



## **IS 2052 : 2023 Compounded Feeds for Cattle — Specification**

**Compounded cattle feed** is a mixture of various concentrate feed ingredients in suitable proportions providing a balanced source of **protein, energy, minerals** and **vitamins** that are vital for normal **health, milk production** and **reproduction** for **cattle**. Animal rations have to be balanced in such a way that both good quality materials as well as agro-industrial by-products complement each other in fulfilling the nutritional requirements of **livestock** of various categories.

The Indian Standard **IS 2052:2023** prescribes the requirements, sampling methods, and tests for cattle feed intended for **buffaloes, cattle, and working bullocks**. The standard specifies requirements for feed available in two types: **Type I** for **high-yielding animals** and **Type II** for **low-to-medium yielding animals**.

The feed must be free of harmful substances, **contaminants**, and objectionable odors and only **plant-based ingredients** with restricted animal origin content (only milk and milk products) are permitted to be its constituents. The standard lays down nutrient requirements to ensure a **balanced composition** of the feed. The requirements of protein, fat, fiber, and ash are distinctive for the two types while other requirements including minerals, vitamins, and moisture are common. The standard also limits the **aflatoxin B1** content to 20 ppb max in plant based raw material (50 ppb in case of solvent extracted rice bran as livestock feed, rice and whole grains) as well as product and **Cadmium** to 0.5 ppm max in the product to mitigate **health hazard** for cattle.

The standard provides guidance on carefully choosing ingredients to ensure a healthy balance of nutrients, including grains, oilseeds, and certain industrial by-products. The feed **packaging** must be robust, labeled with critical information like nutrient content, manufacturing date, and batch details.

This standard, first published in 1962 and revised multiple times, reflects the latest scientific advancements to enhance feed quality and ensure safe and nutritious cattle feeding practices. In this fifth revision, the standard has been updated considering latest technological developments and manufacturing practices.