

Background:

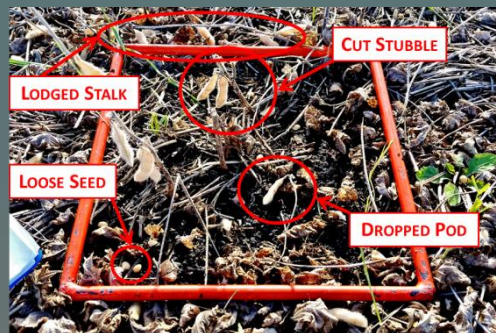
- It is estimated that 80% of harvest losses in soybeans occur at the header

Objectives:

- To understand how air reels may effect header losses on auger headers
- To understand how harvest speed effects header losses

Set-Up:

- Four speeds (2, 3, 4, 5 mph), two headers (auger with and without air reel)
- Four replications, eight treatments
- Forty post-harvest loss samples per plot
- Four types of loss counted



Results – Air Reel:

- Treatments with an air reel showed significantly lower losses across all treatments by approximately 55%.
- Overall difference between treatments was 1.25 bu/ac losses.

Results - Speed:

- Slower speeds (2, 3, 4 mph) showed little difference in losses across all treatments, but increasing to 5 mph caused nearly 40% increase in losses.
- Difference between slower speeds and 5 mph is 0.69 - 0.85 bu/ac.

Trial Details:

Location: East Selkirk

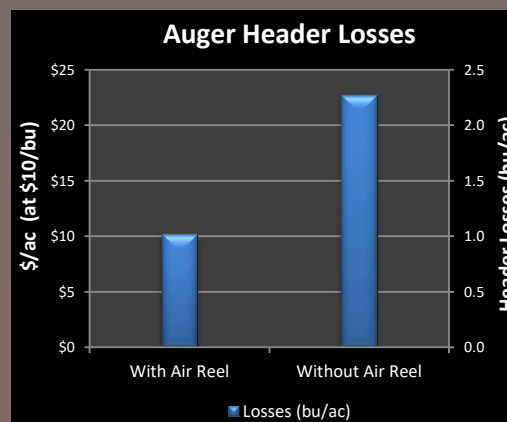
Variety: Dekalb 2410

Samples taken: 1,344

1 bu/ac loss: 4 seeds/ft²

Average lowest pod height: 3.34"

Pre-harvest Samples: 0.0375 bu/ac, and 3.73 plants/ft² (162,479 plants/ac)



Conclusions:

- Harvest speed has a significant effect on header losses above a certain threshold (5 mph)
- An air reel can provide a significant reduction in header losses
- There is substantial potential for harvest practices to greatly reduce soybean header losses in Manitoba

Previous Work:

- Effect of cutting angle (0°, 45°) on header losses
- Effect of cutting angle on header losses due to speed

For access to the full report, or any other reports, please contact PAMI.