



Toxic Wheat | Maharashtra | 13 Mar 2025

Why in News?

A study by [Padma Shri Dr. Himmatrao Bawaskar](#) links the unexplained **hair loss** in Maharashtra's Buldhana district to **toxic elements in wheat consumption**.

Key Points

- **Contaminated Wheat:**
 - A month-long study found that [Public Distribution System \(PDS\)](#) wheat contained dangerously [high selenium levels](#) and significantly [low zinc content](#).
 - Lab tests detected selenium levels of 14.52 mg/kg, far exceeding the normal 1.9 mg/kg.
 - The wheat consignments **originated from Punjab**.
- **Rapid Onset of Alopecia:**
 - Villagers developed **total baldness** within 3-4 days of symptom onset.
 - Around 300 individuals across 18 villages, including college students and young girls, suffered severe hair loss between December 2024 and January 2025.
- **Excess Selenium and Zinc Deficiency:**
 - Tests on affected individuals showed:
 - 35-fold increase in blood selenium levels
 - 60-fold increase in urine selenium levels
 - 150-fold increase in hair selenium levels
 - The study suggests excess selenium intake directly caused the outbreak, while low zinc levels worsened the condition.
- **Social Impact:**
 - The condition has affected people aged 8 to 72 years, leading to **social stigma, disrupted education, and postponed marriages**.
 - Many children have stopped attending school and college due to the **psychological impact**.
- **Further Investigations:**
 - Scientists from the [Indian Council of Medical Research \(ICMR\)](#) collected water and soil samples and submitted its report to the central government.
 - Dr. Bawaskar has not yet submitted his study report to the administration.

Indian Council of Medical Research (ICMR)

- It is the **apex body in India for the formulation, coordination and promotion of biomedical research**.
- Its mandate is to conduct, coordinate and implement medical research for the benefit of the Society; translating medical innovations into products/processes and introducing them into the public health system.
- It is **funded by** the Government of India through the Department of Health Research, **Ministry of Health & Family Welfare**.

Selenium

- Selenium is an essential mineral, and is crucial for various bodily functions, including **metabolism**,

thyroid function, and immune health.

- Rich food sources include **Brazil nuts, seafood, meat, poultry, and organ meats.**
- Selenium Toxicity symptoms are **nausea, vomiting, nail and hair discoloration, brittleness, and loss, fatigue, irritability, and foul breath odor.**

Zinc

- It is an essential trace mineral that plays a vital role in many bodily functions, including **immune system function, wound healing, and DNA synthesis.**
- Zinc deficiency can lead to **various health problems**, including hair loss, impaired immune function, and delayed wound healing, and can be caused by inadequate intake, malabsorption, or increased needs.

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