

Soy Insights Perspectives Survey

Executive Summary
November 2014

EXECUTIVE SUMMARY

Soy Insights' primary objective is to provide industrywide information on issues that may impact the entire U.S. soy value chain, enabling the industry to create long-term strategies for an increasingly global and changing environment. A key tool in collecting this valuable information is the Perspectives Survey, which gathers insight from a variety of experts on what the industry should be discussing and focusing on in five primary focus areas: general industry, soybean meal, soybean oil, customer focus, and freedom to operate.

For the second Perspectives Survey, in-depth interviews were conducted with 44 experts from across the soy value chain. Experts were asked to provide their short-term (1-2 years), medium-term (3-5 years), and long-term (5+ years) perspective on the soybean industry outlook among their areas of expertise within five primary factors, and 25 sub-factors, to help determine whether the outlook for that factor is unfavorable, neutral or stays the same, or favorable.

The results of this Perspectives Survey specified a favorable environment for U.S. soybeans in both the short- and long-term, with a key factor being an excellent outlook for domestic and international demand of both meal and oil. Overall, experts shared the opinion that soybeans will continue to share success with other crops for the next several years.

- The areas of soybean oil, soybean meal and customer focus received a favorable outlook. Experts specifically called out soybean meal as the most favorable areas for U.S. soy, due to continued growth in emerging economies.
- Experts identified challenges in areas such as water access and regulation, U.S. laws, consumer pressures for organics, and infrastructure.

Based on the survey results, the Soy Insights Steering Committee prioritized the top trends currently impacting the soy industry, and any implications of those trends.

The top trends for each sub-factor included:

- Soybean Meal: Continue to breed plants and/or develop technology to increase yield and enhance meal
 - Implication: Opportunity to invest and further develop meal-enhancing technology such as fiber, non-solubles, etc.
- Soybean Oil: Healthful dietary trends, particularly favoring good fats
 - Implication: Capitalize on high oleic nutrition profile
- Customer Focus: GMO vs. non-GMO
 - Implications:
 - Processing chain segregation
 - Market the benefits of high oleic and other nutrient-related traits.
 - Continue to improve customer education
- Freedom to Operate: Decline in infrastructure/transportation advantage
 - Implications:
 - Review restricted truck weights
 - Need for additional funding

GENERAL INDUSTRY

Overview

General Industry covers a wide variety of subjects related to the U.S. soybean value chain. Although receiving an overall neutral to positive outlook, experts did identify an unfavorable area for the soy industry in long-term water access. While most areas remained consistent, experts were more positive toward farm profitability than the previous Perspectives Survey (April 2014).

- Technology Adoption (biotech, traits, etc.) received strong support from experts for an increasingly favorable outlook over the next few years.
 - New traits for drought resistance, yield increases, and stacked traits will have huge impacts on the soy industry.
 - Big data will continue to evolve and grow, including drones, precision farming, and real time water information.
 - However, experts noted that U.S. approval processes need to be efficient to avoid slowing offshore approval. Public perception could also limit adoption of new technologies.
- Survey respondents also had a favorable outlook for increasing demand by U.S. consumers.
 - Health conscious consumers, and lactose and gluten intolerances, are going to drive an increased demand for soy. It is believed the industry will see an increase in the use of soy oils and soy based meat substitutes.
- The outlook for U.S. farm profitability was more positive for this round of interviews than last.
 - Increasing global wealth and demand are largest drivers for the improved farm profitability.
- Pest control and water access proved to be ongoing areas of concern.
 - Perceptions on pest control are divided; some experts believe it will become easier to manage with new technologies, while others believe it will become harder to manage due to increased consumer and regulatory pressures, and weed resistance.
- Access to water will be an increasingly important issue. The key topics mentioned in the survey were rural vs. urban use of water, concerns in California/western U.S., irrigation and tiling restriction, and drought-resistant traits.

Sub-factors	1 – 2 Years		3 – 5 Years		5+ Years	
	2013	2014	2013	2014	2013	2014
US Technology Adoption	2.60	2.70	2.96	2.87	3.00	2.92
US Farm Profitability	1.48	1.92	2.45	2.44	2.81	2.64
US Soy Acreage	2.61	2.44	2.33	2.33	2.61	2.31
US Pest Control	1.8	1.74	1.8	1.89	1.94	1.89
US Water Access	1.9	1.62	1.5	1.33	1.5	1.16
US Soy Food Demand	2.35	2.33	2.54	2.61	2.75	2.70



SOYBEAN MEAL

Overview

Experts provided a positive outlook for U.S. soybean meal, especially international demand.

- International Soybean Meal Demand is the one area that received a perfect favorable score of “3” across all time frames.
 - Increasing demand for animal protein in the developing and developed economies will continue to provide growth opportunities for soybean meal.
 - Livestock in developing countries will be a huge market for soybean meal.
 - Experts did note slight concerns around the unpredictability of regulations in other countries.
- Experts indicated a decrease in the competitiveness of U.S. meal vs. other countries, which they attribute to a lower protein level, as well as a decrease in the U.S. transportation/infrastructure advantage.
- Soybean Meal Technology is another sub-factor to which the experts gave a positive outlook in the next 5+ years.
 - Maintaining and improving the quality, including enhancing amino acids, improving nutritional benefits, and increased attention to enzymes in U.S. soybean meal, will be crucial to increasing demand and value.

Sub-factors	1 – 2 Years		3 – 5 Years		5+ Years	
	2013	2014	2013	2014	2013	2014
US Meal Demand	2.29	2.43	2.57	2.29	2.29	2.57
Outside US Meal Demand	3.00	3.00	3.00	3.00	3.00	3.00
US Meal vs Other Crops	2.00	1.86	2.34	1.86	2.34	1.86
US Meal vs. Other Countries	2.00	1.86	2.20	1.86	2.4	2.00
Meal Technology	2.43	2.15	2.80	2.43	2.83	2.50



SOYBEAN OIL

Overview

Overall, Soybean Oil received a positive outlook for the U.S. soybean industry over the next five years and beyond. There were areas of concern regarding U.S. oil vs. other countries and a slight decrease in the favorability for U.S. oil demand for the short- and medium-term.

- Experts noted that Soybean Oil versus other crops will be a key area of focus depending on how the U.S. Federal Drug Administration handles trans-fat issues. The ban of trans-fats would set up high oleic oils for tremendous success compared to other oils.
 - High oleic soybeans are crucial to the industry to create healthier and more stable oil, and to enhance profitability. However, high premiums could limit adoption by processors.
 - Omega-3s are on the horizon in the 3-4 year range, and could be important to the soy industry.
 - Experts stated that in the near future, the price of soybeans will likely be lower, making it more cost-competitive, but ultimately less profitable for the farmer. The opportunity to capture additional margins will be through utilizing new technology such as input traits, and/or operational efficiencies.
- U.S. Oil vs. Other Countries did receive a more unfavorable outlook than in the April 2014 Perspectives Survey. Experts attributed this primarily to the U.S. losing its transportation infrastructure advantages and a lower rated composition.
- The outlook for Soybean Oil demand outside the U.S. remains very strong for all time periods.
 - Population growth, especially in the middle class, could possibly impact demand.
 - Experts noted they continue to see increased attention on consuming a more healthful diet, and soy's role as a reliable provider.
- Biofuels
 - Biofuels could continue to be an area of opportunity and demand for soybean oil.
 - However, there is uncertainty regarding the Renewable Fuel Standard – it could either provide exponential growth opportunities, or will flatten and cause biofuel plants to close.

Sub-factors	1 – 2 Years		3 – 5 Years		5+ Years	
	2013	2014	2013	2014	2013	2014
US Oil Demand	2.11	1.66	2.33	2.17	3.00	2.33
Outside US Oil Demand	2.37	2.50	2.86	2.50	3.00	2.67
US Oil vs. Other Crops	2.5	2.17	2.5	2.33	2.71	2.40
US Oil vs. Other Countries	2.29	1.83	2.43	1.50	2.50	2.00
Oil Technology	2.62	2.33	3.00	2.83	3.00	2.83



FREEDOM TO OPERATE

Overview

As in April 2014, experts again forecast an unfavorable outlook for several sub-factors in the short- and long-term within the Freedom to Operate category.

- Consumer Pressures to label products containing ingredients derived from GMOs is the one area in which experts see significant improvement opportunities in the 5+ year outlook.
 - Experts expressed a belief that there will be a federal labeling mandate that will not hold up in court, and that will be the end of the pressures.
 - However, some also predict individual companies will continue to voluntarily label their products.
 - On a related note, experts saw demand for organic, local, and traceable food will continue to increase as Americans are more interested in how their food is grown.
- While Favorability of International Laws reported a neutral outlook, experts shared an increasingly unfavorable outlook for Water Rights/Regulation and Favorability of U.S. Laws.
 - Water quality will likely drive regulations, such as the Environmental Protection Agency’s Waters of the U.S. policy, “dead zone” regulation, etc.
 - In terms of water rights and access, soybean growers and users within the soy value chain will increasingly have to compete with the general population’s use.
 - Experts noted that there continues to be uncertainty in international laws, especially around biotech approval.
- In the U.S., as the public and lawmakers are further removed from the farm, and there is less rural input in the government, regulations will be less favorable to the soy industry. U.S. transportation infrastructure continues to decline, and experts see other countries increasing their capabilities, thereby decreasing our competitive advantage.

Sub-factors	1 – 2 Years		3 – 5 Years		5+ Years	
	2013	2014	2013	2014	2013	2014
Favorability of US laws	1.54	1.61	1.38	1.29	1.25	1.50
Favorability of International Laws	1.92	1.90	2.08	1.88	2.17	2.00
Water Rights/Regulation	1.55	1.40	1.1	1.13	1.1	1.13
Consumer Preference for Organic, Local, etc.	1.31	1.17	1.31	1.14	2.46	1.40
Consumer Pressure for GMO Labeling	N/A	1.24	N/A	1.74	N/A	2.20
US Transportation Infrastructure	2.00	1.67	1.85	1.67	2.15	2.30



CUSTOMER FOCUS

Overview

Surveyed experts noted Customer Focus provides both a positive and neutral outlook for the U.S. soy industry, with the exception of short-term component pricing adoption.

- Consumer demand for soy had a favorable outlook over the next five years.
 - Experts see the largest growth opportunity for soy is the alternative protein market, especially in the quick serve area.
- Although it has a less favorable short-term outlook, component pricing continues to be a key area of discussion, and the experts recognized this will be an area of interest with potential to improve over the next 5+ years.
 - Overall, experts say component pricing will take time with little positive movement in the short-term. With so many barriers overall, the soy industry might consider shifting its focus to an easier system or capitalize on the container-shipping trend.
 - The Soy Insights Steering Committee also highlighted the need to get all aspects of the value chain on board, including customers, processors and farmers. All parties need to be aware of, and see the value, in this model.
- A key positive point to highlight in this area is the impact and influence that experts foresee China to continue to play in the U.S. soy industry.
 - China will continue to have a large impact on U.S. soy. It has capacity to crush even more beans, and its demand continues to grow, driven by increasing economic and population growth that fuels meat consumption.
 - There are concerns around the unpredictability and stability of China's biotech approval and regulation process.

Sub-factors	1 – 2 Years		3 – 5 Years		5+ Years	
	2013	2014	2013	2014	2013	2014
US Soy Differentiation	2.14	2.18	2.00	2.36	2.17	2.44
Component Pricing	1.86	1.54	2.14	2.27	2.50	2.45
Consumer Demand For Soy	2.56	2.58	2.78	2.75	2.75	2.92
China Impact/Influence	3.00	2.72	2.87	2.81	2.86	2.80

