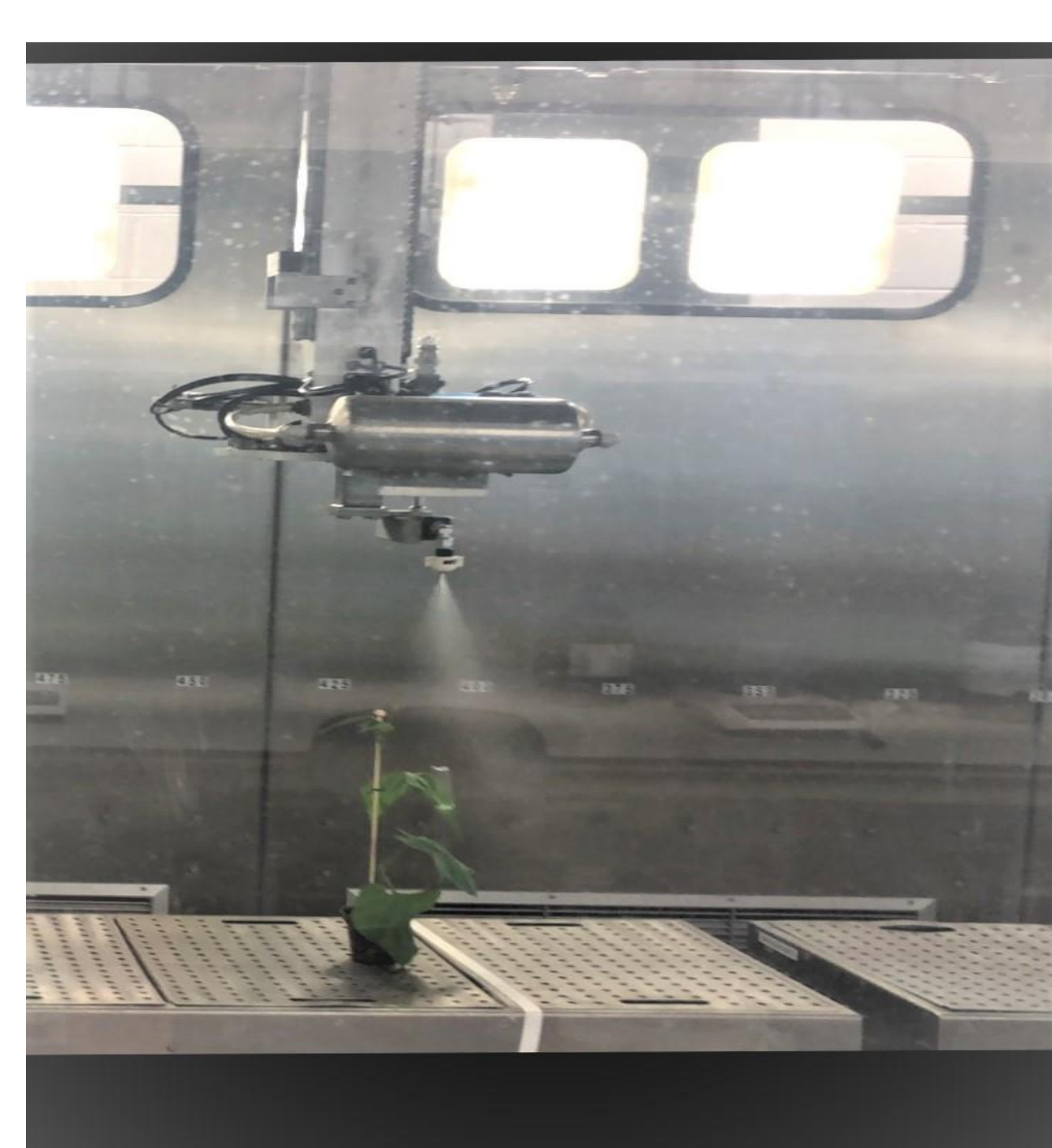
WP Formulation

WP +Adjuvant
WP+ co-formulants

Micro pipetting Application



Track sprayer Application



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outdoor scenarios



harvesting orchard fruit



pruning orchard fruit



thinning orchard fruit



harvesting grapes

indoor scenarios



harvesting ornamentals



harvesting fruiting veg

Factors that may affects DFR



Application rate



Rain fall



Formulation type & co-formulants



Temperature



Leaf texture and shapes