

Harvesting

Factors affecting harvesting

Pre-harvesting factors:

- Environmental factors like temperature, humidity, rainfall etc
- Cultral practices like irrigation, fertilization
- Adequate nutrient availability

Post-harvesting factors:

- Harvesting at the optimal maturity stage is crucial for achieving the best possible quality of the crop.
- The time of day when harvesting takes place can affect the temperature and moisture content of the produce, impacting its quality and shelf life.
- Proper techniques and tools should be used to minimize damage.

Difference between thresher, winnower and combine

Thresher: Designed to separate grains from their stalks, husks, or chaff after the crop is harvested. It can be a simple flail or a more sophisticated machine with rotating blades or rollers.

Winnower: Often uses a stream of air or a series of sieves to blow away the lighter chaff while retaining the heavier grain.

Combine: Performs multiple harvesting tasks, including reaping, threshing, and winnowing, all in one step.

Storage

Factors affecting storage of food grains:

- Moisture
- Temperature
- Oxygen content
- Microorganisms

Silos: Silos are structures used for storing bulk materials, particularly grains. Mostly cylindrical in shape, often made of steel or other durable materials. Designed to protect stored goods from weather, pests, and other environmental factors

Granaries: Granaries are storage facilities having rooms, used to store grain or other dried goods like animal feed. They are typically built above ground to protect the stored materials from rodents, pests, and adverse weather conditions.

Cold storage: Utilizes low temperatures, usually between 0-7°C, cold storage slows down microbial growth and chemical reactions, preventing spoilage and reducing food waste.

- Chilled storage: Typically maintains temperatures between 0°C and 10°C. Most temperate fruits (apples, pears, berries), leafy vegetables (spinach, kale, lettuce), root vegetables (carrots, beets), and cruciferous vegetables (broccoli, cauliflower).
- Frozen storage: Maintains temperatures below 0°C, often as low as -30°C, for long-term preservation of frozen foods and pharmaceuticals. Frozen food like corn, beans, meat etc.