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## **Risk Assessment of the Fungicide Bontima with the Active Substances Cyprodinil and Isopyrazam**

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### **Authors' contributions**

*This work was carried out in collaboration among all authors. The opinion has been assessed and approved by the Panel on Plant Protection Products of VKM. All authors read and approved the final manuscript.*

### **Article Information**

DOI: 10.9734/EJNFS/2022/v14i430490

**Grey Literature**

**Received 10 March 2022**

**Accepted 15 May 2022**

**Published 03 June 2022**

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### **ABSTRACT**

Bontima is a new fungicide containing the two active substances isopyrazam and cyprodinil. Bontima is a fungicide against the most important diseases in winter and spring barley. Isopyrazam is a new active ingredient with new mechanisms of action that may delay the development of fungicide resistance in treated crops.

The risk assessment was finalized at a meeting May 29, 2012, by the Panel on plant protection products of the Norwegian Scientific Committee for Food Safety (VKM).

The Norwegian Food Safety Authority would like, in this regard, an assessment of the following:

- The fate and behaviour in the environment and the ecotoxicological effects and risks with regard to the properties of Bontima and the active substances. The Panel is particularly asked to look at the following:
  - o The persistence of isopyrazam and its metabolites.
  - o The leaching potential of isopyrazam and its metabolites.

**VKM's conclusion is as follows:**

**Fate-related issues**

Isopyrazam is likely to be persistent in Norwegian soils with an associated risk of accumulation after repeated use.

Isopyrazam exhibits low mobility in soil and is not expected to reach groundwater, however the two main metabolites are likely to exceed the EUs drinking water limit of 0.1 µg/L in groundwater.

Since drainage and runoff, as well as drift, contributes to concentrations in surface water the risk assessment have to consider all these sources. In the EU DAR step 4 calculations, buffer zones of 20 m have been used to reduce runoff levels contributions by 80 %. VKM does not accept the use of these buffer zone modifications for Norwegian topographic conditions (with e.g. steeper agricultural areas).

**Risk to the environment**

There is minimal risk for toxic effects of isopyrazam to terrestrial organisms.

For the aquatic compartment, there is a high risk for toxic effects of isopyrazam to aquatic organisms with the proposed application regime. This is based on calculations of runoff without buffer zone modifications, from which the resulting TER calculations show high risk of acute effects on fish and a medium risk of acute effects on invertebrates. A minimal risk for toxic effects was calculated for sediment dwelling organisms, aquatic plants, and algae.

*Keywords: VKM; assessment; Norwegian Scientific Committee for Food Safety; Bontima.*

Available: <https://vkm.no/download/18.175083d415c86c573b5d766c/1500738535203/c4d0a4e6f1.pdf>

**ISBN:** 978-82-8259-061-7

**NOTE:**

This work was carried out in collaboration between all authors. The opinion has been assessed and approved by the Panel on Plant Protection Products of VKM. All authors read and approved the final manuscript.

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**Suggested citation:** VKM (2012) Risk assessment of the fungicide Bontima with the active substances cyprodinil and isopyrazam. Opinion of the Panel on Plant Protection Products of the Norwegian Scientific Committee for Food Safety, ISBN: 978-82-8259-061-71, Oslo, Norway.

## **COMPETING INTERESTS**

Authors have declared that no competing interests exist.

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