The Importance of a Dedicated Biomass Supply Chain

2013 Bio World Congress, Montreal, Canada
Dedicated Supply Chain
Pacific Ag Overview

- Formed in 1998
- 200+ Employees
- PowerStock Subsidiary Created in 2009; merged into Pacific Ag in 2012
- Operating in 7 States
- Core Operations
  - Ag Biomass Supply Chain Development and Operation
    - Bioenergy Sector
    - Export and Domestic Forage
PacificAg is a feedstock supply company. The largest in the US. We design, develop and operate large scale agricultural biomass feedstock supply chains for two growing global markets:

1. Hay and forage for domestic and export animal protein markets and
2. Bioenergy, biofuels and bio-based chemical conversion

We focus on optimizing the partnership and economic return among growers, end users and other key delivery partners.
How We Do It

We deliver value-added supply chain development, management and operations services through our …

• Largest owned and operated biomass harvesting equipment fleet in the US
• Proprietary supply chain management system – PowerStock Pro™
• Extensive grower relationship management experience
• Experienced management & leadership w/ decades of field harvesting logistics and supply chain expertise
• Growing national footprint
The eminent Iowa State economist Bruce Babcock recently said:

“The future of cellulosic biofuels in the United States hinges on whether three under-construction plants are successful. The three plants are designed to produce ethanol from crop residues and are all scheduled to be complete sometime in 2014. DuPont, Abengoa, and Poet/DSM are the owners.

“Success for these plants will be measured not by whether they can make a profit, but more by whether they can demonstrate that they can source, store and process large amounts of crop residues over the course of a year and whether their processing technology can consistently and efficiently convert biomass to ethanol.

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Dedicated Supply Chain Model

A bankable biomass feedstock supply chain requires:

- Reliable quantity
- Reliable quality
- Predictable cost
- Credible supply partners and counterparties
Dedicated Supply Chain Model

A traditional, open market feedstock supply chain (cereal grain model)

- Quantity risk is high – relying heavily on “build it and they will come”
- Quality risk is high – downstream cost risk vs. the threat of grower dissatisfaction leading to supply risk
- Cost risk is high -- open markets drive cost volatility and allow the development of alternative end use markets
- Scalability risk – building local capabilities takes years
Dedicated Supply Chain Model

Dedicated Supply Chain – a supply strategy to increase control and manage complexity characterized by close, formalized cooperation, from one end to the other with limited parties in long-term agreements.

The effect is to:

- Shift from transactional to transformational partnerships
- Long-term cooperation fostering value creation vs. chasing price
- Transparency on cost and margin vs. inadvertent transfers of value
- Purchasing or procurement becomes partnering
Dedicated Supply Chain Model

Dedicated Supply Chains for Bioenergy

“The cooperation between companies in a dedicated supply chain builds new levels of trust between them, fostering a basis for innovation in production processes, products and brands. Within these chains the relationships between companies shift from transactional connects to transformational partnerships, which are based on creating mutual benefit and shared commitment.”

Justin Sherrad, Global Strategist, Renewable Resources at Rabobank
Dedicated Supply Chain Model
Dedicated Supply Chain Model

A dedicated biomass feedstock supply chain provides:

- Reliable quantity – long term supply agreements to limited, qualified parties
- Reliable quality – concentrates standards adherence on partners rather than the “market”
- Predictable cost – aligned interests, transparency and specialization foster innovation and cost reduction
- Credible supply partners – long-term partnerships build experience and allow faster time-to-market and model scalability
The dedicated supply chain is an essential ingredient to managing risk