AgriBusiness

Agricultural Services

About Perdue Farms Inc.

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We believe in responsible food and agriculture.®

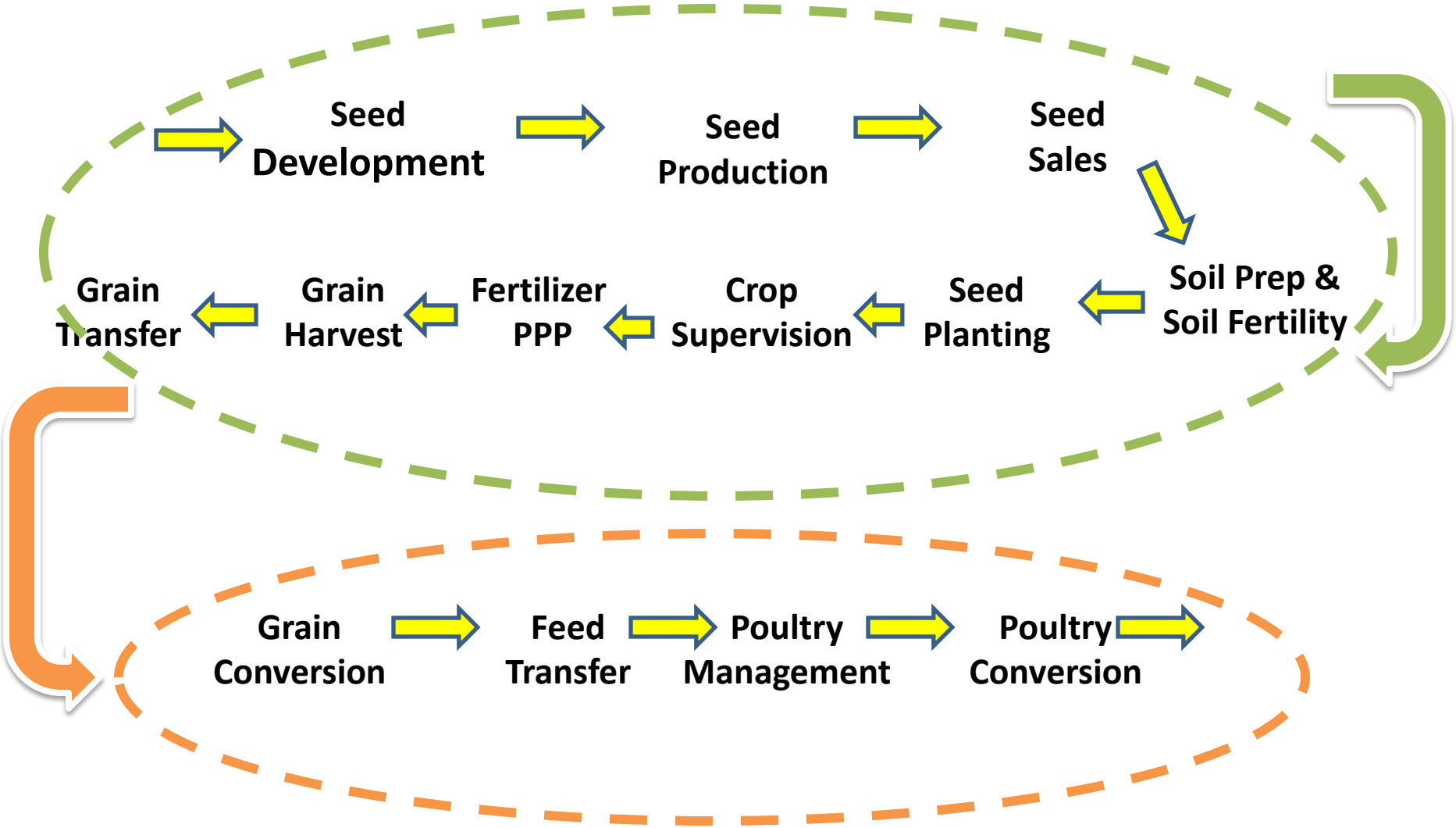
Perdue Foods

- **Perdue Foods** - (branded chicken, and turkey products distributed through retail, food service, and international customers)
- **Coleman Natural Foods** – (organic and antibiotic free meats – chicken, turkey, pork)
- **Niman Ranch** - (antibiotic and hormone free meats – beef, pork, hams, burgers, franks, and breakfast meats)

PERDUE AgriBusiness

- **Grain & Oilseed** – (grain merchandising; processing of oilseeds for oil, meal and hulls; refining and blending edible oils)
- **Animal Nutrition** – (high-end feed ingredients for the dairy industry, custom poultry blends, alternative feed ingredients)
- **Agricultural Services** – (agronomic services for farmers, organic fertilizers)
- **Specialty Crops** – (contracting, agronomic support and purchase of specialty crops such as HEAR Rapeseed and High Oleic Sunflowers)

Agricultural Services Value Chains



Agronomy Services: Who We Serve

- **Conventional Growers** – Retail, Consulting, Precision Ag Agronomy Tools, Pioneer's Encirca Services
- **Specialty Crop Growers** – Contracting HEAR Rapeseed in North East including Agronomic Support
- **Organic Grain Growers** – Microstart 60, Agronomic and Organic Consulting, Nutrient Management Plans

Cover Crops Recommendations: Develop Grower Profile

- **Assess the Grower's Operation**: Livestock, Row Crops, Mixed, Equipment and Personnel
- **Cultural Practices**: Rotation, Corn Maturity, Soybean Maturity, Tillage Practices, Management Level
- **Agronomic Challenges**: Pests, Fertility, Disease
- **History of Cover Cropping**
- **Goals of the Grower** – Motivation for using Cover Crops
- **Soils**
- **There is no one Perfect Strategy for everyone**

Recommendations: Implementation

- Cost- Seed Budgets generally $15-30 per acre
- Timing & Practicality
- Establishment Methods: Broadcast, Incorporated, Drilled, Hydroseed, Planter
- Nutrient Applications: Timing, Type, Locations, Rates
- Custom Work?
- Weather

Common Cover Crop Practices

- Rye- Planted on both livestock (Dairies) and row crop operations
- 2 to 12 species Cover Mixes including Grasses, Legumes, and Brassicas
- Custom Blends gaining popularity with Growers and Retailers
- Quality Early Maturing Corn and Soybean Genetics
- Planting Tillage Radish with Winter Wheat and Barley grain crops at 1lb/acre
- Interseeding Corn
- Dawn Biologic Cover Crop

	Winter kill (fall growth)		Winter hardy (spring growth)	
N fixer (provide N)	SOYBEAN *Glycine max* (L.) Merr.	SUNN HEMP *Crotolaria juncea* L.	HAIRY VETCH *Vicia villosa* Roth.	RED CLOVER *Trifolium pratense* L.
N scavenger (prevent N loss)	OATS *Avena sativa* L.	FORAGE RADISH *Raphanus sativus* L.	CEREAL RYE *Secale cereale* L.	CANOLA *Brassica napus* L.

Nutrient Management

- Livestock Growers have wider spread windows with Cover Crops
- Higher field nutrient retention
- Cover Crops are becoming a staple in nutrient management plans
- Reduction of manure runoff
- Nutrient cycling

HEAR Rapeseed

- High Eurcic Acid Rapeseed – Winter Annual similar to Canola
- 2015-2016 500 acres planted in Pennsylvania and Delaware
- Targeting 5,000 acres for 2016-2017
- Planted 6 weeks prior to Killing Frosts (Mid September)
- Harvested in Late June
- Perdue Provides Agronomic and Management Support

Wheat Stubble planted to Tillage Radish August 5th 2015, planted to Rapeseed September 17th 2015

Dormant Rapeseed; Tillage Radish
terminated by cold weather

Rapeseed March 28th, 2016

Terminated Tillage Radish January 2016

Terminated Tillage Radish March 28th 2016

Organic Cover Crops

- Cover Crops are required in Organic Crop Rotation – Legumes!
- Clover frost seeded into Wheat
- Rye for No-Till Soybeans
- Annual Rye Grass mixes for Tillage Operations
- Hairy Vetch- management challenges
- Winter Annual crops allow for the use of many different cover crop species to address issue

Organic Cover Crops…

- Tillage Radish mixes for compaction and weeds
- Sudangrass/Millet mixes with Sunn Hemp to control weeds, add biomass, and frost kill
- Buckwheat and Oats weed competition and biomass
- Keep the soil covered
- Winter Annuals allow greatest diversity of Cover Crops in rotation

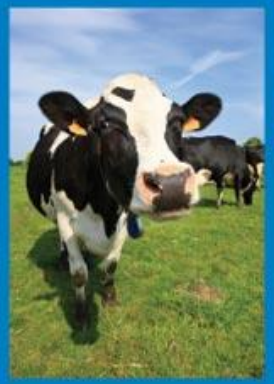
Organic Cover Crops…

- Winter mixes: Cereal grains, legume, canola/rapeseed: Diversity above and below the soil line
- Diverse environment for beneficial insects
- Cover Crop Strips: Planting crops in strips vs contiguous fields for biodiversity
- Interseeding corn at V4-V6, weed competition, ground cover, longer maturity corn

AgriBusiness

Our Customer Promise

Helping customers prosper with flexible, forward-thinking solutions for agriculturally based products from a uniquely trusted name.



Questions?

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