

## 9. Threshing

**Threshing** is the process of loosening the edible part of cereal grain (or other crop) from the scaly, inedible chaff that surrounds it.

**Winnowing** is the step in grain preparation which separates the loosened chaff from the grain.

- Conventional methods – un satisfactory
- Tractor threshing and buffalo trampling – unsuitable due to cracked grain and impurities

Threshing with Animals:



Threshing with Four Wheel Tractor



Manual Threshing

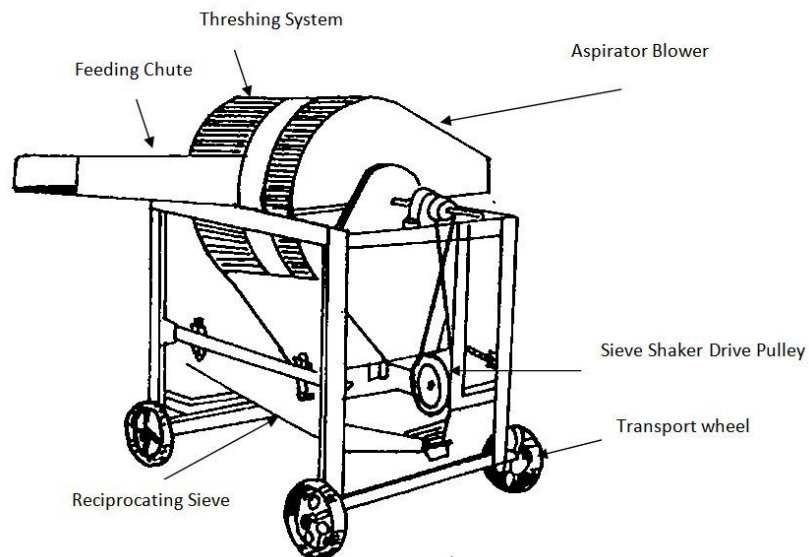


Semi Mechanized Threshing



## Mechanical thresher

Low losses



### Performance comparison of threshing methods

	<i>Buffalo</i>	<i>Tractor</i>	<i>Threshers</i>
Impurities %	4.4	7.8	0.3
Cracked grains %	7.8	11.7	6.3
Loss in head rice %	6.2	7.0	2.0
Moisture %	15.2	14.7	14.1

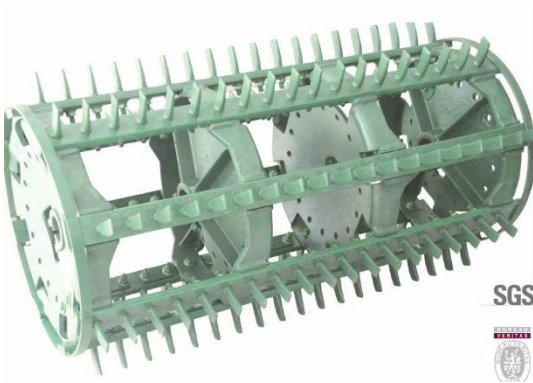
(Source: RPRDC 1983)

## Combine thresher

- Combining operations of threshing, cleaning and bagging.
- Recently More popular
- High capacity
- Low amount of losses
- Straw is thrown to the field



Spike tooth



Raspbar type



Wire loop



### **Factors effecting for threshing performances**

- Crop factors  
Variety of crop, Moisture content of grains, Drying of crops
- Machine or mechanical factors  
Type or model of the machine, Manufacturing quality, type of mechanism, operating quality of the machine, care and maintenance of the machine
- Miscellaneous factors  
Safety factors