SoyInsights Executive Summary

Insights on the Issues that Might Impact the Soy Value Chain

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SoyInsights is a collaborative group of agriculture industry leaders who seek out perspectives to better understand the long-term direction of the U.S. soy industry. These perspectives help position the U.S. soybean industry as the global marketplace leader.

The primary objective of SoyInsights is to provide industrywide information on issues that might impact the entire U.S. soy value chain. SoyInsights will realize its mission by:

- Exploring global marketplace challenges and opportunities.
- Sharing information so partners can incorporate relevant strategies into their unique organizations.

A key tool for identifying the challenges and opportunities for the value chain is gathering input from a range of industry experts and stakeholders. SoyInsights conducted qualitative research with 40 experts from across the soy value chain to provide input on the market issues related to meal, oil and sustainability. The objectives of the research were to gain insight on:

1. What factors will drive U.S. soy leadership in the global market?
2. What factors will impact the U.S. soy industry?
3. What factors can the U.S. soy industry impact?

The stakeholder research identified several market challenges or opportunities that the soy value chain will need to consider and contend with over the next 5-10 years in the areas of meal, oil and sustainability. While many factors could impact the value chain, the SoyInsights Steering Committee narrowed the factors to those in areas where the industry could have an impact.

Top Challenges and Opportunities that Can Be Impacted by the Value Chain

MEAL	OIL	SUSTAINABILITY
1. Improve understanding of the soy nutritional bundle and use that to determine value 2. Constituent pricing	1. Conversion to high oleic 2. New industrial uses (high oleic, green and/or niche)	1. Differentiate U.S. soy by its sustainable production practices 2. Precision ag applications

SOYINSIGHTS INDUSTRY STAKEHOLDER RESEARCH

The SoyInsights stakeholder research focused on gathering qualitative insights and asking experts to name the challenges and opportunities that matter to the industry. The objectives of the research were to gain insight on:

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2. What factors will impact the U.S. soy industry?
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What will drive U.S. soy leadership?

The research asked the experts from soybean meal, soybean oil, and sustainability-related areas to identify the top issues that will affect U.S. soy industry success in the one to five years (2017-2021). And, then in the next five to 10 years (2021-2026).

In the next 1-5 years?	In the next 5-10 years?
Export opportunities	Export opportunities; global economy
Regulatory barriers: new trait approval and global acceptance of biotech	Regulatory barriers: new trait approval and global acceptance of biotech
Foreign competition	Domestic demand
	Foreign competition
	U.S. farm profitability

Related to demand (global and domestic), the experts talked about the impact of income growth on global animal protein consumption, and on the growing need for soy-based consumer food products to **have the ability to meet all their demands related to production, sustainability and health claims**. And, experts noted **the importance of knowing the needs and challenges of the livestock customer in the U.S.** as one of the largest drivers of demand – looking at both the potential meal demand, as well as understanding the production and regulatory issues they're facing.

Additional experts **noted that regulatory barriers have an impact beyond trait and pesticide approvals**. They raised concerns that health and safety issues related to biotechnology and pesticide use can spread and impact other agriculture markets, including soybean meal and oil customers.

What will impact the soy value chain?

The research asked questions to understand what issues will have an impact on the soy industry, and what the soy value chain will need to prepare for or consider addressing.

Top Factors Identified

- Foreign competition
- Regulatory environment
- Public attitudes toward, and knowledge of, large-scale agriculture production
- Infrastructure to move product to market
- Infrastructure to support customized soybeans throughout the value chain

A point of clarification from some of the experts related to addressing public attitudes was that while the general public is important, that audience is being addressed by others. There's a need to **focus on influencers who are making decisions and setting health and nutritional guidelines**.

Experts' input about the regulatory environment included trait and technology approvals, and **also noted water quality regulations in relation to soybean production and livestock production**.

Infrastructure insights focused on locks and dams, with many stating those are the biggest need for improvement, and pushing for **public/private partnerships** to spur investment in improvements.

What can the soy value chain impact?

Finally, the research sought to understand what trends the experts saw as opportunities that the soy value chain could leverage, or issues where the industry could take action to impact.

Top Factors Identified

- Establish **new markets and new products for U.S. soy**: have value chain discussions and create incentives and reward mechanisms.
- Address the **declining U.S. soy protein level** to produce a globally competitive product.
- Influence **U.S. trade policy**: global trading systems that help U.S. soy competitively address increased global demand for protein.
- Achieve **technology innovation and gain approvals** across all parts of the value chain: seed, biotech, equipment, crop rotation and precision data (verbatim quote from sustainability expert).
- **Address sustainability and water quality**: farmers need to understand these issues are real.

Diving deeper, the experts identified which factors might help the soy value chain to improve the soy product, expand the market and improve profitability.

Most improve the U.S. soy product?	Most expand the market for U.S. soy?
New plant breeding techniques/biotech	High oleic
Greater coordination with industry partners on sustainability	Greater coordination with industry partners on sustainability
Incentive to breed for higher protein levels	Take care of China and watch India as next big demand driver
Better quality oils and innovative composition traits	
Big data	

Top Soy Meal Trends to Increase Profitability

- Developing new global markets for animal feed
- Developing new global markets for meat protein
- Constituent pricing of soybeans
- Improved protein levels
- Ensure soy value bundle is understood and fully valued in pricing

Top Soy Oil Trends to Increase Profitability

- Conversion to high oleic soybeans
- New industrial uses for soy oil
- Continued biofuel subsidies
- Renaming and communicating the health benefits of interesterification

Top Soy Sustainability Trends to Increase Profitability

- Precision agriculture applications through use of big data and sensor technology
- Maintaining and improving domestic transportation infrastructure
- Addressing water regulations
- Addressing regulation on plant protection products
- More use of cover crops and no-till

SOY OPPORTUNITIES SCENARIO PLANNING

The SoyInsights Steering Committee conducted scenario planning on two market opportunities for the 2020-2025 timeframe. The two were selected based on criteria of whether the soy value chain could impact the situation and the potential value to the industry. Given the timeframe, conversion to high oleic soybean oil was eliminated from consideration since the hope is that development will be successfully implemented by that time. The Steering Committee selected two opportunities for the scenario planning: constituent pricing and differentiating U.S. soy by its sustainable production practices.

The facilitated scenario planning reviewed the current state of the opportunity, outlined the ideal state by 2025, and then discussed:

- What are barriers that would prevent the value chain from pursuing the ideal state?
- What rewards would motivate the value chain to pursue the ideal state?
- How can the value chain create the environment that drives the change needed to achieve the ideal state?

Constituent pricing

Current State	Desired State
The market deals in protien and oil, but value is driven by more than that. Current challenges are consistent measurement throughout the whole chain, and setting up the process for segregation of beans. There are some processors that are doing this today. Another challenge is a lack of definition and knowledge of the value for the whole market chain - from farmer to end user.	The market drives demand for constituent pricing and farmer consderation of amino acid, protein and oil content when selecting traits. The focus has moved to amino acid and digestability for meal, the ability to measure and compare amino acid profile is in place, and seed traits are available to deliver the desired profile and yield.

How the Value Chain Can Create the Environment for Change
Establish definitions and a consistent language (constituent vs. component). Test within the industry.
Create demand with a new offering/trait that benefits the full value chain. Also look to create demand pull through nutritionists.
Change value proposition discussion in the next five years to be about nutritional bundle/complete package.
Increase awareness of the “what’s in it for me” for each segment of the value chain.
No claims during transition.

Differentiating U.S. soy by its sustainable production practices

Current State

While some discussion continues about whether sustainability is driven by marketing, it is a concern that shows up consistently across the globe. In areas where it's not yet top of mind, it is a growing interest. Food brands/retailers are concerned about the risk of being seen as not "doing the right thing" - that includes the supply chain. Sustainable production must include economic, social and environmental factors, and can't look at soy in a vacuum because of crop rotation. U.S. Soy Sustainability Assurance Protocol has been benchmarked; recognized as sustainable. European Feed Manufacturers' Federation (FEFAC) published Soy Sourcing Guidelines in 2015.

Desired State

U.S. soy - through industry collaboration - has created and manages a definition and standards for sustainable production that includes environmental, economic and social considerations. Sustainable production is leveraged to build demand in markets - especially those where its not yet a requirement. Farmers are engaged because sustainability is part of being good stewards of the land, and is a competitive advantage that contributes to improved profitability by meeting customers' standards. Sustainable practices are benchmarked, results are reported, and the industry mindset is one of continuous improvement.

How The Value Chain Can Create the Environment for Change

Create a definition/languge for conversation.

Establish standards for U.S. soy production - one that is farmer friendly.

Create or partner with consortiums, like The Sustainability Consortium and/or Field to Market, to reduce the number of players, definitions and standards.

Create testimonies of the success of our sustainable practices delivering on customer needs to share with the value chain.