

5.35 TEBUCONAZOLE (189)

RESIDUE AND ANALYTICAL ASPECTS

Tebuconazole, a triazole fungicide, was first evaluated by the JMPR in 1994 (T, R), and last evaluated for toxicology in 2010 and for residues in 2011 within the periodic review programme. The residue definition for compliance with MRLs and for dietary risk assessment for plant and animal commodities is tebuconazole. The ADI for tebuconazole is 0–0.03 mg/kg bw and the ARfD is 0.3 mg/kg bw. It was scheduled by the 48th Session of CCPR (2016) for evaluation by the 2017 JMPR for additional uses.

The Meeting received information on supervised residue trials on beans with pod.

Method of analysis and stability of residues

A QuEChERS method with LC-MS/MS was satisfactorily validated for the analysis of tebuconazole in beans with pod at a LOQ of 0.01 mg/kg. The periods of demonstrated stability cover the frozen storage intervals used in the residue studies

Residues resulting from supervised trials on crops

Legume vegetable

Subgroup of Beans with pods

The GAP of tebuconazole for beans in Kenya allows 3 foliar applications at a rate of 200 g ai/ha with intervals of 7-21 days and a PHI of 7 days. In trials conducted in Senegal and Kenya matching the Kenyan GAP, residues in beans with pods were (n=8): 0.13, 0.17, 0.20, 0.24, 0.39, 0.45, 0.49 and 1.9 mg/kg. The Meeting estimated a maximum residue level of 3 mg/kg, a STMR of 0.315 mg/kg and a HR of 1.9 mg/kg for tebuconazole in beans with pods, and replaced its previous MRL recommendation of 2 mg/kg for common beans (pods and/or immature seeds).

DIETARY RISK ASSESSMENT

Long-term dietary exposure

The International Estimated Daily Intakes (IEDI) for tebuconazole was calculated from the STMRs estimated by this and previous Meetings for raw and processed commodities in combination with consumption data for corresponding food commodities.

The IEDI of the 17 GEMS/ Food cluster diets, based on the estimated STMRs represented 2–9% of the maximum ADI of 0.03 mg/kg bw. The Meeting concluded that the long-term dietary exposure to residues of tebuconazole from uses considered by the Meeting is unlikely to present a public health concern.

Short-term dietary exposure

The International Estimated Short term Intake (IESTI) for tebuconazole was calculated for uses where maximum residue levels were estimated and for which consumption data were available. The results are shown in Annex 4 to the 2017 Report.

The IESTI represented a maximum of 5% and 9% of the ARfD (0.3 mg/kg bw) for the general population and for children, respectively. The Meeting concluded that the short-term dietary exposure to tebuconazole residues from uses considered by the current Meeting is unlikely to present a public health concern.

