





How to reduce the grain loss during postharvest

handling?

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Chao Ding, Ph.D,
Deputy Dean, School of Food
Science and Engineering,
Nanjing University of Finance
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- Engaged in the teaching and research of grain storage and transportation technology & engineering
- **Top young talents in national grain industry(2020)**
- **Executive member of Grain and Oil Drying and Ventilation Branch council of China Grain and Oil Association**
- undertaken > 10 national and provincial grants
- published more than 50 papers in international journals
- **Authorized > 10 patents & software copyright in China**
- First prize of Scientific and Technological Award of China Grain and Oil Association (CGOA);
- **Youth award of Scientific and Technological of CGOA**









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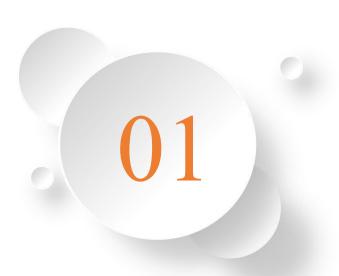
Typical grain postharvest handing technology











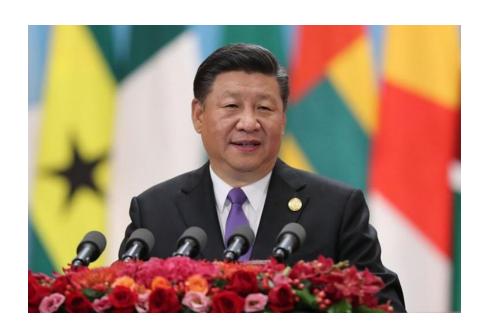
Background of grain saving and loss reduction











"The Rice bowl of the Chinese people should always be firmly in their own hands"

"Food security is a fundamental issue concerning human survival, and reducing food loss is an important way to ensure food security"

——Chairman Xi jinping







Global

The FAO presiented "quantity and quality" losses from harvesting, storage, spoilage and contamination by pests and mildew accounted for 14 percent of post-production losses.

China

——State of Food and Agriculture 2019 report

Grain Re	serve	E
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Loss≈**0.3**%

Loss≈1.0%

Loss≈1.0%

4	logistics transportation	Clean and dry	Long-term storage

farmers' grain storage

Loss≈1.0%

Loss≈3.0%

Loss ≈ 8.0% ~ 10%







Based on statistical data, the post-harvest grain loss in China exceeds 35 million tons per year. The potential and space for grain loss reduction in China is huge, which is mainly reflected in farmers' grain storage, grain storage and transportation, and grain processing.

- The loss rate of farmers' grain storage process is about 8%, and the annual grain loss is nearly 20 million tons.
- The process of storage and transportation includes open-air storage of grain, storage of grain with disease in dangerous warehouses and old warehouses, which caused a loss of 7.5 million tons.
- The third is the process of processing and consumption, with over 7.5 million tons of grain lost every year due to over-processing and low-level extensive processing.