



**Electronic Sow Feeding at Tosh Farms
2010 Pork Management Meeting
Hilton Head, SC
June 17, 2010**

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Tosh Farms
Henry, TN**




Tosh Farms

- Family Owned: Jimmy, Alona, Jamey and Jonathan
- 9,700 acres of Wheat, Corn, Soybeans, and Milo
- 22,500 Sows
- 450,000 Market hogs this year

Why?

- **Europe**
- **HSUS**
- **Florida & Arizona**
- **Smithfield and Maple Leaf**
- **Public Perception/ Consumer Driven**

Why ESF?

- **New Facility/Remodel**
 - **Facility Design**
 - **Build Knowledge**
 - **Individual Sow Feeding**
 - **Jimmy Said So!!!!!!!!!!!!!!**
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Tosh Martin Facility

- 3,400 Sow Multiplier on Electronic Sow Feeding
 - 2- 121' X 301' Gestation Barns
 - Each Pen is 41' X 28'
 - 216 Breeding Stalls
 - 8 – 6'x 21' Recovery Pens
 - Totally Slatted/Deep Pit
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B/G Barn Management

- Training Gilts
 - Isolation is big pens on full feed
 - Gilts are moved to training pens @ 30 weeks old
 - Trained for a minimum of 2 weeks
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B/G Barn Management

- Wean Sows into Breeding Stalls
 - Breed All Females in Breeding Stalls
 - Move Sows to Pens within 48 to 72 Hours
 - Pens Start with 65 Sows @ 17.66 ft²
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Why 65?

- Feed Station Feeds Every 30 Seconds
- Each Feed Dump Is 2.5 oz
- Therefore,
 - $6\text{lbs}/2.5\text{oz} = 38$ Dumps per sow
 - 38 dumps \times 30 seconds = 19 min/sow
 - 19 min \times 65 = 20.8 hours


B/G Barn Management

- All Pens Are Static
 - Animals can be removed, but not added
 - We expect 10-15% fallout
 - Returns, culls, lames, death loss
 - Pens end up with ~58 Sows @ 19.8 ft²
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Challenges

- Management
 - Must have a dedicated manager and crew
 - Must be willing to adapt
 - Must be committed to making the system work
 - Must be able to multi-task
 - Must be detail oriented
 - Must use system tools
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Challenges

- Training Gilts
 - 1-2% will not train
 - It takes time
 - Extra equipment needed
 - Training Gates
 - Fallouts/Lames
 - Where do you put them
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Challenges

- Facilities
 - Knowing what is needed before construction
- Feeding all animals in a day
 - $8\text{lbs}/2.5\text{oz} = 51$ Dumps per sow
 - $51 \text{ dumps} \times 30 \text{ seconds} = 25.5 \text{ min/sow}$
 - $25.5 \text{ min} \times 58 = 24.7 \text{ hours}$

Challenges


- Data Entry
 - Must Enter Sow Information into System
 - Maintenance
 - System Has to work
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Results Jan-06 to Dec-06

Repeat Service	13.2%
Farrowing Rate	77.3%
Total Born	12.5
P/S/Y	23.48
Sow Mortality	18.6%
Culling Rate	37.8%

Changes

- Feed
 - From Pellet to Mash
 - Group Size
 - 65 per pen from 60
 - Use of Training Gates
 - First 2 to 4 weeks
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Changes

- Basic Husbandry Skills
 - Breeding Techniques
 - Increased Treatments
 - Better Lactation Feeding
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Results From Changes

	2006	2007
Repeat Service	13.2%	11.8%
Farrowing Rate	77.3%	80.7%
Total Born	12.5	12.8
P/S/Y	23.48	25.22
Sow Mortality	18.6%	9.9%
Culling Rate	37.8%	34.19%



Farrowing Rate/Total Born




Cull Rate/Sow Mortality




Pigs/Mated/Year

Other Issues Created

- Parity Structure was wrong
 - Mortality/Farrowing Rate made us keep sows we wouldn't normally
 - Too many old sows
 - Switching from purchasing gilts to internally produced gilts

 - Too many foot and leg issues
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More Changes Made


- Stocking Density of Pens
 - 55 summer
 - 60 Winter
 - Gilts in Own pens
 - 30 gilts per week
 - Fill 1 pen every 2 weeks
 - Changed Mineral Package (Sept 08)
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Results From Changes

	2008	2009	Q1-2010
Repeat Service	9.0%	8.5%	5.47%
Farrowing Rate	81.7%	82.9%	83.7%
Total Born	12.6	12.7	12.6
P/S/Y	24.36	25.49	26.27
Sow Mortality	10.5%	11.3%	7.05%
Culling Rate	54.3%	76.0%	47.1%


Things We Did Wrong

- **Construction Delays**
 - **Rough Slats**
 - **Over Conditioned Gilts**
 - **Lactation Feeding**
 - **Not Enough Recovery Area**
 - **Space to Enter New Gilts**
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Things To Consider

- Must Have Better Basic Husbandry Skills
 - ESF vs. Stalls are full of Trade Offs
 - Movements
 - Feeding
 - Management
 - Maintenance
 - Must have spare parts (\$\$\$ in inventory)
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Things to Consider

- Employees
 - Cleaner Work Environment
 - Less Noise
 - Open Facilities
 - Transition from Stalls to Big Pen
 - Pigs
 - There will be fighting how do you manage it
 - When to make groups
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Things to Consider

- How do you fix Parity/Inventory Problems
 - Must bring groups in not individuals
 - Must go in multiples of 65 can't go 1 animal to 1 stall.
 - Farm is full with little extra space
 - Empty space costs money
 - Training Time

Questions ?



Thank you!