

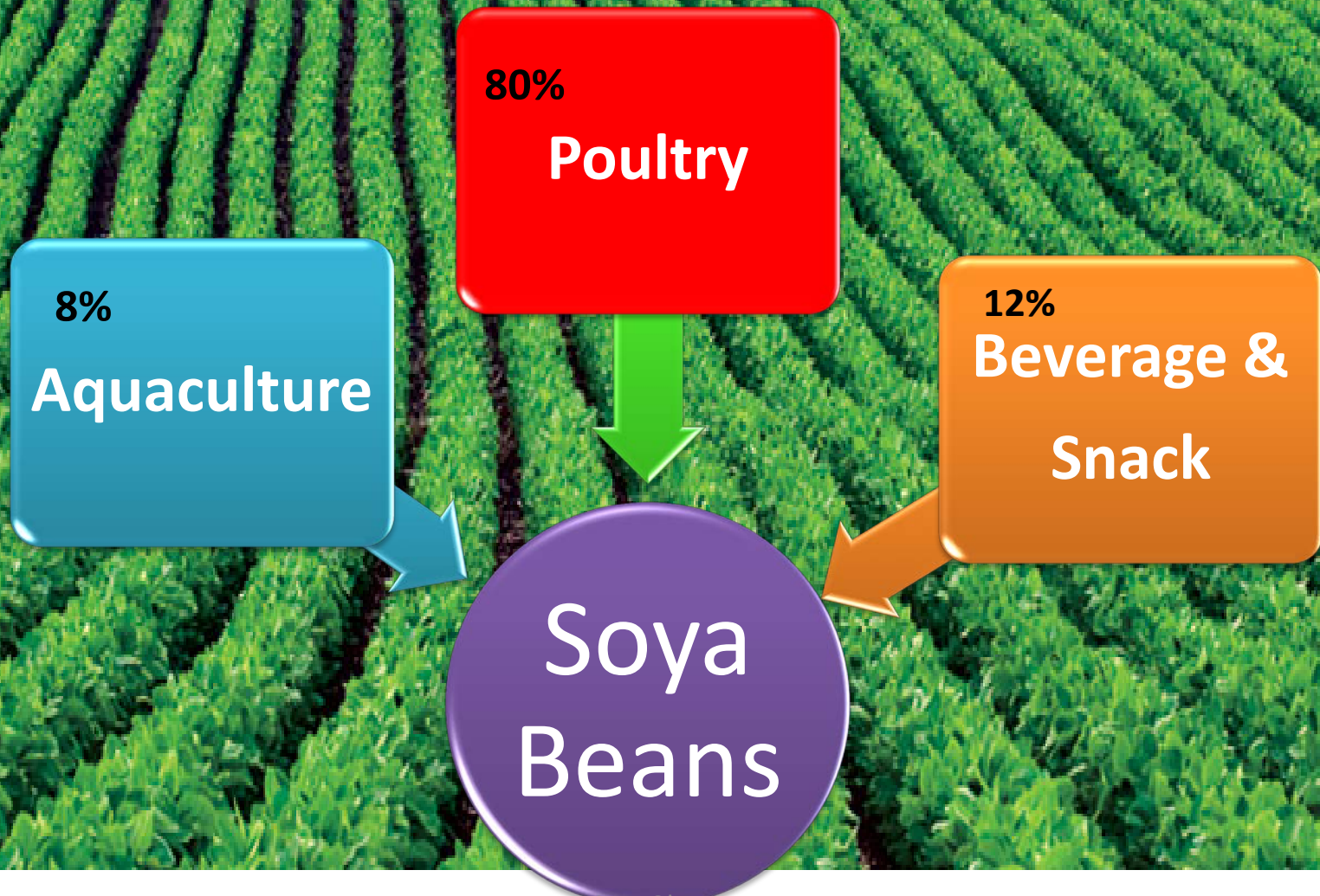


Investment Opportunities in increasing Production and Processing in Soy Value Chain

Background

- Production has been very subsistence, plagued with very poor yield, 0.8 metric tons/ha vs 3.5 metric ha in LatAm
- Northern Ghana accounts for about 90% of production Volume
- Consumer Awareness of Soya Beans as a very good and cheap Protein source is limited
 - Top of Mind Aware is below 1%

Major Categories of Soy Portfolio



Market Size Assumptions-

- **Feed Formulation**

 - Broilers : 33% Soy Meal

 - Layers: 20% Soy Meal

- **Basic Poultry Meat Products**

 - Drum Stick, Gear Box & Wings

- **Soy Proteins Products are held at zero**

 - Soy Milk

 - Soy Tufo, Khebab, etc

- **Aquaculture Feed is held at zero**

Market Growth- Broilers

- Estimated Per Capita Consumption of Poultry Meat has increased from 1.8Kg in 2000 to 7Kg in 2014
- Estimated Volume of Poultry Meat
 - National Volume: 175,000 metric tons
 - Local Production: 55,000 metric tons
 - Imported Poultry Meat: 120,000 metric tons

Market Growth- Broilers

- Drivers for Growth
 - Growing Population
 - Fueled by 3% annual Urbanization Rate
 - Growing Time Poverty among both Urban and rural Consumers – “Eat on the Go”
 - Affordability and Visibility, “everywhere, every time”

Market Size- Soy for Broilers

175,000,000kg

Total Volume of Poultry Meat Consumed



87,000,000 Units

Quantity of Broilers Consumed



173,000,000kg

Volume of Soy Meal to feed the Broilers

Market Growth- Layers

- Estimated Layers Population about 30,000,000 birds as @ 2013
- Drivers for Growth
 - Growing Population
 - Fueled by 3% annual Urbanization Rate
 - Growing Bakery Industry
 - Health Awareness for Kids
 - Emotional Consumption “*kyebom*”

Market Size- Soy for Layers

30,000,000 Units

Quantity of Layers



1,920,000,000Kg

Volume of Feed consumed for 80Weeks



384,000,000Kg

Volume of Soy Meal Consumed

Market Value- Soy Beans for Poultry Industry

- Broilers : 216,000 tons
- Layers : 480,000 metric tons
- TOTAL : 696,000 metric tons
- @ 400/ton = \$278m

Quality KPIs for Soya Beans

–Oil Content of the Soy
Grains

Soy Beans Production



- Farm Machines
 - Heavy Duty Tractors:
 - Plough, Harrow, Cultivator
 - Planters, Spreaders, Sprayers
 - Combined Harvesters
 - Dryers

Soy Beans Production



Irrigation:

- Pump Houses
- Central Pivot Equipment
- Gravity Construction

Soy Beans Production

- Fertilizer and Chemical:

- Volume of Fertilizer

- 1,700,000kg

- Chemicals

Soy Beans Production



- Warehouse and Logistics:
 - Silos
 - Grains Trucks
 - Grains Dryers
 - Grains Cleaners

Soy Beans Processing

- Seed Preparatory Machines
- Solvent Extraction Machines
- Oil Refinery
- Soy Meal Packaging

Egg & Meat Processing

- Meat Processing Machines
- Cold Chain Logistics
- Egg Processing Machines