Opinion of the Scientific Committee on Plants regarding the inclusion of Flurtamone in annex 1 to Directive 91/414/EEC concerning the placing of plant protection products on the market (SCP/FLURT/004-Final) - (Opinion expressed by the SCP on 18 December 1998)

TERMS OF REFERENCE

The draft Commission Directive proposing the inclusion of flurtamone in Annex 1 to Directive 91/414/EEC had been referred to the Scientific Committee on Plants for consultation with the following questions:

1. Do the soil metabolites of flurtamone, particularly 3-trifluoromethylbenzoic acid (TFMBA), represent a risk for contamination of groundwater?
2. Is the available data adequate to assess the effects on beneficial non-target arthropods?

BACKGROUND

The draft Commission Directive for the inclusion of flurtamone in Annex 1 to Directive 91/414/EEC concerning the placing of plant protection products on the market was submitted to the Committee for opinion. The Committee had been supplied with documentation comprising a dossier provided by Rhone-Poulenc Agrochimie, a monograph prepared by the French authorities, a review report prepared by the Commission services of the Directorate General for Agriculture and the Recommendations of the ECCO Peer Review Programme.

Flurtamone is a pre- and early post-emergence contact and residual bleaching herbicide, which is absorbed principally by the shoots of germinating seedlings and to a lesser extent by the developing roots. It is intended to be used to control young annual broad-leaves and some grasses in cereals, sunflower and protein pea crops. Its rate of application per season varies between 0.225 and 1.000 kg ai / ha.

OPINION OF THE COMMITTEE

Question 1

Do the soil metabolites of flurtamone, particularly 3-trifluoromethylbenzoic acid (TFMBA), represent a risk for contamination of groundwater?

In a metabolism study using a sandy loam soil the metabolite TFMBA was shown to form at a maximum concentration of 10.8% while in a field study a maximum of 11% was reported. It was stated that TFMBA "is a very transient metabolite" and concluded that additional information on TFMBA "could be confirmatory more than essential for inclusion of flurtamone in Annex 1" (1). However, it can be derived from the monograph (2) that TFMBA is not very transient with a half-life in a sandy loam soil at 22^{o}C of approximately 50 days. Moreover, average concentrations over a three-year period of 0.03 and 0.09 m g/l were reported (3) in a duplicate lysimeter study using a soil with a pH-water of approximately 6. It can be therefore concluded that part of the yearly average concentrations would probably

exceed 0.1 m g/l. The TFMBA molecule contains a carboxylic acid group and consequently its sorption potential probably decreases with increasing pH, which suggests that the lysimeter study does not represent a worse case situation. In the circumstances, the Committee recommends the inclusion of soils with pH values between 7 and 8 in the sorption studies with TFMBA that the notifier has already agreed to perform (1).

In a duplicate lysimeter study the soil metabolite trifluoroacetic acid (TFAA) was shown to leach at average concentrations over a three-year period of 1.4 and 3.1 m g/l and accordingly represents a risk for contamination of groundwater. On the basis of aquatic toxicity data it was stated (1) that "TFAA is of low concern for the risk of aquatic organisms". However, these data were not included in the documentation submitted to the Committee. Furthermore, reference was made to data (1) on TFAA phytotoxicity and human toxicology that was also not submitted to the Committee. Therefore the Committee is unable to assess whether TFAA represents an unacceptable risk for contamination of groundwater. However, the Committee is aware of human toxicological data available from other sources (4) suggesting possible risks to human health associated with exposure to TFAA. In conclusion, the metabolite TFAA represents a risk for contamination of ground water but in the absence of mammalian toxicology data, the Committee was unable to evaluate the health risk.

Question 2

Is the available data adequate to assess the acceptability of the effects on beneficial non-target arthropods?

Several arthropod species were exposed to the formulations BACARA and NICKEL at maximum field dose and the effects (both lethal and behavioural) of these treatments were evaluated. Overall, the data are adequate to allow an assessment of the acceptability of the effects on beneficial non-target arthropods.

It was suggested (1) that an extended laboratory study on the effects of the compound on the carabid beetle **Poecilus cupreus** may be necessary. Following comments from the applicant and the Rapporteur Member State, it was advised (1) that an extended test was not required in this instance. The Committee agrees with this finding. Although the combined effect quotient (E) for the beetle exposed to BACARA exceeded the EPPO trigger of 30% by 1%, it was felt that in this case an extended laboratory study is not necessary given: (i) the likely reduced initial exposure in extended trials (ii) the fact that neither mortality (7%) nor feeding inhibition (26%) separately exceeded the threshold and (iii) the marginal significance of the combined effect.

When the braconid parasitoid **Aphidius rhopalosiphi** was exposed to BACARA it resulted in a total of 26% mortality after 36 hrs and a reduction in parasitic activity of 61%, generating a combined effect quotient well above the EPPO trigger. Although the applicant argues that the lack of a statistically significant difference between treatment and control renders these results questionable (5), the Committee rejects this line of reasoning. Lack of statistical significance does not in itself provide evidence of "no difference" without an assessment of the power of the test to detect a difference if one occurred. In this instance, it is felt that an extended test (which involves confining the parasitoids over treated plants) would have improved the ability to objectively assess the consequences of short-term natural exposure to the compound and its metabolites. However, given the low toxicity of the compound to another hymenopteran

species (6), and the strong possibility of relatively low long-term exposure, the Committee is prepared to accept the existing laboratory data.

In general, the Committee feels that the tests cover a satisfactory range of arthropod groups, and that the species chosen were appropriate given the intended use of the formulations.

ACKNOWLEDGEMENTS

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Environmental: Professor A Hardy (Chairperson), and Committee Members Dr H.G. Nolting and Professor A. Silva Fernandes and invited experts Professor V. Forbes and Drs J. Boesten, A. Carter and T. Sherratt and Mr H. Koepp.

REFERENCES

1. Recommendations and conclusions of the ECCO Peer Review Programmme (Document 7606/VI/97-Rev 4 including addendum 1)
2. Flurtamone monograph prepared by the Ministere de l'Agriculture, de la Peche et de l'Alimentation, Direction Generale de l'Alimentation, 1997, Volume 3, Annex B: 158.
3. Flurtamone monograph, Volume 3, Annex B: 171-173
4. Danish Environmental Protection Agency, 1988. Health and Environmental Concerns in Connection with Trifluoroacetic Acid. Report No. 43210-01
5. Flurtamone monograph, Volume 3, Annex B: 228
6. Flurtamone monograph, Volume 3, Annex B: 221