

5.18 IMAZAPIC (266)

RESIDUE AND ANALYTICAL ASPECTS

Imazapic is an imidazolinone herbicide for the control of grasses and broadleaf weeds. It was reviewed for the first time by JMPR in 2013 when the residue definition was established for plant and animal commodities to be imazapic for compliance with the MRL and for estimation of dietary intake (The residue is not fat soluble). The Meeting established an ADI of 0–0.7 mg/kg bw and that no ARfD was necessary.

The 2013 JMPR received and considered the plant metabolism study and supervised residue trials on transgenic soya beans; analytical methods, storage stability studies and processing studies on soya beans.

Imazapic was included in the priority list by the CCPR at its Forty-sixth Session in 2014 for evaluation for additional MRLs by this Meeting. The current Meeting received information on the registration of imazapic for application on soya bean cultivars tolerant to imidazolinone herbicides in Brazil. The information on supervised residue trials on imidazolinone-tolerant soya beans provided to the 2013 JMPR is reviewed by the current Meeting against the new GAP in Brazil.

Results of supervised residue trials on crops

The 2013 Meeting received supervised trial data for imazapic on transgenic soya beans. The current Meeting evaluated the data against the new GAP for soya bean cultivars tolerant to imidazolinone herbicides.

Soya bean (dry)

A total of 16 supervised trials were conducted on imidazolinone-tolerant soya beans (transgenic) in different years in Brazil.

The new GAP in Brazil allows a single application of a WG formulation of imazapic (also containing imazapyr) to imidazolinone-tolerant cultivars at the rate of 0.014–0.0175 kg ai/ha (in acid equivalents; for both ground and aerial application) with a PHI of 60 days. For ground applications, the water volume should be 100–200 L/ha and for the aerial application, 40–50 L/ha. The trials employed an application rate of 0.0175 kg ai/ha and the application volume of 200 L/ha.

In one trial in the 2007/2008 growing season, the samples were stored for about 600 days; imazapic was demonstrated to be stable for up to 10 months, the longest storage period tested for imazapic in soya bean. The result of this trial was < 0.01 mg/kg.

Residues arising from the independent supervised residue trials following the critical GAP in Brazil were, in rank order (n=12): < 0.01, < 0.01, < 0.05, < 0.05, 0.05, 0.07, 0.07, 0.10, 0.12, 0.15, 0.23 and 0.25 mg/kg.

The Meeting estimated a maximum residue level of 0.5 mg/kg and an STMR of 0.07 mg/kg.

Fate of residues during processing

Processing

The 2013 Meeting received information on processing of soya beans. The processing factor for imazapic in soya bean processed products is described below.

Processed commodity	N	Processing factor	Best estimate	STMR-P mg/kg
Soya bean				0.07 (STMR)
Oil	2	0.13, 0.14	0.14	0.01