

TABLE 2.—SUMMARY OF TOXICOLOGICAL DOSE AND ENDPOINTS FOR CHLORFENAPYR FOR USE IN HUMAN RISK ASSESSMENT.—Continued

Exposure Scenario	Dose Used in Risk Assessment, UF	Special FQPA SF* and LOC for Risk Assessment	Study and Toxicological Effects
Acute Dietary (General population including infants and children)	NOAEL = 45 mg/kg UF = 1,000 aRfD = 0.045 mg/kg	Special FQPA SF = 1X aPAD = aRfD ÷ FQPA SF = 0.045 mg/kg	Acute neurotoxicity study - rat LOAEL = 90 mg/kg/day based on lethargy in male rats
Chronic Dietary (All populations)	NOAEL = 2.6 mg/kg/day UF = 1,000 cRfD = 0.003 mg/kg/day	Special FQPA SF = 1X cPAD = cRfD ÷ FQPA SF = 0.003 mg/kg/day	Chronic neurotoxicity study - rat LOAEL = 13.6/18 mg/kg/day, M/F, based on the presence of myelinopathic alterations in the CNS in male rats and decreased average body weights, body weight gains, food efficiency, absolute food consumption (F), and water consumption (M) Supporting this endpoint are similar CNS lesions and skin lesions observed in the mouse carcinogenicity study (NOAEL = 2.8)

*The reference to the special FQPA SF refers to any additional SF retained due to concerns unique to the FQPA.

C. Exposure Assessment

1. *Dietary exposure from food and feed uses.* Risk assessments were conducted by EPA to assess dietary exposures from chlorfenapyr in food as follows:

i. *Acute exposure.* Acute dietary risk assessments are performed for a food-use pesticide if a toxicological study has indicated the possibility of an effect of concern occurring as a result of a 1-day or single exposure. The Dietary Exposure Evaluation Model (DEEM®) analysis evaluated the individual food consumption as reported by respondents in the USDA 1994–1996 and 1998 nationwide Continuing Surveys of Food Intake by Individuals (CSFII) and accumulated exposure to the chemical for each commodity. The following assumptions were made for the acute exposure assessments: Tolerance-level residues (not anticipated residues); 100% crop treated for all registered and proposed commodities; and default DEEM® Version 7.76 processing factors for all commodities. EPA selected separate acute dietary endpoints for females 13–50 years old and the general U.S. population (including infants and children). Therefore, two separate acute dietary exposure assessments were performed for females 13–49 years old and for the general U.S. population and various population subgroups. These assessments conclude that the acute dietary exposure estimates are below EPA's LOC (<100% aPAD) at the 95th exposure percentile for females 13–49 years old (15% aPAD), and the general U.S. population (6% of the aPAD) and all other population subgroups. The most highly exposed population

subgroup (other than females 13–49 years old) is children 1–2 years old, at 12% of the aPAD.

ii. *Chronic exposure.* In conducting this chronic dietary risk assessment the DEEM® analysis evaluated the individual food consumption as reported by respondents in the USDA 1994–1996, and 1998 nationwide CSFII and accumulated exposure to the chemical for each commodity. The following assumptions were made for the chronic exposure assessments: Tolerance-level residues (not anticipated residues); 100% crop treated for all registered and proposed commodities; and default DEEM® Version 7.76 processing factors for all commodities. An assessment of the general U.S. population and various population subgroups was conducted. This assessment concludes that the chronic dietary exposure estimates are below EPA's LOC (<100% cPAD) for the general U.S. population (24% of the cPAD) and all population subgroups. The most highly exposed population subgroup is children 1–2 years old, at 47% of the cPAD.

2. *Dietary exposure from drinking water.* The registered uses of chlorfenapyr include: Termiticide use, crack and crevice use, and use on ornamental plants grown in greenhouses. The proposed use is for vegetable crops grown in greenhouses. When used according to label directions, these uses are not expected to result in contamination of drinking water.

3. *From non-dietary exposure.* The term “residential exposure” is used in this document to refer to non-occupational, non-dietary exposure

(e.g., for lawn and garden pest control, indoor pest control, termiticides, and flea and tick control on pets).

Chlorfenapyr is registered for residential crack and crevice use and in-ground termite use. EPA has addressed the issues of possible residential exposures to chlorfenapyr when used according to label directions, either as a termiticide or as a crack and crevice treatment. EPA concluded that there is essentially no incidental-oral or dermal exposures. Further, the low vapor pressure of chlorfenapyr makes inhalation exposure negligible.

4. *Cumulative effects from substances with a common mechanism of toxicity.* Section 408(b)(2)(D)(v) of the FFDCA requires that, when considering whether to establish, modify, or revoke a tolerance, the Agency consider “available information” concerning the cumulative effects of a particular pesticide's residues and “other substances that have a common mechanism of toxicity.”

EPA does not have, at this time, available data to determine whether chlorfenapyr has a common mechanism of toxicity with other substances. Unlike other pesticides for which EPA has followed a cumulative risk approach based on a common mechanism of toxicity, EPA has not made a common mechanism of toxicity finding as to chlorfenapyr and any other substances and chlorfenapyr does not appear to produce a toxic metabolite produced by other substances. For the purposes of this tolerance action, therefore, EPA has not assumed that chlorfenapyr has a common mechanism of toxicity with other substances. For information regarding EPA's efforts to determine