Are residues expected in honey after pesticides application?

Data on residue levels in aerial part of the crop are available?

HR < 0.05 mg/kg in aerial part of crop?

HR ≥ 0.05 mg/kg in aerial part of crop?

Veterinary medicinal use?

Active Substance

Default MRL set at LOQ or 0.05 mg/kg

Calculation based on HR from aerial parts of the crop

Specific MRL set

Field or tunnel trial

Specific MRL set

Transfer from syrup to honey

Compare MRL and residue definition in Reg (EU) No 37/2010, set MRL for Reg (EC) No 396/2005 approximately

Default MRL set at LOQ or 0.05 mg/kg

Direct Colony Feeding Studies

Used to estimate the transfer of residues from field to honey. Sucrose solution spiked. The concentration used to dose the feeding solution should ideally be based on residues found in the honey 'stomach' of bees foraging on treated crop (the highest application rate according to GAP should be used).

However, if no such residue data are available then the spiking should be done at the rate at which residues are expected to be found in the aerial parts of the plants.

At least 4 test tunnels and 1 control with a single colony placed into each tunnel is required as the minimum replication for such studies.

MRL values can then be calculated using the median transfer factor generated from these feeding studies.

If ecotoxicological semi-field or field studies are performed on bees, data on pollen and nectar from these studies might be useful depending on comparison of the applied GAPs.

Field or Semi Field Studies

Tunnel trials aim to determine the likely residues in honey based on the tested GAP, via direct foraging of bees on suitable mellifereous treated crop.

At least four trials are considered necessary.

Can be undertaken in one season, but must be separated spatially by at least 10km.

Based on the results in honey an MRL proposal could be made based on the OECD calculator.

HR = Highest Residue
MRL = Maximum Residue Levels
LOQ = Level of Quantification
GAP = Good Agricultural Practice

Speak to our experts about your Tunnel/Field Studies or Direct Colony Feeding Studies needs

www.fera.co.uk/bee-ecotoxicology
+44 (0)300 100 0321
sales@fera.co.uk