A REVIEW OF GLOBAL PROTEIN & US CONSUMER TRENDS

Dhamu Thamodaran
EVP, Chief Strategy Officer and Chief Commodity Hedging Officer

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Smithfield. Good food. Responsibly.
DISCUSSION TOPICS

• Smithfield: Who We Are
• Global Protein Trends
• US Consumer Trends
SMITHFIELD – WHO WE ARE
SMITHFIELD – WH GROUP MEMBER

Note: #1 market position in Poland in packaged meat SKUs per Nielsen Retail Audit 9 months ended November 2016. #1 Hog Producer and Processor in Romania per CCC report on slaughtered & classified hogs 2016.
WHO IS SMITHFIELD FOODS?
LARGEST AND LEADING PLATFORM IN PORK INDUSTRY

- $14 billion global food company
- 52,000+ employees worldwide
- Operations in five countries
- #1 Supplier to US Retail, Foodservice, and Export Channels
- #1 World Hog Producer: 1.2 million sows producing 21 million hogs annually
- #1 World Pork Processor: 37 million head annually
- #1 US Packaged Pork Company: 3.0 billion pounds annually (3.5 billion pounds globally)
- Export products to more than 40 countries
VERTICALLY INTEGRATED PLATFORM PROVIDES AN UNPARALLELLED LEVEL OF TRACEABILITY AND FOOD SAFETY

$14BN COMPANY THAT OPERATES IN 23 U.S. STATES AND 5 COUNTRIES

World's Largest Hog Producer: ~21 million hogs globally
Smithfield raises pigs on approximately 3,900 company-owned, leased, and contract hog farms globally. Additionally, plants purchase hogs from independent hog producers.

World's Largest Pork Processor: ~37 million hogs globally
17 fresh meat processing plants globally, including 13 plants which also have packaged meats production

Top Producer of Packaged Pork: ~3.5 billion pounds globally
28 plants dedicated to packaged meats production globally

More than $14 Billion in Annual Sales
We provide leading retailers, restaurants, and foodservice companies with respected brands and innovative products

Note: Includes volume information of Smithfield's two joint ventures in Mexico
LEADING PORK PLAYER IN THE U.S. MARKET

**#1 U.S. HOG PRODUCER**
- More than 2x size of next largest competitor
- Proprietary breeding stock enables Smithfield to market highly differentiated pork products

**#1 U.S. PORK PROCESSOR**
- U.S. leader by wide margin
- #1 supplier to export from the U.S.

**#1 U.S. PACKAGED PORK COMPANY**
- #1 Supplier to retail and foodservice
- Brands ranked #1 in numerous product categories

Note: Per Successful Farming 2016, National Hog Farmer 2016, IRI 52 weeks ending 10/02/16, Nielsen Perishables Group 52 weeks ending 10/01/16. Represents % market share per segment.
SMITHFIELD’S CUSTOMERS ARE THE WHO’S WHO OF MAJOR RETAILERS, FOODSERVICE AND RESTAURANTS

<table>
<thead>
<tr>
<th>Retailers</th>
<th>Foodservice</th>
<th>Restaurants</th>
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<tbody>
<tr>
<td>Walmart</td>
<td>Sysco</td>
<td>Subway</td>
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<tr>
<td>Kroger</td>
<td>US. Foods</td>
<td>McDonald's</td>
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<td>Costco Wholesale</td>
<td>PFG</td>
<td>Applebee's</td>
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<td>Jetro</td>
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<tr>
<td>Safeway Wholesale</td>
<td>West Liberty Foods</td>
<td>Burger King</td>
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<tr>
<td>Safeway</td>
<td>Services Group of America</td>
<td>Dunkin' Donuts</td>
</tr>
<tr>
<td>C&amp;S Wholesale Grocers</td>
<td>Blue Line</td>
<td>Five Guys</td>
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<tr>
<td>BI-LO</td>
<td>GFS</td>
<td>FIVE GUYS</td>
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<td>ShopRite</td>
<td>Golden Corral</td>
<td>In the Box</td>
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<tr>
<td>ALDI</td>
<td>MBM</td>
<td>Jack Sandwiches</td>
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<tr>
<td>Save A Lot food stores</td>
<td>Shamrock Foods</td>
<td>Little Caesars</td>
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<tr>
<td>meijer</td>
<td>McLane</td>
<td>Beyond Pizza</td>
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<tr>
<td>Dollar General</td>
<td>Cheney Brothers</td>
<td>Ruby Tuesday</td>
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<tr>
<td>Nash Finch Company</td>
<td></td>
<td>Cici's</td>
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<td>Topco</td>
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GLOBAL PROTEIN TRENDS

• Global challenges to meet increasing protein consumption demand and supply/demand imbalances.
• Trade flows and agreements are critical to address these challenges.
• Chicken will become the dominant protein consumed in the world
• China will slowly increase their import share of domestic protein consumption, pork from 1% to 5%
• Technology adoption will revolutionize global protein production and operations sector
GLOBAL LANDSCAPE
RESOURCES AND CONSUMPTION IMBALANCE

Surplus
11% of world population
25% of agricultural land

Deficit
47% of world population
20% of agricultural land
TRADE FLOW
90% OF GLOBAL TRADE IS THROUGH OCEAN

North & South America have advantage over Europe
SHIPPING GETTING EFFICIENT WITH INTRODUCTION OF NEW ADVANCED SHIPS

2016 (MSC Oscar) | +18,000 TEU
2020           | 22,000 TEU

Source: Vickerman & Associates
GLOBAL PROTEIN TRADE
ASIA MAJOR GROWTH TREND

Global Meat & Poultry Destinations

10% Average Annual Growth
GLOBAL PORK TRADE
ASIA MAJOR GROWTH TREND

Value of Global Pork Exports to Region

- Asia
- North America
- Rest of World

15% Average Annual Growth
GLOBAL PER CAPITA PROTEIN CONSUMPTION
STEADY GROWTH – CHICKEN POISED TO BE THE LEADING PROTEIN

Chicken is poised to overtake pork
Beef to decline
Other proteins to emerge
CHINA’S NATURAL RESOURCES CHALLENGES

2/3 of farmland located above the red line

Half of China’s population lives above the red line

80% of water is located below the red line
MEGACITIES
MAJOR OPPORTUNITIES FOR VALUE ADDED PORK DEMAND

By the Numbers

CHINA’S NEW MEGACITIES
Cities with populations of 10 million or more grow on the mainland By Flavia Krause-Jackson

19%

Share of China’s population living in megacities

Vertical Growth versus Horizontal
CHINA PORK OPPORTUNITIES AND CHALLENGES

- Pork industry will go through some structural changes, from backyard farming to a new form of commercial farming.
- 50% of pork production will come from some form of commercial farms.
- Food safety will be the major focus in all phase of food supply.
- With growth in middle class, Packaged foods, or cold temp product categories will grow.
- Food service sectors and supporting supply chains will develop, similar to US and European model.
- US needs to be cost competitive to retain the market share in China. Europe, South America and Canada are gaining market share.
US CONSUMER TRENDS

• Meal solutions and Meal kits
• Need to know where, how and what is in our food; antibiotic free, natural, clean label
• On-line retailing
• Retail competitions
• Convenient stores – one stop shopping, quick and easy
• Restaurants and home delivery
MEAL KIT
A NEW WAY TO PREPARE MEALS

**Convenient** – Door delivery

**Attractive Prices** – 2 meals for 3 days @ $60/week

**Variety** – Different flavors

**Healthy** – Proteins and vegetables are balanced

- Growing Rapidly
  - $1.5 billion
  - $6.0 billion by 2020

- Top Names
  - Blue Apron – 8 million meals per month
  - Plated
  - Chef’d
  - Hello Fresh
  - Munchery

- Others
  - Amazon
  - Peapod

Will Impact Restaurant Industry
GROCERY ON-LINE: GROWING TREND

Grocery – F&B: $800 billion
On-line: $33 billion
Share: 4%

By 2020:
$70 billion
25-35 year olds will buy 28% groceries on-line
AMAZON CHARGING AHEAD

The e-commerce company makes up just 1% of the overall U.S. food and beverage market, but it is a dominant player in online groceries.

<table>
<thead>
<tr>
<th>Gross merchandise volume, 2015</th>
<th>2015 market share</th>
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<tbody>
<tr>
<td>Amazon</td>
<td>$6.16 bil</td>
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<tr>
<td>Wal-Mart</td>
<td>$3.76 bil</td>
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<tr>
<td>Peapod</td>
<td>$721 mil</td>
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<tr>
<td>Fresh Direct</td>
<td>$554 mil</td>
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<tr>
<td>Kroger</td>
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<td>Safeway</td>
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<tr>
<td>Instacard</td>
<td>$150 mil</td>
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<tr>
<td>Google Express</td>
<td>$138 mil</td>
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Sources: Top500Guide.com, Cowen & Co.
NEW GROCER MAKING A BIG MOVE INTO US

- Privately held
- 10,000 stores in 28 countries
- $70.0 billion
- 100 new stores in US by 2018
- Major plans ahead
- US Headquarters: Arlington, VA
ALDI

- Privately Held
- $69 Billion (US)
- Sister company to Trader Joe’s
- 1,600 US Locations (doubled in size over past 10 years); 2,000 locations by 2018
- Major plans ahead for EU too
- US Headquarters: Batavia, IL
WALMART FIGHTING BACK
AUTOMATION AND NEW TECHNOLOGY
RISE OF THE ROBOTS

Most US households will have a robotic PA by 2050 or may be sooner

**United States Automotive Industry**
2010-2015

- 80,000 new industrial robots installed
- 230,000 more employees

**Industrial Manufacturing**
Measured in robots per 100 workers

- S. KOREA: 5.31
- JAPAN: 3.05
- GERMANY: 3.01
- U.S.: 1.76
- CHINA: 0.49

**Annual Supply of Industrial Robots**

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<td>70</td>
<td>80</td>
<td>80</td>
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<tr>
<td>CANADA / MEXICO</td>
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<td>30</td>
<td>40</td>
<td>50</td>
<td>60</td>
<td>60</td>
</tr>
</tbody>
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**Total Forecast on Average Per Year**

- China: 2017-2019: +20%
- Japan: 2016-2019: +5%
- North America: 2016-2019: Between 5-10%

Source: IFR World Robotics 2016
HAPPENING NOW

Technological Advances Exponentially
Robotics, AI, Drones

Labor Issues and Unemployment?