Context:

Food safety authority finds most adulteration in Telangana followed by Madhya Pradesh and Kerala.

Facts:

1. India has the highest cattle population in the world.
2. India is the largest milk producer in the world. India produces 176 million tonnes of milk during 2017-18.

What is Solid non-fat (SNF)?

Milk is approximately 87 percent water and 13 percent solids. As it comes from the cow, the solids portion of milk contains approximately 3.7 percent fat and 9 percent solids-not-fat.

The serum solids or milk solids-not-fat (MSNF) contain the lactose, caseins, whey proteins, and minerals.

Problem:

1. Proper feeding of cattle ensures more fat and SNF.
2. But maltodextrin and sugar are added to raise the level of fat and SNF artificially.
3. FSSAI has found out presence of aflatoxin-M1, antibiotics and pesticides in processed milk and raw milk.
4. 10% of total processed milk samples failed to comply with FSSAI norm.
47% of the total raw milk samples failed to comply with FSSAI norm.

Why problem of milk contamination?

Aflatoxin M1 comes in the milk through feed and fodder that are currently not regulated in the country.

Harmful effects of Maltodextrin:

Side effects may include allergic reactions, weight gain, gas, flatulence, and bloating.
Maltodextrin may also cause a rash or skin irritation, asthma, cramping, or difficulty breathing.

Causes of Alfatoxins:

1. Aflatoxin mycotoxins are toxic to humans. They also cause cancer in humans and animals.
2. Aflatoxins have been reported to cause digestive system effects such as diarrhea, vomiting, intestinal hemorrhage, and liver necrosis and fibrosis.
3. Alfatoxins are more dominant in processed food than in raw milk.

Solutions:

1. Proper feeding of the cattles will increase SNF and fat naturally.
2. Proper regulation of use of antibiotics to cattles.
3. Frequent testing of milk samples by FSSAI authorized testing centers.
4. Establish testing machines that can detect residue of Aflotoxin M1.
5. Organic farming by reducing the amount of chemical pesticides. Even crop rotation, Zero Budget Natural Farming (ZBNF) and crop diversification can minimize the problem of pests.