



## Arsenic Accumulation in Paddy Plants

- A recent publication by the Jadavpur University, has revealed rise in arsenic contamination of paddy plants from ground water in West Bengal.
- It also highlighted that the concentration of 'arsenic accumulation' depended on the variety of paddy and its stage in the crop cycle.
- The study shows that arsenic uptake in the paddy plant reduces from root to grain, and that its concentration is related to the variety of the rice cultivated as well.
- The study have also raised concerns over the disposal of the contaminated rice straw which is used as animal fodder or burnt or sometimes left in the field itself to serve as fertiliser.
- In India, West Bengal, Jharkhand, Bihar, Uttar Pradesh in the flood plains of the Ganga; Assam and Manipur in the flood plains of the Brahmaputra and Imphal rivers and Rajnandgaon village in Chhattisgarh state have been reported to be affected by arsenic contamination in groundwater.

### Arsenic

- Arsenic (As) is an odourless and tasteless metalloid widely distributed in the earth's crust.
- Arsenic can get into the human body through drinking water as well as eating food that has been contaminated with arsenic.
- Arsenicosis is the medical word for arsenic poisoning, which occurs due to accumulation of large amounts of arsenic in the body.
- Arsenicosis leads to adverse health effects through inhibition of essential enzymes, which ultimately leads to death from multi-system organ failure.
- Long-term exposure to arsenic from drinking-water and food can cause cancer and skin lesions. It has also been associated with cardiovascular disease and diabetes. In utero and early childhood exposure has been linked to negative impacts on cognitive development and increased deaths in young adults.
- Arsenic is one of WHO's 10 chemicals of major public health concern. WHO recommended current limit of arsenic in drinking-water is 10 µg/L.