

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

## **Risk Assessment Report**

### **Deltamethrin**

(Pesticides)

Food Safety Commission of Japan (FSCJ)

January 2015

#### **ABSTRACT**

FSCJ conducted a risk assessment of deltamethrin (CAS No.52918-63-5), a pyrethroid herbicide, based on results from various studies.

The data used in the assessment include fate in animals (rats, mice, cattle, horses, chickens and salmons), fate in plants (cotton and apples), residues in crops, subacute toxicity (rats, mice and dogs), subacute neurotoxicity (rats), chronic toxicity (dogs), combined chronic toxicity/carcinogenicity (rats), carcinogenicity (mice), three-generation reproductive toxicity (rats), two-generation reproductive toxicity (rats), developmental toxicity (rats, mice and rabbits), developmental neurotoxicity (rats) and genotoxicity.

Major adverse effects of deltamethrin observed are decreased body weight gain and effects on the nervous system such as convulsion. Deltamethrin showed no carcinogenicity, reproductive toxicity, teratogenicity, developmental neurotoxicity and genotoxicity relevant to human health.

Based on the above results, deltamethrin (total amount of the isomers) was identified as the residue definition for dietary risk assessment in agricultural products and livestock products.

The lowest no-observed-adverse-effect level (NOAEL) obtained in all tests was 1 mg/kg bw/day in a 2-year combined chronic toxicity/carcinogenicity study in rats, and in one- and two-year chronic toxicity studies in dogs. FSCJ specified an acceptable daily intake (ADI) of 0.01 mg/kg bw/day by applying a safety factor of 100 to the NOAEL.

The lowest NOAEL for potential adverse effects of a single oral administration of deltamethrin was 1 mg/kg bw/day in a subacute toxicity study in dogs. FSCJ specified an acute reference dose (ARfD) as 0.01 mg/kg/bw applying a safety factor of 100 to the NOAEL.