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

Risk Assessment Report

Picoxystrobin

(Pesticides)

Food Safety Commission of Japan (FSCJ)
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ABSTRACT

FSCJ conducted a risk assessment of picoxystrobin (CAS No. 117428-22-5), a strobilurin fungicide, based on results from various studies.

The studies include the fate in animals (rats), fate in plants (wheat and tomatoes), residues in crops, subacute toxicity (rats and dogs), subacute neurotoxicity (rats), chronic toxicity (dogs), combined chronic toxicity/carcinogenicity (rats), carcinogenicity (mice), two-generation reproductive toxicity (rats), reproductive toxicity (rats and rabbits), developmental toxicity (rats and mice), immunotoxicity (rats and mice) and genotoxicity.

Major adverse effects of picoxystrobin observed are decreased body weight gain, hepatocellular hypertrophy in mice, as well as mucosal hyperplasia and dilated mucosal gland of the duodenum in mice. No neurotoxicity, reproductive toxicity, teratogenicity, immunotoxicity or genotoxicity relevant to human health were observed.

Although increased incidences of interstitial cell adenomas were observed in a two-year chronic toxicity/carcinogenicity study in rats, genotoxic mechanism was unlikely to be involved in the tumor induction, and therefore, FSCJ concluded that it is possible to establish a threshold dose in the assessment.

Based on the above results, only picoxystrobin (parent compound) was identified as the residue definition for dietary risk assessment in agricultural products.

The lowest no-observed-adverse-effect level (NOAEL) obtained was 4.6 mg/kg bw/day in a one-year chronic toxicity study in dogs. Applying a safety factor of 100 to the NOAEL, FSCJ specified an acceptable daily intake (ADI) of 0.046 mg/kg bw/day.

The lowest value of a NOAEL or lowest observed adverse effect level (LOAEL) for potential adverse effects of a single oral administration of picoxystrobin was 25 mg/kg bw/day obtained in a developmental toxicity study in rabbits. However, considering that a NOAEL was not obtained in an acute neurotoxicity study in rats at the lowest administered dose of 200 mg/kg bw, the NOAEL was 30 mg/kg bw/day in a developmental toxicity study in rats, and the severity of toxic effects observed in various studies was judged comprehensively, FSCJ specified an acute reference dose (ARfD) of 0.2 mg/kg bw based on LOAEL of 200 mg/kg bw obtained from an acute neurotoxicity study in rats and applying a safety factor of 1,000 (10 for species difference, 10 for individual difference, and 10 for the adopted LOAEL value).