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## Toxicological overview of a novel strobilurin fungicide, orysastrobin

Bennard van Ravenzwaay<sup>1)</sup>, Masako Akiyama<sup>2)</sup>, Robert Landsiedel<sup>1)</sup>, Heinz Kieczka<sup>1)</sup>, Georgina Cunha<sup>1)</sup>, Steffen Schneider<sup>1)</sup>, Uwe Kaspers<sup>1)</sup>, Wolfgang Kaufmann<sup>1)</sup> and Masaki Osawa<sup>1)</sup>

1) Department of Experimental Toxicology and Ecology, BASF AG

2) Regulatory Toxicology Department, Development & Registration Division, BASF Agro Japan Ltd.

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### Abstract:

Orysastrobin is effective against major fungal diseases of rice plants. Acute toxicity is moderate and no skin or eye irritation or skin sensitisation occurred. Secondary, adaptive and reversible, changes in the duodenal mucosa (increased proliferation of the epithelium to increase iron absorption) and thyroid (increased proliferation of follicular cells to increase thyroid hormone synthesis) resulted in increased tumor incidence in the duodenum of rats and mice, and in the thyroid of male rats. In view of a reversible mechanism of action with a clear threshold dose and the absence of mutagenic potential *in vivo*, and the well-established excessive sensitivity of rats to TSH elevation, orysastrobin is not considered to present a carcinogenic risk to humans. The compound was not selectively toxic to reproduction. The ADI should be derived from a chronic rat study with a NOAEL of 100 ppm.

### Keywords:

orysastrobin, strobilurin, fungicide, duodenal mucosa, thyroid, ADI

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