ANNEX B

Metconazole

B.8 Environmental fate and behaviour

Addendum September 2005

B.8.6.2 Predicted Environmental Concentrations in in ground water (PECgw) (Annex IIIA 9.21)

Addendum to BASF document MK-601-003: "Predicted environmental concentrations of BAS 555 F (metconazole) in soil, groundwater, surface water, and sediment following applications of CARAMBA (metconazole 60 g a.s./l SL) to cereals and oilseed rape in the EU" (Beigel C., 2004)

Method of calculation :

The simulations were performed with FOCUS_PELMO version 3.3.2 for all the relevant crop-location scenarios (northern EU an Southern EU), using the following pesticide input parameters, selected following FOCUS (2000) recommendations: molecular weight (M.W.) of 319.8 g mol^{-1}, Henry constant of 0.0 Pa m^3 mol^{-1} (assuming no volatilization), average K_{OC} and 1/n values of 1000.6 L kg^{-1} and 0.938, respectively (mixture of cis:trans isomers), and average laboratory half-life of 247 days (average of the first-order laboratory degradation DT_{50} values of metconazole from five soils, corrected separately to the FOCUS reference temperature and soil moisture conditions of 20ºC and pF2, which were significantly longer than the half-life values measured in the field).
The amount of metconazole reaching the soil after crop interception (soil load) was calculated by subtracting the amount of pesticide intercepted by the crop at the time of application from the application rate. Crop interception values of 25% for cereals (conservative estimate for the first possible visible signs of infection, growth stage BBCH 10-19, leaf development) and 40% for oilseed rape (conservative estimate for potential first signs of infection, growth stage BBCH 10-19, leaf development) were used.

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The simulations were performed with the maximum number of applications for each crop, at the highest application rate (two applications of 90 g a.s./ha, 14-day interval). The total soil load after crop interception was 67.5 g a.s./ha and 54 g a.s./ha per application for cereals and oilseed rape, respectively.

Findings :
B.8.6.2-1 The predicted 80th percentile concentrations of metconazole (in µg/L) in shallow groundwater (1m depth) following two applications (90 g a.s./ha, 14-day interval)

Location	Mid-season applications	Early-season applications
	Winter Cereals	**Winter Cereals**
Châteaudun	<0.001	<0.001
Hamburg	0.001	0.002
Jokionen	<0.001	<0.001
Kremsmünster	<0.001	<0.001
Okehampton	0.005	0.006
Piacenza	0.023	0.023
Porto	<0.001	<0.001
Sevilla	<0.001	<0.001
Thiva	<0.001	<0.001
	Spring Cereals	**Spring Cereals**
Châteaudun	<0.001	<0.001

Hamburg	<0.001	<0.001
Jokionen	<0.001	<0.001
Kremsmünster	<0.001	<0.001
Okehampton	<0.001	<0.001
Porto	<0.001	<0.001
	Winter Oilseed Rape	**Winter Oilseed Rape**
Châteaudun	<0.001	<0.001
Hamburg	0.002	0.002
Jokionen	0.001	0.001
Kremsmünster	0.007	0.008
Okehampton	0.014	0.016
Porto	<0.001	<0.001
	Summer Oilseed Rape	**Summer Oilseed Rape**
Jokionen	<0.001	<0.001
Okehampton	<0.001	<0.001
Porto	<0.001	<0.001

Conclusions :
The endpoints which have been used were chosen in accordance with the FOCUS guidance (Koc, laboratory DT_{50}, correction of DT_{50} to 20°C and pF2, GAP, worst case interception parameters, monoculture scenario)
All the estimated concentrations were well below the 0.1 µg/l EU trigger value.