



## *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





### *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.

### *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.

### *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.