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Threshing/cylinder losses

It should be 0.5 to 1%.

High cylinder speed, less c.c & vice versa

High m.c, increase cylinder speed (C.S)
and reduce c.c,

Medium m.c, medium c.s & c.c



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Header losses (0.5 -2%)

Losses due to reel

High reel speed more shattering losses, over ripe crop,
reel too high

Reel index: 1.25 – 1.5

Reel slightly ahead of cutterbar

Lodged crop: move the reel forward and lower the height

Reel tyne set backward

Taller crop: set the reel back and raise the height

Short crop: 10 cm above the cutterbar

Losses due to cutterbar

Grain head missed by cutter bar (Height of cut too high)

Shattering of grain during cutting

Too low cutterbar height, increase material feed in to
combine resulting over loading of the rack

Sharp cutterbar, proper registration

Augur losses

Augur clearance to low

Feed Conveyor losses



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RACK LOSS

Separation efficiency decreases exponentially with increase in MOG throughput

Straw walker auxiliaries added for better separation

Opening of straw walker not clogged



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MEASUREMENT OF LOSSES IN COMBINE OPERATION



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TYPES OF LOSSES

Pre harvest losses

**Loss of grain from standing crop
before harvest**

Processing losses

**Damage grain, Unthreshed grain,
separating & cleaning loss**

Collectable losses

Non collectable losses

Processing losses

Total combine losses



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Collectable losses

Unthreshed & broken grain in main grain outlet

Unthreshed grain (U.T),%
= (wt of U.T grain/ total grain harvested grain) * 100

Broken grain, %
= (wt of broken grain/ total grain in grain tank) * 100



Non-Collectable losses

Header loss

Cutterbar loss),%

= (Cutterbar grain loss (kg/ha)/ total grain to be harvested) *100

Reel loss, %

= (Shattering loss / total grain to be harvested)* 100

■ **Straw walker loss: Grain passing out through the straw walker (Rack) %**

= (wt of threshed, Unthreshed & damaged grain in the rack / grain throughput) *100



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- Total non collectable loss: Header loss + Straw walker loss + sieve loss
- Total combine losses: Total collectable + non collectable losses
- Grain throughput: Wt. of threshed, un-threshed grain, broken grain (grain outlet+ straw outlet+ sieve outlet) + header loss
- Straw throughput: Wt. straw (grain outlet+ straw outlet+ sieve outlet)
- Crop throughput: grain throughput + straw throughput