

What it does

Boron (B) deficiency affects cell wall biosynthesis and the structure and plasma membrane integrity.

It leads to reduction in plant height, death of growing points, and white discoloration and rolling of leaf tips. When the plant is infected at panicle initiation stage, Boron deficiency can cause plants to not produce panicles.

Why and where it occurs

Boron deficiency is relatively rare especially in irrigated rice systems. It is not very common in rice, but can occur in the following soils:

- Highly weathered, acid red soils and sandy rice soils
- Acid soils derived from igneous rocks
- Soils formed from marine sediments
- High organic matter status soils
- In context of Odisha, upland soils show B deficiency

How to identify

- Check the leaves for symptoms. Symptoms usually appear first on young leaves. Tips of emerging leaves are white and rolled (similar to Calcium (Ca) deficiency).
- In severe conditions, growing points can die, but new tillers continue to emerge.
- Plants also have reduced height.
- When the plant is infected at panicle initiation stage. Boron deficiency can cause plants to not produce panicles.

To confirm B deficiency, bring soil and plant sample to a laboratory for testing.

How to manage

The following general measures are recommended to prevent B deficiency:

- To manage B deficiency, avoid leaching and loss of water from the field.
- B deficiency in Odisha is an emerging issue that requires B application in soluble form for rapid treatment (0.5kg B/ha). Broadcast and incorporate it before planting (Avoid mixing it with ammonium fertilizers)



Tips of emerging leaves are white and rolled

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