

MAY 17 - 19, 2022

MANDALAY BAY | LAS VEGAS, NV

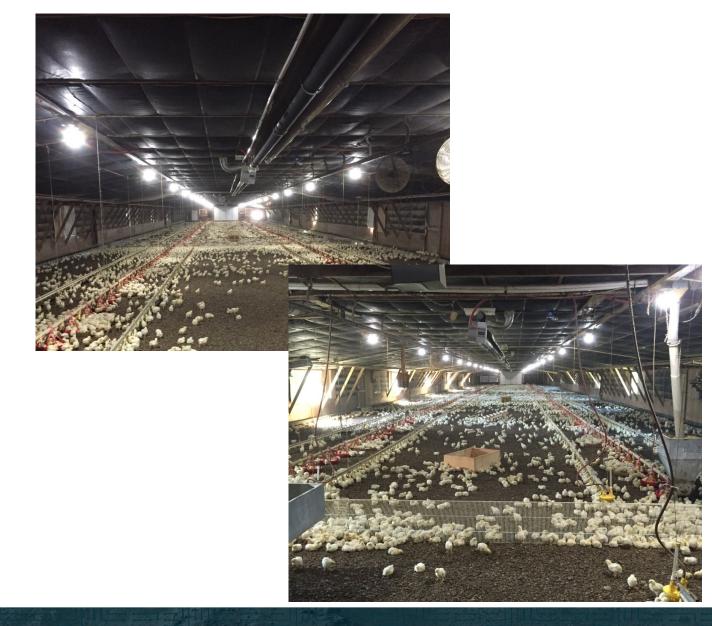
RFID JOURNAL LIVE!

RFID Application for Chickens

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Perdue Foods, LLC

Free Range Chickens

- Generally commercial chickens don't have access to outdoors
- Chicken houses are designed with "solid sidewalls"
- This has allowed state of the art ventilation and temperature control
- But...we have been trying to figure out how to change that to allow for access to the outdoors and natural sunlight



Rules for Access to Free Range

- From 3 weeks on, if the temperature is acceptable, the doors must be open
- The pasture has to be as large as the inside of the house
- The pasture must be at least 50% covered in rooted vegetation
- Free Range = Outdoor Access...but no promises?

TEMPERATURE GUIDELINES FOR	
OUTDOOR PASTURE ACCESS	
<u>DAY</u>	OUTDOOR TEMPERATURE
0 - 20	No Outdoor Access
21	80+ DEGREES
28	75+ DEGREES
35	70+ DEGREES
42+	65+ DEGREES





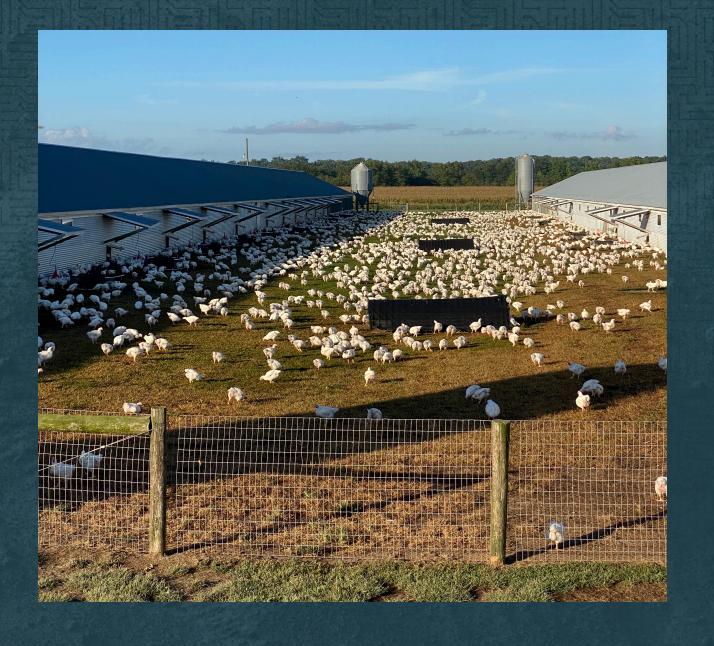




- Doors to be a 46" X 22" double paneled door.
- Number of doors 1/40 ft of house



We'd like them all to look like this!



But they all look different and we'd like to study why!

Austin Good



Bruce Stelfax



John Fahnestock



Michael Forey



James Martin



Phil Meck



Harold Shrink



Maloney



Measuring Birds Outdoors

A person on a bucket with a stopwatch could do this farm!



But not this one! Need something better.





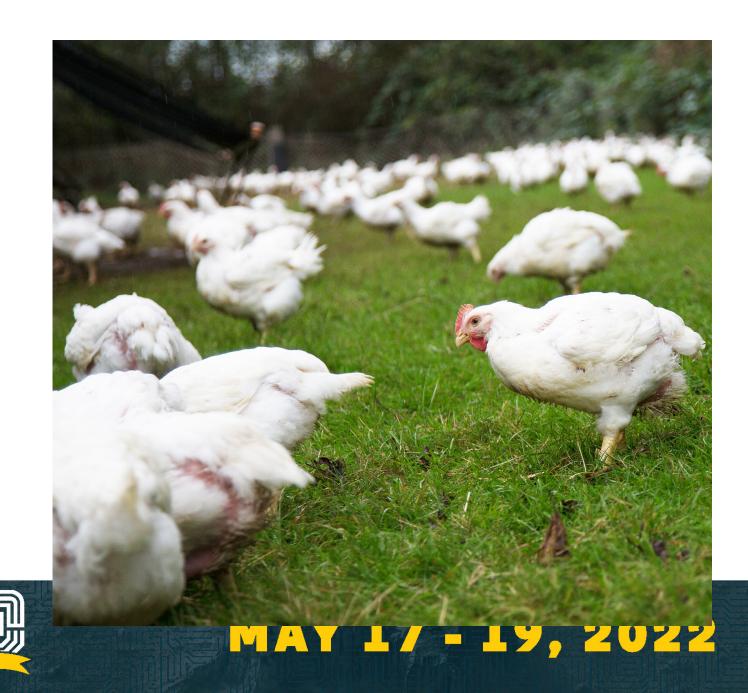
Measuring Birds Outdoors

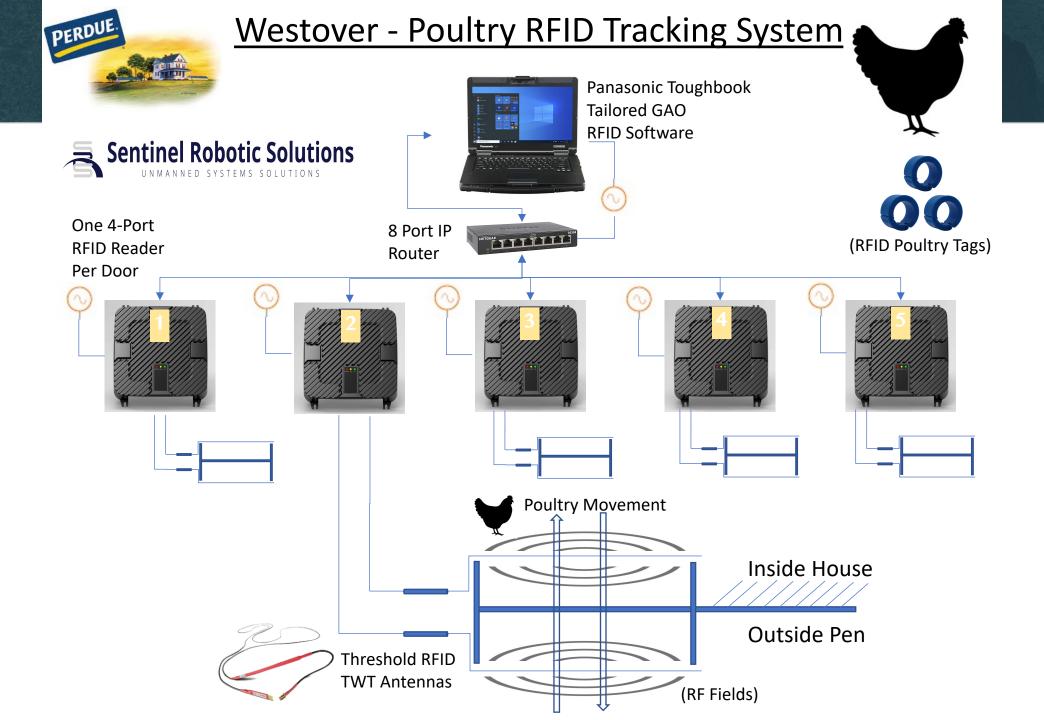
We Thought:

 RFID can provide good information – although not easy and not "off-theshelf"

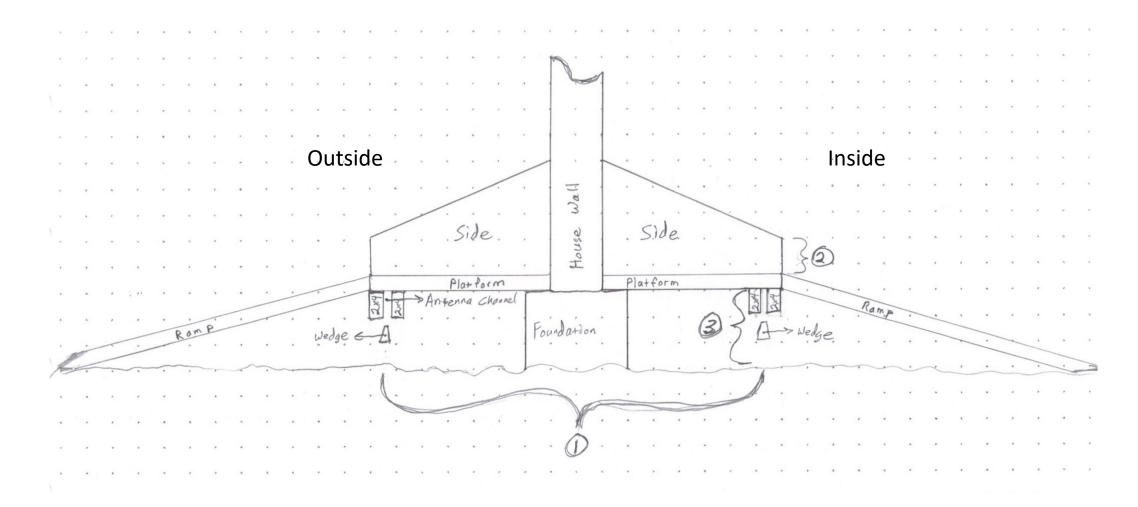
Our questions:

- 1. How many birds go through the door each day?
- 2. How long do they stay outside?
- 3. Are there some chickens that stay out much longer than others?
- 4. Do they go in and out multiple times?
- 5. Is there a preference for time of day?





Building an RFID Gate in a Chicken Pophole





Able to determine which bird

Software Capability



Able to determine direction the bird moved

A to B = went outside
B to A = went inside



Able to dump data to Excel for calculation and analysis





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Results?

- Avian Influenza in the US has resulted in outdoor birds being confined to the indoors – therefore our work has been delayed.
- Things others have described:
 - "pop-hole-following" is a significant thing one of the biggest stimulators for a bird to go outside is....following a pen mate
 - Birds need to be "trained"
 - You need to have a schedule stick to it
 - Something to look forward to out in the pasture.
 - With some breeds 20% birds outdoors on any given day would be very successful, other breeds might be well over 50%



This seems like a "different" application of RFID technology — but it will be VERY helpful!





