

Indiana Corn and Soybean Research Center

Threshing and Shelling Room

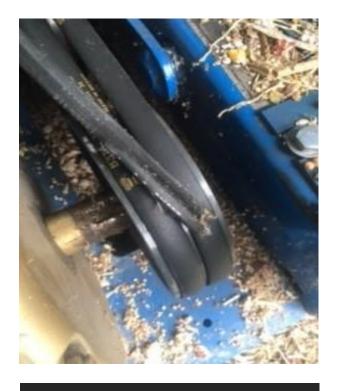
Project Information

- Our project was to make an alarm system for the ICSC threshing and shelling room.
- Our design features a light as an alarm for the room.
- This project should greatly decrease downtime in the threshing and shelling room.

General Information

- ASM49500/ABE48600, Spring 2023
- Team members
 - Elizabeth Zelt
 - Hongzhi Wu
 - Nicholas Habzansky
- Sponsored by Indiana Corn and Soybean Research Center





TIME READY BY AND THE R

How it Helps

- The system will alert people working in the Threshing and Shelling room that the barrel is not rotating properly.
- This will increase efficiency and decrease downtime of the system.

The Issue

- The thresher at the ICSC will occasionally clog and reduce productivity.
- The thresher barrel will stop rotating, causing bridging of waste material and backup on the conveyor belt feeding it.
- Our project is meant to alert employees working on the line that the thresher has stopped rotating.

Technical Data

- The system we have decided to implement will set off the alarm if the barrel slows too much.
- Our design uses a proximity sensor with a timer relay, implemented to set the alarm off if the barrel does not make a full rotation in a certain amount of time.

Why it Helps

- The reduction in system downtime will allow research to not be backed up by a lack of disposal of materials.
- This will also result in less time taken out of employees' days to disassemble, clean, and reassemble the thresher and its enclosure, particularly in undesirable weather.