



# Smithfield

## Blue Skyways Collaborative Conference *Goods Movement: Needs, Challenges, and Opportunities*

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1.

**Who is Smithfield?**

Smithfield

**Smithfield** *Good food. Responsibly.™*

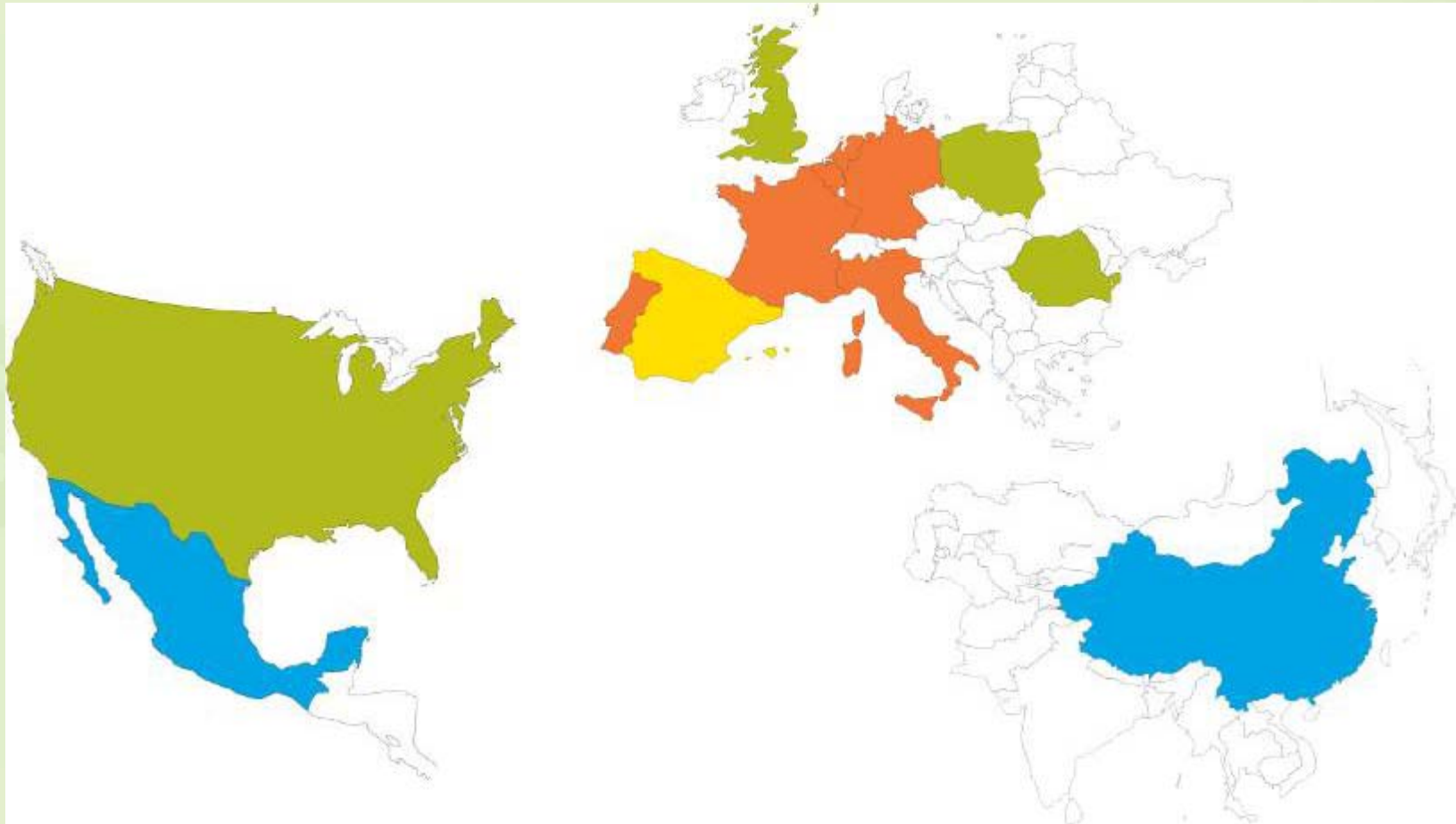
# Think you know Smithfield? Think again.

- Smithfield Foods is much more than just pork.
  - International food company with operations in 13 countries through wholly owned subsidiaries and joint ventures
  - Over 57,000 employees globally
  - Pork, turkey, specialty foods
  - Annual sales of \$12 billion
  - [Corporate Social Responsibility Report](#)



# International Food Company

- In 13 countries through wholly owned subsidiaries and joint ventures



# Smithfield Foods

## GENERAL

	FY 2007	FY 2008
Employees (Domestic)	36,700	41,500
Brands	50+	50+
Products	200+	200+
Sales <sup>1</sup>	\$9.4 billion	\$11.4 billion
Customers	3,500	4,000

## PORK

Pounds of Fresh Pork Produced	3.1 billion	4.0 billion
Pounds of Packaged Meats Produced	2.9 billion	3.1 billion
Sales	\$ 7.9 billion	\$ 9.6 billion

## HOG PRODUCTION

Sows	888,000	1,100,000
Market Hogs Produced	13.9 million	19.4 million
Joint Venture Sows	114,000	98,000
Joint Venture Market Hogs Produced	1.5 million	1.5 million
Hog Production Sales	\$1.8 billion	\$2.4 billion

# Corporate Social Responsibility (CSR)

- Supports aspiration to become the most trusted leader in the livestock production and meat processing industries
- Many facets:
  1. Environment
  2. Animal welfare
  3. Employees
  4. Food safety
  5. Community involvement
- All international subsidiaries expected to comply with the Smithfield Foods Code of Business Conduct



# ENVIRONMENT

**Smithfield**

# Smithfield's Commitment

- Goal of 100% compliance, 100% of the time
- Dedicated team at corporate and IOC levels
- Environmental policy
- ISO 14001 certification
- Environmental compliance committee
- Environmental awards program
- Compliance tracking



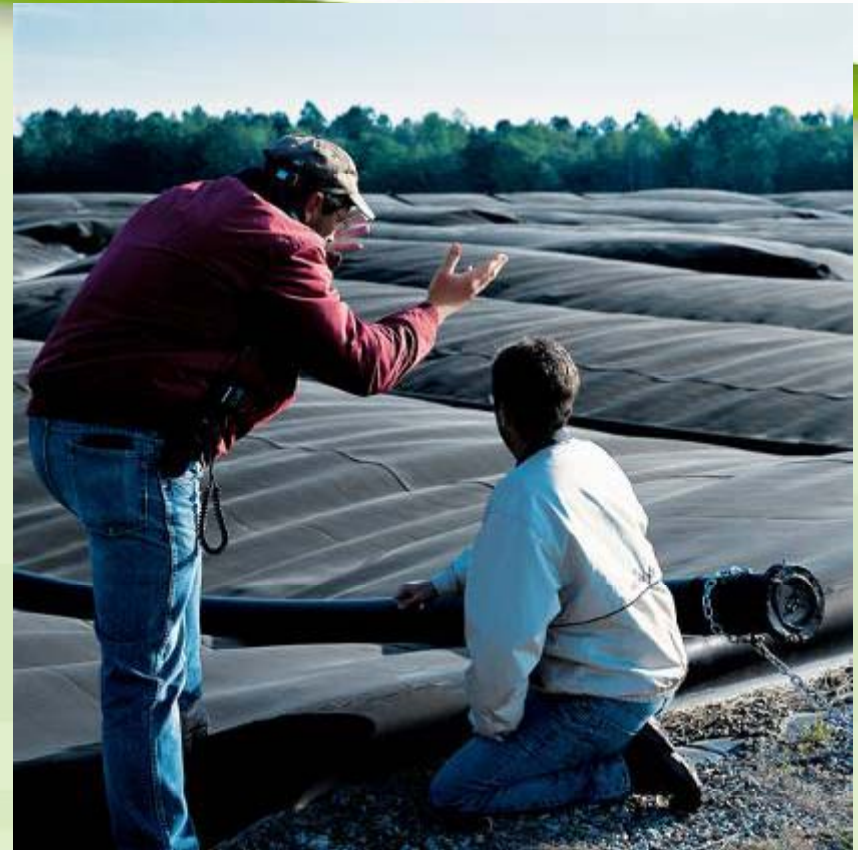
# Environmental Stewardship

- Sponsor of the national FFA Environmental and Natural Resources Career Development Contest
- World Water Monitoring Day
- 57 waterways in 18 states, Poland and Romania



# Reducing Greenhouse Gases

- BioEnergy Task Force
  - Capturing methane at some processing plants
  - Swine farm methane capture in MO and TX



# 2.

## Goods Movement The Transportation Chain

# Smithfield Movement of Goods

- Product shipment
  - Domestic
  - International
- Market pig transportation (market haul)
- Wean/Feeder pig movement (live haul)
- Feed Delivery
- Grain purchasing

# Grain Purchasing



Good food. Responsibly.™

# Grain Purchasing

- 200 million bushels of corn annually
- 1.5 million tons soybean meal annually
- Grain surplus or deficit in area determines transportation method
- Truck delivery - farmers deliver by truck for most of Midwest, 30% of NC
- Unit train deliveries, NC, TX, UT
- Ocean Going Vessels – sometimes import grain for NC

# Feed Delivery



# Feed Truck



# Feed Delivery

- 8.8 million tons feed
- Mix of company owned truck fleet and independents
- 144 trucks company owned
  - 13.4 million miles
  - 3.0 million gallons fuel

# Pig Transportation



- Wean
- Feeder
- Markets

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# Pig Transportation

- Live haul
  - Wean and feeder pig movement between farms
    - 90 trucks owned
    - 4.2 million miles
    - 830,000 gallons fuel
- Market pigs
  - Pig movement to processing plant, company and independent trucks
    - 53 trucks owned
    - 5.4 million miles
    - 980,000 gallons fuel
- East - mostly owned fleet, Midwest -mostly independent truckers



# Product Transportation

- Domestic
  - Interplant transfers (processed meats)
  - Deliver to customer distribution centers and stores
- East
  - Company owned fleet
  - 150 trucks
  - 12,000,000 miles
  - 1.5 million gallons fuel
  - SmartWay member
- Midwest
  - Contract and independent truckers

# Smithfield Transportation - SmartWay



The Smart Way to Save Fuel,  
Money, and the Environment

## Profile: Smithfield Transportation Co, Inc.

Smithfield, Virginia



Winner, 2006 SmartWay Excellence Award

Winner, 2007 SmartWay Excellence Award

Food supplier Smithfield Transportation Company transports raw and finished products between its plants, as well as delivering directly to its customers along the eastern seaboard. With more than 160 drivers and 750 tractors and trailers, Smithfield's fleet travels more than 13 million miles annually and handles approximately 45% of the tonnage that Smithfield ships.

Smithfield Transportation has improved its fleet's performance by adding technologies such as single wide tires, aerodynamics, idling equipment, automatic tire inflation, and advanced lubricants. As a result, its fuel efficiency has improved by 10% and its idling time has been reduced by 60%.

*"The conservation of natural resources is of paramount importance, and through the SmartWay Transport Partnership, Smithfield has realized opportunities to continuously improve through new technologies and maintenance methodologies that have a positive impact on the environment."*

**Norman Fisher**

VP, Fleet Safety and Environmental Affairs

# Exports



# Exports

- Exports
  - Approx. 20% of production or 800 million pounds
- Top 5 markets
  - China
  - Japan
  - Hong Kong
  - Mexico
  - Russia
- Transportation methods
  - Europe & Asia - refrigerated containers via ocean going vessel
    - East – truck to port
    - Midwest – truck to rail, rail to port
  - Mexico – all trucked

3.

**What is Smithfield  
doing?**

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# Fuel & Emission Reduction Projects

- APUs
- Auto Shutdown / Progressive Shifting
- Driver Education & Incentive Programs
- Increase Payload
- Super Singles
- GPS Insight
- Route Analysis

# APU's – Product Transportation

- Wired into the truck cab allow the driver to regulate the temperature.
- Diesel units use on average less than 0.1 gallons per hour
- Used by Smithfield Transportation
- Pilot project on feed delivery hydraulic system
- Live haul applications?



# Auto Shutdown / Progressive Shifting

- Auto Shutdown – after 5 minutes of idling
- Progressive Shifting - Changing gears upward as early as possible when accelerating
  - Results in quicker acceleration because diesel engines produce the most torque in lower rpm ranges
  - Computer control used to limit maximum rpm per gear
- Driver education on system required
- Used on newer trucks in most of fleet

# Increasing Payload – Live Haul

- On truck scaling system
- The more weight on the vehicle, the more air pressure required to maintain ride-height.

## Tractor Scale



## Trailer Scale



# Air Weigh Scale Trial

	<u>DATE</u>	<u>LOAD #</u>	<u>SCHEDULE D HEAD CT.</u>	<u>LOADED HEAD CT.</u>	<u>HEAD CT. VAR.</u>	<u>WT. AT FARM</u>	<u>WT. AT PLANT</u>	<u>WT. VAR.</u>
1	7/23/08	429197	185	193	8	80180	80060	-120
2	7/24/08	429692	179	194	15	79940	78820	-1120
3	7/24/08	430282	187	195	8	82460	81880	-580
4	7/28/08	430810	187	195	8	81640	81400	-240
5	7/28/08	430963	189	199	10	79340	77880	-1460
6	7/28/08	430810	187	195	8	81640	81400	-240
7	7/28/08	430963	189	199	10	79340	77880	-1460
8	7/29/08	431099	187	195	8	79880	78940	-940
9	7/30/08	431982	190	195	5	80340	79020	-1320
10	7/31/08	432216	190	201	11	79880	78600	-1280
11	8/1/08	431010	185	208	23	81900	82040	140
12	8/1/08	431974	185	200	15	77620	77260	-360
13	8/4/08	433735	187	187	0	80980	80740	-240
14	8/6/08	433061	180	190	10	82240	85160	2920
15	8/7/08	433047	187	187	0	82440	81900	-540
16	8/8/08	433676	187	187	0	78660	77580	-1080
17	8/8/08	433970	192	200	8	79900	78080	-1820
		average	187	195		<b>8.64 Extra Animals per Load</b>		

# Super Single Tires

- Single wide tire replaces dual wheels
- Single rim and tire combination is lighter than duals
- Less rolling resistance than duals
- Being used in product distribution fleet
  - Reported 4% fuel efficiency gain
  - Also running nitrogen in tires
- Being used / tested in live haul and feed delivery

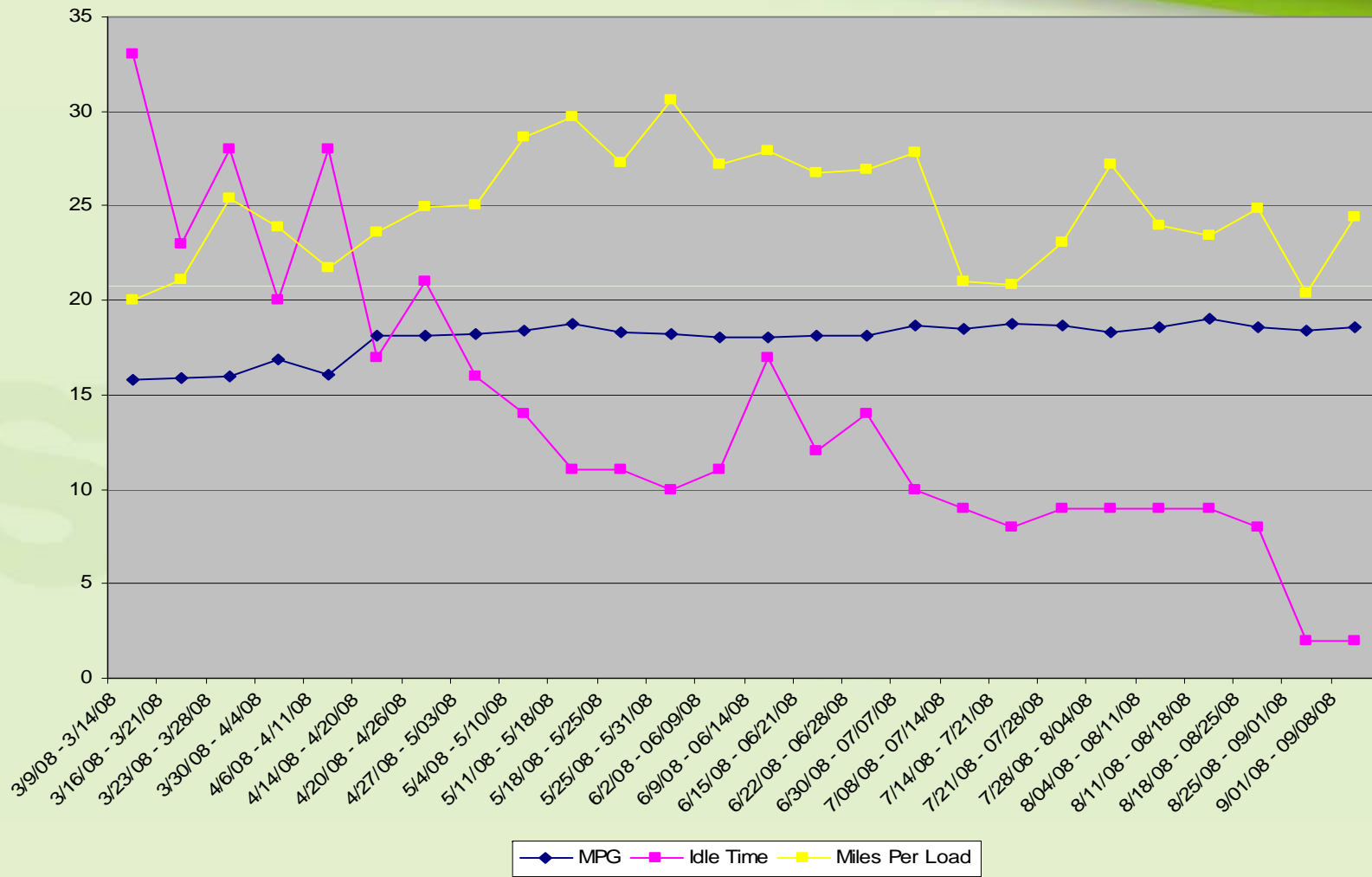


# GPS Insight Pilot Project

- The GPS insight unit allows tracking the location and activity of the vehicle
- Activity includes fuel economy and speeding violations
- Before the installation the loading department averaged 34% idle time and 15.8 mpg.
- After installation of the device department has realized 14% increase in fuel efficiency to 18.3 mpg most aided by a 26% decrease in idle time.
- Pilot involves 200 plus insight units installed

“What gets measured gets done”

# GPS Insight – Reduction in Idle Time



# Route Analysis

- Geographic Information System (GIS) analysis
  - Four companies combined in North Carolina
  - Feed deliveries shifted to closer mills after GIS analysis
  - Shorter routes than older mapping
- Midwest – shifted pigs to closest plant after acquisitions

# Fuel Mileage Comparison

- Feed delivery -4.5 mpg
- Live Haul -5.0 mpg
- Market haul -5.5 mpg
- Product transport -8.0 mpg
  - was 6.7 mpg prior to SmartWay package

4.

## Challenges and opportunities

Smithfield

# Challenges and opportunities

- Business integration after multiple acquisitions
  - How many trucks do we have?
- Data collection
  - Expand environmental metrics?
- Information sharing
  - Go beyond environmental coordinators
- Independent truckers
  - Information sharing, contracts, cost reduction
- Financial payback
  - Many times tough to justify \$\$



# Smithyfield