

direct action by captan or the thiocarbonyl chloride moiety released after metabolism to THPI. The presence of captan in the urine indicated that a certain amount of captan is available systemically.

In view of these considerations, the Meeting reconfirmed the ARfD of 0.3 mg/kg bw based on a NOAEL of 30 mg/kg bw per day for increased incidences of intrauterine deaths and malformations at 100 mg/kg bw per day in the study in rabbits and using a safety factor of 100. This ARfD applies to women of childbearing age. The Meeting concluded that it was unnecessary to establish an ARfD for the rest of the general population.

An addendum to the toxicological monograph was not prepared.

Estimate of acute reference dose

0.3 mg/kg bw for women of childbearing age

Unnecessary for the rest of the general population

Information that would be useful for the continued evaluation of the compound

Results from epidemiological, occupational health and other such observational studies of human exposures.

5.5 CARBARYL (008)

RESIDUE AND ANALYTICAL ASPECTS

The carbaryl was last evaluated for residues by the 2002 JMPR. Residue data on cranberries and chilli peppers were evaluated by the current Meeting for estimation of maximum residue levels.

Carbaryl is approved for the control of a range of insect pests in cranberries such as Cranberry fireworm, Cranberry fruitworm and Cranberry twig girdler as well various larvae and bugs in chilli peppers.

Results of supervised trials on crops

Supervised trials were carried out following the maximum registered dosage rate in cranberries in the USA and in chilli peppers in Thailand. The residues were determined with HPLC after post-column derivatisation in all trials. The limit of quantification was 0.02 mg/kg. The recoveries ranged between 81% and 110%.

Cranberries

The US GAP permits a maximum of 5 applications at 7 day intervals with a dosage rate of 1.68–2.24 kg ai/ha. Three replicate samples were taken from each plot. The highest residues derived from maximum application rates 7 days (PHI) after the last application was: 0.52, 0.94, 1.85, 2.95 mg/kg.

Taking into account that cranberry is a minor crop, the Meeting considered that four trials performed at maximum GAP were sufficient, and estimated a maximum residue level of 5 mg/kg, an STMR of 1.40 mg/kg and an HR of 2.95 mg/kg.

Chilli peppers

Residues in mature chilli peppers treated according to maximum GAP (0.425–0.6375 kg ai/ha at 7–10 day intervals with a PHI of 14 days) were: 0.05, 0.5, 0.09, 0.09, 0.10, 0.25 mg/kg.

The Meeting estimated a maximum residue level of 0.5 mg/kg, an STMR of 0.09 mg/kg and an HR of 0.25 mg/kg for fresh chilli peppers.

Based on the concentration factor of 7 (for explanation and rationale see report section on Chilli peppers), the Meeting estimated an STMR of 0.63 (7×0.09) mg/kg and a maximum residue level of 2 ($7 \times 0.25=1.75$) mg/kg to replace its previous recommendation of 50 mg/kg for dried chilli pepper, which was based on an MRL of 5 for sweet peppers, and the default concentration factor of 10.

DIETARY RISK ASSESSMENT

Long-term intake

Using the consumption figures for chilli peppers and the STMR value of 0.63 for dried chilli peppers, the long term intake from use of carbaryl on chilli peppers and cranberries amounts to 0–2% of the ADI (0–0.008 mg/kg bw) in the 13 regional diets.

The Meeting concluded that the long-term intake of residues derived from carbaryl use on cranberries and chilli peppers that have been considered by the present JMPR will not, in practical terms, change the total intake of residues from other uses considered by the 2002 JMPR.

Short-term intake

The rounded cranberry short term intake is 0% of the ARfD (0.2 mg/kg bw) for both children and for adults. The short term intake derived from the consumption of dried chilli pepper is 0% for adults and 1% for children.

The Meeting concluded that the short-term intake estimate derived from residues of carbaryl use on cranberries and chilli peppers that has been considered by the JMPR is unlikely to present a public health problem.

5.6 CLOFENTEZINE (156)

RESIDUE AND ANALYTICAL ASPECTS

Clofentezine, an acaricide first evaluated by the JMPR in 1986 and re-evaluated for residues several times up to 1992. A toxicological review was conducted in 2005, when an ADI of 0–0.02 mg/kg bw was established. The 2005 JMPR concluded that an ARfD was not necessary. At the 37th session of the CCPR, clofentezine was scheduled for Periodic Re-evaluation of residues by the 2007 JMPR.

The manufacturer supplied information on identity; metabolism and environmental fate; residue analysis; use patterns; residues resulting from supervised trials on citrus, pome fruits, stone fruits, grapes, strawberries, currants, melons, tree nuts, tomatoes and cucumbers; and the fate of residues on apple, peach, almond and animal tissues during storage and orange, apple, grape and strawberries in processing. GAP information and enforcement methods were supplied by the manufacturer and the governments of the Netherlands and Australia.

Animal metabolism

The Meeting received animal metabolism studies with clofentezine in lactating cows, goats and laying hens. Clofentezine [¹⁴C] labelled in the tetrazine ring was used in the animal metabolism studies.

The metabolism of clofentezine in rat, mouse, rabbit, calf and cow, dog, baboon and hen was qualitatively similar (details on laboratory animal metabolism are given in the toxicology report), with