This is provisional English translation of an excerpt from the original full report.

Risk Assessment Report

Isouron

(Pesticides)

Food Safety Commission of Japan (FSCJ)
February 2016

ABSTRACT

FSCJ conducted a risk assessment of isouron (CAS No.55861-78-4), a urea herbicide based on results from various studies.

The data used in the assessment include the fate in animals (rats), fate in plants (wheat and kidney beans), residues in crops, subacute toxicity (rats, mice and dogs), subacute neurotoxicity (rats), chronic toxicity (dogs and monkeys), combined chronic toxicity/carcinogenicity (rats and mice), two-generation reproductive toxicity (rats), developmental toxicity (rats and rabbits), and genotoxicity.

Major adverse effects of isouron include cytoplasmic vacuolation in various organs and tissues including the tissues of the nervous system, retinal degeneration and anemia. No carcinogenicity or genotoxicity relevant to human health was observed.

The mean number of implantations was decresed in the rat two-generation reproduction study by the treatment.

Developmental toxicity tests in rats showed that isouron induced microphthalmia in the fetuses at the dose with maternal toxicity. No developmental toxicity was observed in rabbits.

Based on the results of fates in animals and plant, and residues in crops, isouron (parent compound only) was identified as the relevant substance for the residue definition for dietary risk assessment in agricultural products.

The lowest no-observed-adverse-effect level (NOAEL) in all studies was 1.74 mg/kg bw/day in a two-year combined chronic toxicity/carcinogenicity study in rats. FSCJ specified an acceptable daily intake (ADI) of 0.017 mg/kg bw/day based on depression of hyperplasias of bile ducts and stroma at 8.77 mg/kg bw/day, applying a safety factor of 100 to the NOAEL.

The lowest NOAEL for potential adverse effects of a single oral administration of isouron was 20 mg/kg bw/day based on body weight loss, tachycardia (dogs) and vomiting (monkeys) and at 50 mg/kg bw/day in

one-year chronic toxicity studies in rats and monkeys. FSCJ concluded an acute reference dose (ARfD) of 0.2 mg/kg bw/day, applying a safety factor of 100 to the NOAEL.