



# USB Action Plan

FY2016

10/20/15

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## UNITED SOYBEAN BOARD/SOYBEAN CHECKOFF

# LONG-RANGE STRATEGIC PLAN 2011-2016

After 20 years of steady successes, the checkoff is now facing a worldwide demand that requires a 50 percent increase in protein by 2030.\* We must continue striving for even greater yields to meet this growing demand while differentiating our U.S. soy products and services in the global marketplace.

**CORE VALUE:** The board, with honesty and integrity, collectively and individually, is committed to working within the letter and spirit of applicable law and regulation to achieve maximum value for each soybean farmer's checkoff dollar.

**MISSION:** Effectively invest and leverage soybean checkoff resources to maximize profit opportunities for U.S. soybean farmers.

**VISION:** U.S. soybeans will be the leader of the global oilseed industry.

**STRATEGY:** Create and maintain partnerships that differentiate and increase the utilization of U.S. soy in a changing global market.

### STRATEGIC OBJECTIVES

- 
**MEAL:** Increase the value of U.S. soybean meal to the entire value chain.  
**Measurement:** Changes in volume and value of U.S. soy meal.
- 
**OIL:** Increase the value of U.S. soy oil to the entire value chain.  
**Measurement:** Changes in volume and value of U.S. soy oil.
- 
**FREEDOM TO OPERATE:** Ensure that our industry and its customers have the freedom and infrastructure to operate.  
**Measurement:** Increase in acceptance of today's agriculture practices by influencers, customers, regulators and influential consumers.
- 
**CUSTOMER FOCUS:** Meet our customers' needs with quality soy products and services to enhance and expand our markets.  
**Measurement:** Improvement in customer relationships by key segments.

### PRIORITY ISSUES

#### PROTECT AND SUPPORT THE U.S. ANIMAL AGRICULTURE INDUSTRY

**Measurement:** Number and size of production facilities by species.

#### INVESTMENT IN TRANSPORTATION INFRASTRUCTURE

**Measurement:** Increase in public and private investment in soy transportation modes.

\*United Nations Food & Agriculture Organization

[www.UnitedSoybean.org](http://www.UnitedSoybean.org)



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# USB STRATEGIC OBJECTIVES AND TARGET AREA GOALS | FY15

		ACTION TEAMS							
TARGET AREAS		MEAL Increase Value of U.S. Meal	OIL Increase Value of U.S. Oil	FREEDOM TO OPERATE Ensure Freedom and Infrastructure to Operate	CUSTOMER FOCUS Quality Soy Products and Services to Enhance and Expand Markets				
DOMESTIC OPPORTUNITIES						<b>Quality and Component Value:</b> Ensure quantity and quality of U.S. soybeans to sustainably supply global markets while capturing greater value for all sectors of the soybean industry	<b>Feed:</b> Increase value of soybean meal in domestic feed	<b>Industrial:</b> Grow the use of soybean components for industrial and other new applications	<b>Food:</b> Increase the value and consumption of soy products for food use
INTERNATIONAL OPPORTUNITIES						<b>Customer Preference:</b> Engage foreign buyers with information and tools that help impact their profitability and drive preference for U.S. soy	<b>Differentiate:</b> Differentiate the value, sustainability and competitive advantage of U.S. soy from other competing products and origins to increase value and/or market share	<b>Market Access:</b> Develop credible resources and educate foreign governments, influencers and stakeholders to improve market access and resolve trade barriers	<b>Sound Science:</b> Increase the awareness of globally recognized sound science associated with U.S. soy with regard to biotech, food safety and security and sustainability
SUPPLY						<b>Component Value:</b> Improve seed composition to increase component value of U.S. soybeans ensuring quantity and quality to sustainably supply global markets, including the expansion of the availability of the high oleic (>70%) trait in adapted, high-yielding varieties in all major soybean maturity groups	<b>Yield Research:</b> Identify molecular techniques and genetic pathways that enhance soybean yield potential and stress resistance	<b>Sustainable Yield Production:</b> Develop soybean production systems that capture maximum yield potential while achieving continuous improvement against all key production sustainability metrics outlined in the U.S. Soybean Sustainability Protocol	<b>Feed:</b> Identify and develop measures that characterize and allow value capture of U.S. soybean meal
COMMUNICATIONS						<b>Customer Acceptance:</b> Increase acceptance of today's agriculture by non-ag audiences	<b>Customer Awareness:</b> Grow U.S. farmer understanding of end-use customers and their changing needs	<b>Leverage:</b> Collaborate with QSSBs and value chain to ensure consistent messaging and leveraging of resources	<b>Farmer Support:</b> Maintain level of U.S. soybean farmers who see value in the soy checkoff

**UNITED SOYBEAN BOARD  
SUMMARY BUDGET  
FOR FISCAL YEAR ENDING SEPTEMBER 30, 2016**

	FY2016 PROPOSED BUDGET	AT-TA ADJUSTMENTS	July FINAL ADJUSTMENTS	FY2016 APPROVED BUDGET	FY2015 APPROVED BUDGET
<b>BUDGETED OPERATING REVENUE</b>					
QSSB Collections	\$ 76,593,750			76,593,750	85,500,000
Investment Income				0	0
<b>Total Budgeted Operating Revenue</b>	<b>\$ 76,593,750</b>	<b>0</b>	<b>0</b>	<b>76,593,750</b>	<b>85,500,000</b>
<b>BUDGETED PROGRAM EXPENDITURES</b>					
Meal		19,425,525		19,425,525	20,190,790
Oil		17,028,647		17,028,647	20,883,156
Freedom to Operate		11,692,845		11,692,845	15,378,892
Customer Focus		11,255,170		11,255,170	14,331,923
Seed Industry Partnership - HOS	8,000,000			8,000,000	8,000,000
Allocations to Strategic Objectives	59,402,187	(59,402,187)		0	0
USB Managed - Program Implementation	17,488,070		732,158	18,220,228	19,872,808
USB Managed - Other Programs	3,800,000		300,349	4,100,349	4,353,499
<b>Total Program Funding</b>	<b>\$ 88,690,257</b>	<b>0</b>	<b>1,032,507</b>	<b>89,722,764</b>	<b>103,011,068 (1)</b>
USB Evaluation of Programs	1,773,805	0	20,650	1,794,455	2,060,221
<b>Total Programs &amp; Evaluation</b>	<b>\$ 90,464,062</b>	<b>0</b>	<b>1,053,157</b>	<b>91,517,219</b>	<b>105,071,289</b>
<b>BUDGETED NON-PROGRAM EXPENDITURES</b>					
USDA	275,000			275,000	300,000
Administrative	3,829,688	0	0	3,829,688	4,275,001
QSSB Assessment Credits	25,000			25,000	25,000
<b>Total Non-Program Expenditures</b>	<b>\$ 4,129,688</b>	<b>0</b>	<b>0</b>	<b>4,129,688</b>	<b>4,600,001</b>
<b>Total Budgeted Operating Expenditures</b>	<b>\$ 94,593,750</b>	<b>0</b>	<b>1,053,157</b>	<b>95,646,907</b>	<b>109,671,290</b>
<b>BUDGETED OPERATING SURPLUS(SHORTFALL)</b>	<b>(18,000,000)</b>	<b>0</b>	<b>(1,053,157)</b>	<b>(19,053,157)</b>	<b>(24,171,290)</b>

TOTAL PROGRAM FUNDING	ACTION TEAMS				PIC* and USB MANAGED	Total	
	MEAL	OIL	FREEDOM TO OPERATE	CUSTOMER FOCUS			
<b>FY2016 ALLOCATION by Strategic Objective</b>							
<b>Target Areas:</b>							<i>FY2015 Allocations</i>
Domestic Opportunities (Food/Feed; Industrial)	6,622,161	11,579,480	3,390,925	2,926,345	3,077,394	27,596,305	32,284,831
International Opportunities (Food/Feed; Industrial)	4,450,388	1,362,292	2,104,712	3,826,758	10,022,786	21,766,936	25,355,983
Supply	7,556,529	1,362,292	2,537,347	1,913,380	1,515,731	14,885,279	16,752,014
Communications	796,447	2,724,583	3,659,861	2,588,687	3,604,317	13,373,895	16,264,741
Seed Industry Partnership - HOS		8,000,000				8,000,000	8,000,000
USB Managed					4,100,349	4,100,349	4,201,499
<b>Committed Allocation to Strategic Objective</b>	19,425,525	25,028,647	11,692,845	11,255,170	22,320,577	89,722,764	102,859,068
Additional Allocation							0
<b>Allocation for FY 2016</b>	19,425,525	25,028,647	11,692,845	11,255,170	22,320,577	89,722,764	102,859,068 (1)
Percent of AT funding, excl. HOS third party	32.70%	28.67%	19.68%	18.95%	N/A	100.00%	

\* Program Implementation Cost (PIC) amounts based on FY2016 preliminary proposals.

\* Program Implementation Cost (PIC) amounts based on Primary Contractor proposals, allocated to Target Areas as follows:

Domestic Opportunities = 2/3 SmithBucklin PIC

International Opportunities = USSEC PIC

Supply = 1/3 SmithBucklin PIC

Communications = OsbornBarr PIC

## **FY2016 Market Environment**

The national soy checkoff's 2016 fiscal year approaches amid expectations for another strong year of soybean production in the United States and the competitor countries Brazil and Argentina—potentially breaking new records. While weather patterns and other variables have yet to determine the final outcome for the 2015/16 marketing year, the overall market environment continues to be one of great – and increasing – global soybean supplies and production, putting downward pressure on prices.

As of late spring 2015, market-year 2014/15 utilization of U.S. soy appears robust in domestic and global markets. Overall, U.S. soy exports stood at 90.5 percent of the annual U.S. Department of Agriculture (USDA) estimate with several months to go in the year (note: the soybean crop year goes from Sept. 1 to Aug. 31 and meal/oil from Oct. 1 to Sept. 30.) USDA forecasts total exports of U.S. meal, soybeans, and oil will exceed 61 million metric tons, a 9.5 percent increase over the record pace of last year.

Continued growth in the U.S. livestock industry and biofuels builds on the recent trends for domestic utilization of soy and contributes to a solid foundation projected by USDA headed into the 2015/16 marketing year for an expected fourth-consecutive domestic-consumption record for soybean oil.

The following observations were compiled from staff interviews and strategic-reporting materials in late spring 2015, and are designed to provide broad context to United Soybean Board farmer-leaders as they consider programming for the 2016 fiscal year.

### **Soybean Meal**

Soybean-meal consumption is expected to increase for the third consecutive year, driven by strong demand from animal agriculture, as exports of soybean meal and whole soybeans are expected to soften.

USDA predicts that domestic soybean meal consumption by animal agriculture will continue to rise due to expansion in the broiler and swine sectors. When questioned about the impact of avian influenza, leading economists said that decreased soybean meal consumption is likely to be regional and primarily limited to the turkey and layer sectors.

DDGS and canola meal, combined with relatively cheaper synthetic amino acids, continue to displace significant amounts of soybean meal per ton in formulated feed. This market slippage was accelerated when lower soybean supplies in prior marketing years spurred domestic use of synthetic amino acids in swine and poultry diets.

Despite this pressure, domestic soybean meal consumption rose by 400,000 metric tons last year. This volume increase came despite the average price of \$490 per ton for the year, according to USDA.

USB conducted considerable work in 2015 exploring how to maximize the value of soybean meal to better compete in this challenging marketplace, including the work of the Value Task Force in conjunction with the greater soy value chain, and the Animal Nutrition Working Group. Together with the work of some of the Qualified State Soybean Boards and land-grant universities, two logical approaches to maximize the value of soybean meal emerged in FY2015, within the context of emphasizing the entire nutritional bundle in soybean meal that includes protein, amino acids and energy. The two potential value-enhancement opportunities they are exploring are increasing the energy content of soybean meal by reducing indigestible oligosaccharides while increasing seed sucrose content; and reducing insoluble carbohydrates to increase oil and protein in the seed.

The 2015 fiscal year also brought with it the work of CONNECTIONS 2014, during which a record crowd of 429 members of the U.S. soy value chain gathered and discussed topics central to soybean-farmer profitability, maximum-value U.S. soybean meal among them. As a result, USB directors have a mandate to further investigate approaches to addressing this issue, work that will kick into high gear in FY2016, when the Value Task Force will deliver its recommendations to the Board. USB directors will meet with representatives of seed and technology companies, processors, QSSBs, and end users to determine which meal improvements to work toward, eventually culminating in research and commercialization activities beginning in FY2017 under the Meal Action Team.

Regarding international markets, by mid-June, China's soybean imports were already 7.2 percent higher than last year. The EU was running 18.4 percent ahead of last year for soybeans. Despite pressure on GMO products, Turkey was up 109 percent. Triple-digit growth is also seen for Portugal, Bangladesh, Colombia and Costa Rica. Regarding soymeal, Thailand's imports were up 78 percent as nearby Indian soymeal is scarce and costly. Two and one-half years after implementation of the bilateral free trade agreement with Colombia, soymeal imports have almost doubled. Overall exports of soymeal to the EU were down 16.5 percent, reflecting the increased crush of U.S. soybeans.

China's soy consumption of fish and livestock feed continues to grow by 9 to 10 percent per year, and soyfood demand there has outstripped China's ability to produce it. U.S. soy exports to Southeast Asia are growing, as well. In India, increased domestic consumption is tightening that country's supply available for export, opening up opportunities for U.S. soy sales in the region. And European poultry and swine producers continue to move away from specifying non-GM meal in their rations, opening further U.S. export opportunities. U.S. soymeal exports to Europe rose in 2013/14 to the highest level in two decades.

As USB leads in industry in maximizing the value of U.S. soybean meal, its efforts to help U.S. soybean farmers realize enhanced profit opportunities from meal continue, as well. Yet raising awareness among growers continues to be challenging. In the winter 2015 Producer Attitudes Survey, 65 percent of producer-respondents indicated they would be in favor of moving to a component pricing system, 2 percentage points lower than the proportion who responded similarly a year earlier.

## **Soybean Oil**

The U.S. Food and Drug Administration's move in June 2015 revoking the GRAS (Generally Recognized as Safe) status of partially hydrogenated oils used in human food holds significant implications for the U.S. soy industry. Among them is the fact that approximately 2 billion pounds of soybean oil will need to be replaced within the food chain over the next three years. The FDA's decision, while not unexpected, adds urgency for the successful introduction of high oleic soybeans in the farm marketplace to meet the growing needs of the food industry to get a steady supply of high oleic oil.

Fiscal year 2015 saw progress in the development of this market, both on the supply and demand sides. Farmers in eight states grew high oleic varieties on an estimated 250,000 acres. The list of food companies testing high oleic soybean oil topped 500. The EU granted regulatory approval for the single high oleic traits found in both Plenish and Vistive Gold. The EU, however, requires stack approval for varieties with multiple biotech traits so the work in Europe is not complete and continues to stymie growth in acreage. China also is a barrier on the trait found in Monsanto's Vistive Gold. Chinese regulators previously approved the trait in DuPont Pioneer's Plenish. Monsanto has completed all required tests but is still awaiting approval. Both EU and Chinese approval could happen as early as the first quarter of 2016.

Helping to support soybean oil prices is the market for biodiesel, for which U.S. soybean oil is the primary feedstock. More than 5 billion pounds of soybean oil went to producing 1.3 billion gallons of biodiesel in 2013/14, or nearly 25 percent of the domestic soybean-oil crush. The U.S. Environmental Protection Agency recently proposed volume requirements for biomass-based diesel that would indicate a growth in the market potential for soybean oil as a feedstock through 2017. That proposal is expected to be finalized by November 2015. One USB subject-matter expert cautions that it's important to monitor Brazil and Argentina's participation in this market, and ensure that U.S. soy remains the primary feedstock of U.S.-produced biodiesel. Outside of the biodiesel industry, industrial use of soybean oil for non-biodiesel purposes continued its run of growth in 2013/14 utilizing 1.5 billion pounds of soybean oil. These uses have more than doubled over the last decade, equating to over 8-percent compound growth since 2004/05.

Globally, U.S. soy oil exports are on track to exceed the USDA forecast, with the current marketing year likely to become one of the best export years in the last five. With 58 percent of the marketing year behind us (in June 2015), exports of U.S. soy oil stand at 73 percent of the year's USDA forecast – with sales of 1.45 billion pounds of oil.

The majority of U.S. soy oil exports go to the Americas region, which showed substantial growth of 50 percent in June 2015 with a significant portion of the marketing year yet to happen, despite a stronger dollar and increased competitive soy oil exports from South America. U.S. soy oil export growth is strong year-over-year across the region, including in Guatemala (up 176 percent year over year), Peru (up 135 percent), Dominican Republic (up 84 percent), and Colombia (up 66 percent).

## **Sustainability**

The overseas' markets resoundingly acknowledge the relevance and desirability of the U.S. Soybean Sustainability Assurance Protocol (SSAP) compared to the competing certification from the Round Table for Sustainable Soy (RTRS). The RTRS, launched nine years ago, certified 1.3 million metric tons in 2014 – a new record for it. In 2014, the inaugural year for the SSAP program, U.S. soy certified 684 metric tons (25,132 bushels). As of mid-June of 2015, SSAP had already certified 850,638 metric tons (approximately 31.3 million bushels). There are 279,110 soybean producers in the U.S. SSAP program compared to approximately 40 in the RTRS, according to their website.

Adding to the building momentum of the SSAP is the decision in February by the Dutch Feed Industry Association known as NEVEDI to approve the SSAP under its sustainability scheme, meaning that U.S. soy with an SSAP certificate can satisfy NEVEDI's requirement for sustainable feedstuffs for feed manufactured in the Netherlands to be exported within Europe. This is an important milestone as the SSAP continues to build its presence in the marketplace.

## **Additional Highlights**

An econometric simulation model of world soybean and soybean-product markets dating back more than 20 years was conducted by Gary Williams, Ph.D., professor of agricultural economics at Texas A&M University. According to the study, international marketing activities conducted on behalf of U.S. soybean farmers increased soybean exports each year by an average of 993,600 metric tons, or nearly 5 percent. For soybean meal and soybean oil, the average annual growth over that period was estimated to be somewhat larger at 15 percent (808,600 metric tons) and 24 percent (149,600 metric tons) respectively.

## MEAL

### Target Area Goals and Measurements Addressed by Meal Action Team

#### Quality and Component Value (D01):

- Key component measurement scheme is identified and shared with industry by 2025.
- Soybean meal and other products (e.g., soy protein concentrate) use in domestic feed rations reaches 28.5 million metric tons by 2016.

#### Feed (D02):

- A component value marketing platform for U.S. is established by 2016.
- Soybean meal and other products (e.g., soy protein concentrate) use in domestic feed rations reaches 28.5 million metric tons by 2016.
- U.S. broiler exports increase 5 percent by volume from 3.1 million metric tons by 2015.
- U.S. broiler exports increase 7 percent by value from \$3.6 billion by 2015.
- U.S. pork exports increase 12 percent by volume from 2.3 million metric tons by 2015.
- U.S. pork exports increase 15 percent by value from \$6.1 billion by 2015.
- U.S. turkey exports increase 7 percent by volume from 319 thousand metric tons by 2015.
- U.S. turkey exports increase 10 percent by value from \$599 million by 2015.

Industrial (D03): Soybean meal component use in industrial uses reaches 0.081 million metric tons by 2016.

Food (D04): Raise consumer perceptions of soy as healthy from 75 percent to 80 percent.

Customer Preference (IO1): Net Promoter Score.

Differentiate (IO2): Valuation of U.S. Soy & Extrinsic Differentiators.

Sound Science (IO4): Positive media.

Component Value (S1): Increase the combined seed content of protein and oil by 10 percent by 2025.

Yield Research (S2): Identify four key transcription factor gene systems that control expression of genes related to yield, protein composition and oil content by 2020.

Sustainable Yield Production (S3): Increase Average U.S. soybean yield by 36% per acre by 2025.

Customer Awareness (C2): Percentage of U.S. soybean farmers willing to grow varieties with higher protein and oil content to meet customer demand.

Leverage (C3): 10 percent growth in leveraged dollars with QSSBs.

Farmer Support (C4): Maintain at least 76 percent of U.S. soybean farmers who say they believe the soy checkoff is a “good deal” for soybean farmers.

### Constraints/Opportunities Addressed by Meal Action Team in Priority Order

**Animal Feed:** There is opportunity to further engage and educate animal nutritionists, livestock producers, soybean farmers and other decision makers about the value of U.S. soybean meal to increase inclusion rates in animal rations, develop products with improved composition and create a preference for U.S. soy.

**U.S. Meat & Poultry Demand:** Profit potential for U.S. soybean farmers can be increased by strengthening demand for U.S. meat and poultry internationally, which is a key opportunity for increasing U.S. soybean meal consumption.

**Yield Improvement Through Breeding:** The lack of modern methods and genetic markers for use by genetic researchers and breeders constrains the development of high-yield varieties that would enable soybean farmers to enhance the value of their crop.

**Protecting Soybean Yield from Environmental, Pest and Disease Stresses:** U.S. soybean farmers are limited in the extent to which they can exploit the soybean genetic yield potential because of the lack of understanding of the physiological pathways involved in environmental stress tolerance and the biology of pest organisms that can be exploited to develop soybean varieties with better yield under stress conditions or managed to protect soybean plants from losses due to drought, heat or emerging disease, nematode or insect pests.

**Soy in Aquaculture:** Soybean farmers have an opportunity to increase the value of U.S. soybeans by establishing soybean meal as a preferred protein source in aquaculture diets based on research and utilization of best management practices to maximize the inclusion of U.S. soybean meal and soy protein concentrate in aquaculture feed in high-demand global markets, while encouraging consumption and support of farm-raised seafood by educating influencers on the health, environmental and economic benefits of soy-fed fish.

**New Industrial Uses Development:** Soybean farmers can increase the value of U.S. soybean meal by developing new processes to utilize the low-value, indigestible components in meal, capitalizing on its low cost, consistent availability and low carbon footprint through research, market and economic analyses to develop and commercialize new soy products.

**Human Uses:** The soy industry has an opportunity to increase the value and consumption of soy products by maintaining and enhancing the soy “Health Halo” through support of

worldwide soy health research and communications activities around the positive human health benefits of consuming soy, and through dissemination of accurate information to key consumer influencers to help counter misinformation.

## OIL

### Target Area Goals and Measurements Addressed by Oil Action Team

#### Industrial (DO3):

- 32 new products/applications (average each year) introduced using a soybean component.
- Soybean oil component use in biodiesel and other industrial uses reaches 5.6 billion lbs by 2016.
- Soybean oil component use in biodiesel and other industrial uses reaches 5.6 billion lbs by 2016.
- 32 new products/applications (average each year) introduced using a soybean component.

Food (DO4): Soy oil usage for food will reach 14 billion pounds by 2020.

Customer Preference (IO1): Net promoter score.

Differentiate (IO2): % of target that understands how to value U.S. soy's competitive advantage with regard to transparency, supply, contractual issues and risk reduction.

Market Access (IO3): Progress in addressing of Barriers to Trade of U.S. Soy.

#### Component Value (S1):

- Increase combined seed content of protein and oil 10% by 2025.
- 18 million acres of high oleic soybeans by 2023.

#### Customer Awareness (C2):

- High oleic processors meet 80% of contract goals annually.
- Maintain at least 76 percent of U.S. soybean farmers who say they believe the soy checkoff is a "good deal" for soybean farmers.

Leverage (C3): 10% growth in leveraged dollars with QSSBs and value chain from \$8.4 million to \$9.2 million.

Farmer Support (C4): Maintain at least 76 percent of U.S. soybean farmers who say they believe the soy checkoff is a "good deal" for soybean farmers.

## Constraints/Opportunities Addressed by Oil Action Team in Priority Order

**High Oleic Soybean Program:** The success of the high oleic soybean program is constrained by availability of high oleic soybean varieties; lack of farmer awareness; initial value chain education and commitment; and timely end-user incorporation into products.

**Biodiesel Program:** U.S. soybean farmers have an opportunity to expand biodiesel markets by providing technical support and expertise, while marketing and educating key audiences about this high quality fuel.

**Commodity Soy Food Oil:** The commodity soy oil market is constrained from domestic and international growth due to a lack of awareness of U.S. soybean oil's true value through its physical attributes, price competitiveness and trusted supply.

**New Industrial Uses for Oil:** Soybean farmers will benefit from increased value of U.S. soybean oil by investing in the development of preference for soybean oil as a feedstock/ingredient among manufacturers of high value, high volume industrial products and applications and their customers.

**Modifying Soybean Oil Content and Composition:** Higher oil percentage and/or enhanced oil traits in soybean varieties present an opportunity to increase the perceived value of soybeans to domestic processors and export markets.

## FREEDOM TO OPERATE

### Target Area Goals and Measurements Addressed by Freedom to Operate Action Team

Quality and Component Value (DO1): Fifteen brands endorse a USB-supported sustainable soybean sourcing program by 2020.

Feed (DO2):

- Soybean meal and other products (i.e. soy protein concentrate) use in domestic feed rations reaches 28.5 million metric tons by 2016.
- U.S. broiler exports increase 5% by volume from 3.1 million metric tons by 2015.
- U.S. broiler exports increase 7% by value from \$3.6 billion by 2015.
- U.S. turkey exports increase 7% by volume from 319 thousand metric tons by 2015.
- U.S. turkey exports increase 10% by value from \$599 million by 2015.
- U.S. pork exports increase 12% by volume from 2.3 million metric tons by 2015.
- U.S. pork exports increase 15% by value from \$6.1 billion by 2015.

Food (DO 4): \*Proposed Measurement to be Reviewed by SMC\* Raise consumer perceptions of soy as healthy from 75% to 80% by 2018.

Customer Preference (IO1): Net Promoter Score.

#### Differentiate (IO2):

- Differentiate the value, sustainability and competitive advantage of U.S. soy from other competing products and origins to increase value and/or market share.
- % of target that understands how to value U.S. soy's competitive advantage with regard to transparency, supply, contractual issues and risk reduction.

#### Market Access (IO3): Progress in addressing of Barriers to Trade of U.S. Soy.

#### Sound Science (IO4):

- Volume of "Certified Sustainable" U.S. Soy exported.
- Number of neutral to positive articles appearing in the international trade/consumer media about the U.S. soybean industry.
- Increase the awareness of globally recognized sound science associated with U.S. soy with regards to biotech food safety and security and sustainability.
- % improvement in Global Biotechnology Environment Scan.
- Targeted buyers rating of effectiveness of U.S. Soy in contributing to their country/region food safety and security.

Sustainable Yield Production (S3) – Increase average U.S. soybean yield by 35% per acre through (A) translation of research results into new higher yielding varieties and better management practices and (B) capturing 10% more genetic yield potential per acre by 2025 by managing biotic and abiotic stresses that impact yield.

Consumer Awareness (C1) – Percentage of consumers who believe today's ag is moving in the right direction increases from 43 percent to 47 percent. Percentage of influencers who are 'comfortable' with the way that meat, grains and produce are grown and raised increases from 54 percent to 56 percent.

Leverage (C3) – 10% growth in leveraged dollars with QSSBs and value chain from \$8.4 million to \$9.2 million.

#### Constraints/Opportunities Addressed by Freedom to Operate Action Team in Priority Order

**Sustainability:** Farmers can capture additional (quantifiable?) agronomic, marketing and stakeholder acceptance benefits through a collaborative effort to benchmark and continuously improve performance against sustainability metrics.

**Water:** Regional/local organizations lack the coordinated resources (information, leveraged funding, collaborative strategy, etc.) to support farmers in maintaining a farmer-led approach to water stewardship.

**Biotechnology:** The freedom to utilize biotechnology is being threatened for U.S. farmers due to a lack of education and understanding about modern technology. This lack of education reduces opportunities for U.S. soy farmers to use varieties that support the health of the soy industry.

**Animal Ag (Domestic):** The #1 customer of soybean farmers, animal agriculture, faces many challenges that potentially could inhibit its ability to operate and expand.

**Transportation / Infrastructure:** In order to ensure efficient transportation for the agriculture industry, USB supports and communicates on issues related to the soy transportation infrastructure. This includes managing the communications process with consistent messaging and tools for effective and timely response to emerging issues.

**Market Access:** Opportunity to increase U.S. soy exports to global markets by reducing market access trade barriers or addressing trade issues such as differential export taxes, chemical maximum residue limits, use of food grade mineral oil as dust suppressant, sustainability, and analysis and impact of possible Free Trade Agreements.

**Animal Ag (International):** U.S. soy, grain, and meat and poultry market access is impeded in some international markets because of concerns over food security and safety. In addition importing countries have created artificially high import restrictions (published and unpublished) in an effort to protect their processing industry.

**Longevity of the Industry (Next Generation):** Budget cuts and reduced awareness of the career opportunities in agriculture among young scientists constrain the potential for continuous improvement in soybean production. In today's standard curriculum; K-12, undergraduate and graduate students are not encouraged to pursue educational tracks that train them in soybean sciences and lead them to become the next generation of soybean researchers.

## CUSTOMER FOCUS

### Target Area Goals and Measurements Addressed by Customer Focus Action Team

Quality & Component Value (DO1):

- Fifteen brands endorse a USB-supported sustainable soybean sourcing program by 2020.
- A component value marketing platform for U.S. is established by 2016.

Feed (DO2): Soybean meal and other products (i.e. soy protein concentrate) use in domestic feed rations reaches 28.5 million metric tons by 2016.

Industrial (DO3):

- Soybean meal component use in industrial uses reaches 0.081 million metric tons by 2016
- Soybean oil component use in biodiesel and other industrial uses reaches 5.6 billion lbs by 2016.
- Grow the use of soybean components for industrial and other new applications.

Food (DO4):

- Increase the value and consumption of soy products for food use.
- Raise consumer perceptions of soy as healthy from 75-80 percent by 2018; Soy oil usage for food will reach 14 billion lbs. by 2020.
- Soy oil usage for food will reach 14 billion pounds by 2020; Raise consumer perceptions of soy as healthy from 75% to 80% by 2018.

Customer Preference (IO1): Net Promoter Score.

Differentiate (IO2):

- Net Differentiation Score.
- % of target that understands and acts on the value of U.S. soy on the basis of digestible protein, amino acid profile and energy.

Market Access (IO3): Progress in addressing barriers to trade of U.S. soy.

Component Value (S1): Increase domestic use of U.S. soy by the animal feeding industry by 25% by 2025.

Sustainable Yield Production (S3): Increase average U.S. soybean yield by 36% per acre by 2025.

Feed (S4):

- Standard analytical measures for digestible amino acids developed by 2020; standard analytical measures for metabolizable energy accepted worldwide by 2016. Document the composition profile and resulting value of U.S. soybeans and soybean meal compared to South American competitors by 2015.
- Document the composition profile and resulting value of U.S. soybeans and soybean meal compared to South American competitors by 2015.

Customer Awareness (C2): % of U.S. soybean farmers who say they would be willing to change the seeds they plant if export markets like China demanded soy with higher protein and oil content increases from 32 % to 35 %.

Leverage (C3): 10% growth in leveraged dollars with QSSBs and value chain from \$8.4 million to \$9.2 million; Increase number of QSSB communication partnerships from 27 to 30.

Farmer Support (C4): Maintain at least 76 percent of U.S. soybean farmers who say they believe the soy checkoff is a “good deal” for soybean farmers.

#### Constraints/Opportunities Addressed by Customer Focus Action Team in Priority Order

**Customer Engagement & Relationships:** Customers in food, feed and industrial markets lack the knowledge of the benefits and value-added services provided by the U.S. soybean industry and its products. In order to meet our customers’ needs with quality soy products and services, we must engage with them, build trusting relationships and educate them on our products and the services and resources we offer.

**Production Coordination & Outreach:** In order to meet our customers' needs with quality soy products and services, we must ensure U.S. farmers efficiently produce a high-quality supply of soybeans. Operating in a constantly evolving ag production industry, U.S. soybean farmers lack recently-tested methods and information that allow them to more efficiently produce a high-quality supply of soybeans.

**Value Capture:** In order to meet our customers' needs with quality soy products and services to enhance and expand our markets, we must help them capture the intrinsic (protein, amino acid, metabolizable energy, etc.) and extrinsic (sustainability, transparency, consistency of supply, etc.) advantages of U.S. soybeans and soybean products.

**Market Intelligence:** In order to meet our customers' needs with quality soy products and services, we must gather and provide current information, data and analyses about customers and global market conditions for soy and competitive products. This intelligence is critical to USB's and the U.S. soybean industry's ability to make strategic decisions that positively impact U.S. soybean farmers.



USB Action Team  
Program Briefs  
FY2016

# USB Meal Action Team FY16 Program Brief

## Animal Feed

- 1. Program overview:** There is opportunity to further engage and educate animal nutritionists, livestock producers, soybean farmers and other decision makers about the value of U.S. soybean meal to increase inclusion rates in animal rations, develop products with improved composition and create a preference for U.S. soy.
- 2. Meal Action Team ranked 1 out of 7 constraints/opportunities.**
- 3. What target areas are funded with this program?** Domestic Opportunities, Supply, Communications, International Opportunities
- 4. Which target area goals and measurements does this program impact?**  
Feed (DO2): A component value marketing platform for U.S. is established by 2016; Component Value (S1): Increase the combined seed content of protein and oil by 10 percent by 2025; Quality (DO1): Key component measurement scheme is identified and shared with industry by 2025; Component Value (DO3): Soybean meal and other products (e.g., soy protein concentrate) use in domestic feed rations reaches 28.5 million metric tons by 2016; Customer Awareness (C2): Percentage of U.S. soybean farmers willing to grow varieties with higher protein and oil content to meet customer demand; Leverage (C3): 10 percent growth in leveraged dollars with QSSBs; Farmer Support (C4): Maintain at least 76 percent of U.S. soybean farmers who say they believe the soy checkoff is a “good deal” for soybean farmers; Customer Preference (IO1): Net Promoter Score; Differentiate (IO2): Valuation of U.S. Soy & Extrinsic Differentiators.
- 5. What is the desired impact and what is USB’s ability to achieve this impact?** U.S. soybean growers maintain or increase inclusion rates and market share of U.S. soy in animal feed by developing better products, demonstrating and communicating the benefits and supporting the global animal agriculture industry. Improve the quality of U.S. soy by improving metabolizable energy and amino acid balance through plant breeding and other technologies.
- 6. What does USB’s involvement (level of effort) look like?** Support research to develop and test soybean germplasm with improved feed qualities. Test and analyze soy samples from the U.S. and other countries. Provide the domestic and international livestock and poultry industries with tools and information to improve their operational knowledge and enhance profitability through marketing campaigns, technical symposiums, demonstrations, trade shows and Web-based outreach, ensuring consistent messaging on the value of U.S. soybean meal.
- 7. Who is already working on this issue, what are they addressing, and what are the opportunities for partnerships to leverage this investment?** University/USDA researchers, QSSBs, Foreign Ag Service and commercial companies. Animal Nutrition Working Group partners (including Tyson Foods, JBS Pilgrim’s Pride, Perdue Farms, ADM, JBS United, Cargill, Hanor Companies, Land O’Lakes Purina Feeds), national organizations such as National Pork Board, U.S. Poultry and Egg Association, and American Feed Industry Association.
- 8. Where are we in the cycle of this issue – e.g., is this an emerging issue?** Emerging pressures continue from new, cheaper synthetic amino acids and other protein sources (e.g., new high-protein, low-fiber canola meal) and variances in the quality of the U.S. and non-U.S. crops each year.
- 9. Priority Audience(s)? Limit to 2-3 audiences.** Livestock/poultry producers, seed companies and soybean farmers.

# USB Meal Action Team

## FY16 Program Brief

### U.S. Meat & Poultry Demand

- 1. Program overview:** Profit potential for U.S. soybean farmers can be increased by strengthening demand for U.S. meat and poultry internationally, which is a key opportunity for increasing U.S. soybean meal consumption.
- 2. Meal Action Team ranked 2 out of 7 constraints/opportunities.**
- 3. What target areas are funded with this program?** Domestic Opportunities, International Opportunities, Communications.
- 4. Which target area goals and measurements does this program impact?**
  - Feed (DO 2): Soybean meal and other products (e.g., soy protein concentrate) use in domestic feed rations reaches 28.5 million metric tons by 2016.
  - U.S. broiler exports increase 5 percent by volume from 3.1 million metric tons by 2015.
  - U.S. broiler exports increase 7 percent by value from \$3.6 billion by 2015.
  - U.S. pork exports increase 12 percent by volume from 2.3 million metric tons by 2015.
  - U.S. pork exports increase 15 percent by value from \$6.1 billion by 2015.
  - U.S. turkey exports increase 7 percent by volume from 319 thousand metric tons by 2015.
  - U.S. turkey exports increase 10 percent by value from \$599 million by 2015.
  - 10 percent growth in leveraged dollars with QSSBs.
  - Customer Preference (IO1): Net promoter score: Differentiate. (IO2): Valuation of U.S. Soy.
  - Leverage (C3): 10 percent growth in leveraged investments. Farmer Support (C4): Maintain at least 76 percent of U.S. soybean farmers who say they believe the soy checkoff is a “good deal” for soybean farmers.
- 5. What is the desired impact and what is USB’s ability to achieve this impact?** U.S. soybean farmers will capitalize on increased foreign demand for U.S. meat and poultry through increased exports of U.S. meat, poultry and soy over the next decade by collaborating with partners on marketing and communications activities. USB’s ability to impact this area is high.
- 6. What does USB’s involvement (level of effort) look like?** Partner with leading meat and poultry export organizations and economic analysis firms to identify key markets, support marketing and communications strategies, address trade barriers and collaborate with U.S. stakeholders, including meat and poultry producers, traders and other companies. Use consistent messages in communications to boost meat and poultry consumption internationally.
- 7. Who is already working on this issue, what are they addressing and what are the opportunities for partnerships to leverage this investment?** USB is partnering with QSSBs, state corn boards, USDA, Pork Board, National Chicken Council, National Turkey Federation, Foreign Ag Service and industry partners in support of USMEF and USAPEEC programs.
- 8. Where are we in the cycle of this issue, e.g., is this an emerging issue?** This is an ongoing opportunity with excellent prospects for growth. Independent economic research anticipates double-digit export growth for the pork, chicken and turkey sectors over the next five to 10 years.
- 9. Priority Audience(s)? Limit to 2-3 audiences.** QSSBs, corn checkoff, and U.S. and global marketing organizations.

# USB Meal Action Team FY16 Program Brief

## Yield Improvement Through Breeding

1. **Program overview:** The lack of modern methods and genetic markers for use by genetic researchers and breeders constrains the development of high-yield varieties that would enable soybean farmers to enhance the value of their crop.
2. **Meal Action Team ranked 3 out of 7 constraints/opportunities.**
3. **What target areas are funded with this program?**  
Supply.
4. **Which target area goals and measurements does this program impact?**  
Yield Research (S2): Identify four key transcription factor gene systems that control expression of genes related to yield, protein composition and oil content by 2020.
5. **What is the desired impact, and what is USB's ability to achieve this impact?**  
Identify genes related to soybean yield potential and the factors that control their expression and inheritance. Develop genetic markers for improved soybean yield. These impacts are readily achievable through funding public research.
6. **What does USB's involvement (level of effort) look like?**  
In cooperation with industry partners, fund research to (a) identify molecular and genetic pathways and controls that can be harnessed to increase soybean yield and (b) apply molecular and traditional methods to cutting-edge breeding programs to develop adapted, higher yielding soybean varieties with improved composition.
7. **Who is already working on this issue, what are they addressing and what are the opportunities for partnerships to leverage this investment?**  
Universities, USDA and commercial partners. Research is being conducted to identify genes involved in controlling yield potential and develop markers for those genes.
8. **Where are we in the cycle of this issue - e.g., is this an emerging issue?** Improvement in yield requires ongoing research and breeding efforts.
9. **Priority Audience(s): Limit to 2-3 audiences.** Commercial seed companies and USDA/universities.

## **USB Meal Action Team FY16 Program Brief**

### **Protecting Soybean Yield from Environmental, Pest and Disease Stresses**

1. **Program overview:** U.S. soybean farmers are limited in the extent to which they can exploit the soybean genetic yield potential because of the lack of understanding of the physiological pathways involved in environmental stress tolerance and the biology of pest organisms that can be exploited to develop soybean varieties with better yield under stress conditions or managed to protect soybean plants from losses due to drought, heat or emerging disease, nematode or insect pests.
2. **Meal Action Team ranked 4 out of 7 constraints/opportunities.**
3. **What target areas are funded with this program?** Supply, Communications
4. **Which target area goals and measurements does this program impact?**  
Yield Research (S2), Sustainable Yield Production (S3), Increase Average U.S. soybean yield by 36% per acre by 2025.  
Leverage (C3), 10% growth in leveraged investments.  
Farmer Support (C4) Maintain at least 76 percent of U.S. soybean farmers who say they believe the soy checkoff is a “good deal” for soybean farmers.
5. **What is the desired impact and what is USB’s ability to achieve this impact?** Soybean germplasm that yields better despite these types of stresses will be developed through collaborative research with industry that utilizes new discoveries, molecular and traditional breeding efforts. These impacts are readily achievable through funding public research.
6. **What does USB’s involvement (level of effort) look like?** Fund research activities by university and USDA researchers to understand and deploy better stress-resistance packages in commercial soybean varieties. Work with commercial partners to commercialize improved stress tolerance packages. Communicate results of checkoff-funded efforts to address these issues.
7. **Who is already working on this issue, what are they addressing, and what are the opportunities for partnerships to leverage this investment?** Universities, USDA, QSSBs, and commercial partners. Research is being conducted to explain soybean physiological responses to environmental stress, understand pest biology and identify genes involved in controlling soybean tolerance to environmental stresses and resistance to disease, nematode and insect pests. Genetic markers for these genes are also being developed to speed variety development.
8. **Where are we in the cycle of this issue, e.g., is this an emerging issue?** This is a continuing issue. As knowledge is gained, improvements continue to be made.
9. **Priority Audience(s)? Limit to 2-3 audiences.** Commercial seed companies, USDA/universities, QSSBs

# USB Meal Action Team FY16 Program Brief

## Soy in Aquaculture

1. **Program overview:** Soybean farmers have an opportunity to increase the value of U.S. soybeans by establishing soybean meal as a preferred protein source in aquaculture diets based on research and utilization of best management practices to maximize the inclusion of U.S. soybean meal and soy protein concentrate in aquaculture feed in high-demand global markets, while encouraging consumption and support of farm-raised seafood by educating influencers on the health, environmental and economic benefits of soy-fed fish.
2. **Meal Action Team ranked 5 out of 7 constraints/opportunities.**
3. **What target areas are funded with this program?** Domestic and International Opportunities.
4. **Which target area goals and measurements does this program impact?**  
Feed (DO2): Soybean meal and other products (e.g., soy protein concentrate) use in domestic feed rations reaches 28.5 million metric tons by 2016; Customer Preference (IO1): Net Promoter Score; Differentiation (IO2): Valuation of U.S. soy.
5. **What is the desired impact and what is USB's ability to achieve this impact?** The desired impact is to grow the market for soybeans as the preferred ingredient in farm-raised seafood production. USB can provide tools and resources to help aquaculture producers address challenges and operate more efficiently; provide marketing support for farm-raised seafood products; educate key audiences on the health, environmental and economic benefits of farm-raised seafood; and collect and disseminate data and information. This includes supporting research to optimize the use of soy based ingredients in feed rations for selected species and supporting research addressing related aquaculture production issues. USB can also impact the production technologies used by producers that provide a more sustainable product and in turn drive up the demand for soy-based feeds.
6. **What does USB's involvement (level of effort) look like?** Research is supported at institutions with recognized expertise. Research results are distributed via feed mills, feeding demonstrations, technical servicing, industry trade shows, and various other communication channels. USB works with feed and aquaculture producers to educate them on the best feed formulations and best practices through feeding trials, seminars and one-on-one consulting.
7. **Who is already working on this issue, what are they addressing and what are the opportunities for partnerships to leverage this investment?** Partners include QSSBs, National Aquaculture Association, Sea Grant, Aquaculture Stewardship Council, Soy Aquaculture Alliance, Global Aquaculture Alliance, and other producer and industry associations and stakeholders, in various markets. Within China alone, millions of dollars have been leveraged in the last five years. Intensive Production Technology, which was researched and developed by the U.S. soybean industry, will be one of the two priority technologies to be promoted in the third-largest aquaculture-producing province of China. There will be substantial financial support from the provincial government and many more opportunities in coming years.
8. **Where are we in the cycle of this issue – e.g., is this an emerging issue?** It is projected that soy inclusion rates in global aquafeeds overall will increase to 25-30 percent based on quality and economics of fish production. Global soybean meal demand for the aquaculture industry is expected to exceed 17 million metric tons within the next decade, with more than 95 percent of that growth in overseas markets. Both the inclusion rate and total demand numbers for soybean meal are conservative. The global aquaculture industry is the fastest-growing sector of animal production. Global demand for the major cultured fish and shrimp species that are fed, given the limitation of zero growth in wild catch, is expected to grow from 26 million metric tons in 2010 to more than 45 million metric tons in 2020.
9. **Priority Audience(s)? Limit to 2-3 audiences.** Aquaculture industry, U.S. and global research organizations and QSSBs.

# USB Meal Action Team

## FY16 Program Brief

### New Industrial Uses Development

1. **Program overview:** Soybean farmers can increase the value of U.S. soybean meal by developing new processes to utilize the low-value, indigestible components in meal, capitalizing on its low cost, consistent availability and low carbon footprint through research, market and economic analyses to develop and commercialize new soy products.
2. **Meal Action Team ranked 6 out of 7 constraints/opportunities.**
3. **What target areas are funded with this program?** Domestic and International Opportunities
4. **Which target area goals and measurements does this program impact?**  
Industrial (D03): Soybean meal component use in industrial uses reaches 0.081 million metric tons by 2016. Customer Preference (I01): Net promoter score: Differentiate (I02): Extrinsic differentiators.
5. **What is the desired impact and what is USB's ability to achieve this impact?** The desired impact is to grow the use of soybean meal and its components in high-value, high-volume industrial markets. Meal is being used as a raw material in adhesives and paper coatings, and can be used as an extender in plastics and fibers or fermented to make commodity chemicals such as succinic acid. USB can make an impact by continuing its leadership in supporting the development of new technologies and through technology transfer and communications to industry partners and farmers creating awareness, interest, trial and adoption.
6. **What does USB's involvement (level of effort) look like?** Funding of multiyear research and development efforts in cooperation with industry partners that identifies and develops the functional, mechanical and physical property advantages of existing meal and meal products such as soy flour and concentrates in high-volume applications. Fund research on developing new processes to expand use of meal in producing higher-value products from the protein and low value carbohydrates in both feed and industrial products and applications. Work with industrial partners to commercialize new technologies within the United States and overseas.
7. **Who is already working on this issue, what are they addressing, and what are the opportunities for partnerships to leverage this investment?** A majority of projects have commercial partners whose contributions normally exceed USB investment by more than two to one. Examples of industry partners include Ashland Chemical, Columbia Forest Products, Kimberly Clark, Ford Motor Company, Sherwin-Williams and Rust-Oleum. The Foreign Agricultural Service is also a supporting partner in ventures of this type.
8. **Where are we in the cycle of this issue – e.g., is this an emerging issue?** Projects will fall into one of the following stages, with most projects initially falling into stage 2 or 3: Stage 1 – Research to explore a new concept, Stage 2 – Research to determine feasibility, Stage 3 – Development of the product and process, Stage 4 – Commercial Introduction. Until about 2009, industrial meal utilization was negligible. With the launch of a single product, soy wood adhesives, use has increased to over 140 million pounds and is expected to grow rapidly with the launch of new paper products and industrial chemicals over the next several years.
9. **Priority Audience(s)? Limit to 2-3 audiences.** Commercial and industrial companies.

# USB Meal Action Team

## FY16 Program Brief

### Human Uses

- 1. Program overview:** The soy industry has an opportunity to increase the value and consumption of soy products by maintaining and enhancing the soy “Health Halo” through support of worldwide soy health research and communications activities around the positive human health benefits of consuming soy, and through dissemination of accurate information to key consumer influencers to help counter misinformation.
- 2. Meal Action Team ranked 7 out of 7 constraints/opportunities.**
- 3. What target areas are funded with this program?** Domestic and International Opportunities.
- 4. Which target area goals and measurements does this program impact?**  
Food (DO4): Raise consumer perceptions of soy as healthy from 75 percent to 80 percent; Customer Preference (IO1): Net promoter score: Differentiate (IO2): Valuation of U.S. Soy & Extrinsic differentiators; Sound Science (IO4): Positive media.
- 5. What is the desired impact and what is USB’s ability to achieve this impact?** USB can significantly impact the positive perceptions about soy’s healthfulness for human consumption. Maintaining a health halo for soyfoods (protein) will help ensure market demand of soybean oil, animal feed and other soy components. Based on the recent successes in using human health research to quickly countermand attacks on the use of soy protein in food production, USB has a very real ability to put the results of this program into action immediately. Support for traditional and innovative soyfoods in Asia will maintain and expand important markets in Indonesia, Taiwan, Japan, India and Latin America.
- 6. What does USB’s involvement (Level of effort) look like?** Marketing soy protein’s health halo to health professionals and media and funding new health research are important tactics in advancing the health halo and generating positive news about soy. Soy awareness and trial are generated via health professional organization sponsorships, patient tools development and expert spokespeople for media interviews/speaking engagements. Funding of the Soy Health Research program has resulted in \$25 million in NIH research grants on a \$1 million (over 10 years) USB investment. Workshops, conferences, one-on-one technical exchange and trade-servicing efforts for the use of U.S. soy in important international markets.
- 7. Who is already working on this issue, what are they addressing, and what are the opportunities for partnerships to leverage this investment?** Health professional organizations, including the Academy of Nutrition & Dietetics (AND), American Academy of Physician Assistants (AAPA) and American Association of Nurse Practitioners (AANP) and the National Institutes of Health (NIH), Foreign Ag Service (FAS), and numerous state, provincial, and national governments, as well as charitable foundations and local industries, support the use of soy in social feeding programs.
- 8. Where are we in the cycle of this issue – e.g., is this an emerging issue?** This is a mature issue but important for ongoing new product development and creating “news” around soy’s (protein and oil) healthfulness that will support not only human consumption, but animal feed as well. It is gaining in importance as end consumers demand more information on the nutritional and safety aspects of the foods they consume.
- 9. Priority Audience(s)? Limit to 2-3 audiences.** NIH, professional health organizations and soyfood industry.

**USB Oil Action Team**  
**FY 16 – High Oleic Soybean Program**

- 1. Program Constraint** –The success of the high oleic soybean program is constrained by availability of high oleic soybean varieties; lack of farmer awareness; initial value chain education and commitment; and timely end-user incorporation into products.
- 2. Oil Action Team ranked 1 out of 5 constraints/opportunities**
- 3. What target areas are funded with this program?** Supply, DO, Comm, IO
- 4. Which target area goals and measurements does this program impact?** DO (4- Food: Soy oil usage for food will reach 14 billion pounds by 2020. 3-Indust. - 32 new products/applications (average each year) introduced using a soybean component.); Supply (1- Comp. Value: 18 million acres of high oleic soybeans by 2023); Comm. (2- Cust. Awareness: High oleic processors meet 80% of contract goals annually. 3-Leverage: 10% growth in leveraged dollars with QSSBs and value chain from \$8.4 million to \$9.2 million); IO (2- Differentiate: % of target that understands how to value U.S. soy's competitive advantage with regard to transparency, supply, contractual issues and risk reduction, 3- Market Access: Progress in addressing of Barriers to Trade of U.S. Soy)
- 5. What is the desired impact and what is USB's ability to achieve this impact?** USB will help the U.S. soybean industry reach 18 million acres of high oleic soybeans planted by 2023. This acreage goal is expected to produce 9 billion pounds of high oleic soybean oil which will need demand from U.S. food markets, industrial users and exports.
- 6. What does USB's involvement (level of effort) look like?** USB will take a broad market approach to this program by looking at push and pull in the market. The soy checkoff will ensure the push/supply by collaboration in soybean breeding (public and private) to ensure availability of soybean varieties in more U.S. maturity groups. USB will also participate in marketing activities to motivate U.S. soybean farmers to grow high oleic soybeans. On the demand side, USB will test and promote the benefits of high oleic soy oil to end-users to ensure strong demand for the product. Internationally, USB will work on creating awareness and understanding of high oleic oil and acceptance of the oil through CODEX or other methods.
- 7. Who is already working on this issue, what are they addressing, and what are the opportunities for partnerships to leverage this investment?** QUALISOY and its industry partners throughout the value chain are working in conjunction with USB on this program. There are opportunities to partner at many different levels to ensure there is a consistent message coming from the soybean industry. Seed companies have developed traits and varieties in limited geographies. They market their individual seed brands to farmers and promote oil to food targets. They also are responsible for global regulatory approvals. Processors are also involved in the end-user success of high oleic soybeans. They work with their oil customers to ensure awareness of high oleic soybean oil. Processors are integral in sharing market signals with the rest of the value chain. By leveraging the investments of seed companies, processors and other QUALISOY partners, USB can extend the success and reach of its high oleic program.
- 8. Where are we in the cycle of this issue, e.g., is this an emerging issue?** High oleic soy is not an emerging issue, but it is at the onset of commercialization, the most critical period in a product's introduction.
- 9. Priority Audiences?:** Farmers and the Food sector.

**USB Oil Action Team**  
**FY 16 – Biodiesel Program**

1. **Program Constraint** – U.S. soybean farmers have an opportunity to expand biodiesel markets by providing technical support and expertise, while marketing and educating key audiences about this high quality fuel.
2. **Oil Action Team ranked 2 out of 5 constraints/opportunities**
3. **What target areas are funded with this program?** Domestic Opportunities, Communications
4. **Which target area goals and measurements does this program impact?**  
DO (3-Industrial Soybean oil component use in biodiesel and other industrial uses reaches 5.6 billion lbs by 2016.)  
Communications (3 - Leverage: 10% growth in leveraged dollars with QSSBs and value chain from \$8.4 million to \$9.2 million. 4 -Farmer Support: Maintain at least 76 percent of U.S. soybean farmers who say they believe the soy checkoff is a “good deal” for soybean farmers.)
5. **What is the desired impact and what is USB’s ability to achieve this impact?**  
U.S. soybean farmers have an opportunity to expand biodiesel markets by providing technical support and expertise to industry and end users, while marketing this high-quality fuel and capitalizing on biodiesel’s EPA classification as an Advanced Biofuel. The desired impact is to grow the market for soybean oil. USB’s ability to impact is great as USB continues to lead research and development activities necessary to expand this market and continues to reach farmers with key biodiesel messages.
6. **What does USB’s involvement (level of effort) look like?**  
USB’s support of the biodiesel industry, in partnership with the National Biodiesel Board, is centered around research and education activities for the Biodiesel and Bioheat Programs.
7. **Who is already working on this issue, what are they addressing and what are the opportunities for partnerships to leverage this investment?**  
The National Biodiesel Board is the primary organization addressing the challenges of the biodiesel industry. NBB leverages their research and education activities through OEMs, industry and government agencies, and communications partners. They address the key issues for biodiesel outreach including sustainability and biodiesel’s Advanced Biofuel status. QSSBs and biodiesel industry partners also fund biodiesel activities through NBB.
8. **Where are we in the cycle of this issue, e.g., is this an emerging issue?**  
Compared to its biggest competitor, petroleum, biodiesel is an industry in its infancy. Biodiesel’s growth is dependent on continued research and education to make this viable biofuel a mainstay in America’s transportation fuel supply.
9. **Priority Audiences?:** Original Equipment Manufacturers, Influencers, Farmers

**USB Oil Action Team**  
**FY 16 – Commodity Soy Food Oil**

1. **Program Constraint:** The commodity soy oil market is constrained from domestic and international growth due to a lack of awareness of U.S. soybean oil's true value through its physical attributes, price competitiveness and trusted supply.
2. **Oil Action Team ranked 3 out of 5 constraints/opportunities.**
3. **What target areas are funded with this program?** International Opportunities and Domestic Opportunities
4. **Which target area goals and measurements does this program impact?**  
DO (4 – Food: Soy oil usage for food will reach 14 billion pounds by 2020.) IO (1 – Customer Preference: Net promoter score.)
5. **What is the desired impact and what is USB's ability to achieve this impact?** Even with the entry of high oleic soy oil into the edible market, U.S. commodity soy oil remains a major segment in global food oil use. The desired impact is expanded awareness of the health and functional attributes among targets to increase preference and use of U.S. soy.
6. **What does USB's involvement (level of effort) look like?** USB works domestically and internationally to maintain and grow demand for U.S. commodity food oil – the biggest user of U.S. soybean oil. Through outreach and educational activities, USB reaches the global edible oil value chain including food companies, the foodservice industry, vegetable oil refiners, wholesalers and distributors. Work is also done with influencers, such as health professionals, to spread knowledge about soy. USB facilitates trials and demonstrations to help bring awareness to soybean oil's role in the human diet and the opportunities for more customers to use U.S. commodity soybean oil.
7. **Who is already working on this issue, what are they addressing, and what are the opportunities for partnerships to leverage this investment?** Collaborations with food companies, retailers, oil refiners and wholesale/distributors exist today. These efforts include advanced marketing training programs, product promotions, new packaging research, replacing other vegetable oil with U.S. soy oil in food product development and formulation, and co-sponsoring U.S. soy oil use trials.
8. **Where are we in the cycle of this issue, e.g., is this an emerging issue?** U.S. commodity soy oil is in the mature phase, the longest duration stage in a product's life cycle. In this stage, continuing and new sales can come about from repositioning based upon innovative packaging and/or new product development, awareness raising promotional campaigns, educating the value chain on lesser-known attributes of soy oil's health benefits/functional properties, or from investments in enhanced labeling.
9. **Primary Audiences?:** Food Sector, Health & Wellness Professionals, Distributors/Retailers

**USB Oil Action Team**  
**FY 16 – New Industrial Uses for Oil**

- 1. Program Constraint** – Soybean farmers will benefit from increased value of U.S. soybean oil by investing in the development of preference for soybean oil as a feedstock/ingredient among manufacturers of high value, high volume industrial products and applications and their customers.
- 2. Oil Action Team ranked 4 out of 5 constraints/opportunities**
- 3. What target areas are funded with this program?** Domestic Opportunities, International Opportunities, Communications
- 4. Which target area goals and measurements does this program impact?**  
DO (3 -Industrial: Soybean oil component use in biodiesel and other industrial uses reaches 5.6 billion lbs by 2016; 32 new products/applications (average each year) introduced using a soybean component.) IO (2- Differentiate: % of target that understands how to value U.S. soy's competitive advantage with regard to transparency, supply, contractual issues and risk reduction. (Net differentiation score)) COM (2 - Customer Awareness: Maintain at least 76 percent of U.S. soybean farmers who say they believe the soy checkoff is a “good deal” for soybean farmers.)
- 5. What is the desired impact and what is USB’s ability to achieve this impact?**  
USB’s desired impact is to grow the use of soybean oil for high value, high volume industrial markets. Soy oil is now used in plastics, paints/inks, lubricants, solvents, surfactants and many other products. USB can further impact by continuing support in the development of new technologies and through technology transfer to industry partners creating awareness, interest, trial and adoption and commercialization.
- 6. What does USB’s involvement (level of effort) look like?** USB works in cooperation with industry partners to identify and develop advantages of U.S. soybean oil in industrial applications. By funding multi-year research and development efforts, USB demonstrates the functional, mechanical and physical property advantages U.S. soybean oil brings to the market. USB also works with industrial partners to commercialize new technologies to increase global demand of U.S. soybean oil.
- 7. Who is already working on this issue, what are they addressing, and what are the opportunities for partnerships to leverage this investment?** A majority of projects have commercial partners whose contributions normally exceed USB investment. Examples of industry partners include Goodyear Tire and Rubber Company, Ford Motor Company, ADM, Sherwin Williams, Bunge, Bayer Material Science, Lear Corporation, Cargill, Rust-Oleum, CHS and the Foreign Agricultural Service.
- 8. Where are we in the cycle of this issue, e.g., is this an emerging issue?**  
Industry and academia will normally bring forward initial data to provide proof of concept prior to requesting USB investment. Projects will normally fall into stage 2 or 3. (Stage 1 - Research to explore a new concept; Stage 2 - Research to determine feasibility; Stage 3 - Development of the product and process; Stage 4 - Commercial Introduction). Industrial usage of soybean oil (excluding biodiesel) has had significant and consistent growth over the past decade and is now at 1.4 billion pounds according to the latest USB Market View Database estimates (2012). Use is typically in high value products, (many over \$1/pound) which add significant value, as well as, demand volume to the soy industry.
- 9. Primary Audiences?:** Users, Converters, Suppliers

**USB Oil Action Team**  
**FY 16 – Modifying Soybean Oil Content and Composition**

1. **Program Constraint** – Higher oil percentage and/or enhanced oil traits in soybean varieties present an opportunity to increase the perceived value of soybeans to domestic processors and export markets.
2. **Oil Action Team ranked 5 out of 5 constraints/opportunities**
3. **What target areas are funded with this program?** Supply
4. **Which target area goals and measurements does this program impact?** Supply (1- Component Value: Increase combined seed content of protein and oil 10% by 2025.)
5. **What is the desired impact and what is USB's ability to achieve this impact?** The overall goal is to incrementally increase oil content from the current U.S. average of 18.5% to 20.5% (at 13% moisture content) while maintaining protein content and yield. The other primary goal of this program is to develop soybeans with fatty acid composition that better meets industry needs. These goals will be accomplished primarily through public research that can be funded by USB.
6. **What does USB's involvement (level of effort) look like?** USB will fund and promote research in soybean genetics and breeding to increase or improve oil content. Research to discover new alleles and genes that affect oil content from sources outside of the current germplasm, through screening of exotic germplasm and mutagenized genetic material. Funding research to evaluate new gene combinations and molecular resources to produce environmentally stable oil profile with new fatty acid composition. Incorporation of these new oil traits into adapted elite soybean varieties.
7. **Who is already working on this issue, what are they addressing, and what are the opportunities for partnerships to leverage this investment?** USDA is currently working on these programs and leveraging USB's investment, along with the National Science Foundation. QSSBs are also funding research in breeding programs, molecular and high stearic research.
8. **Where are we in the cycle of this issue, e.g., is this an emerging issue?** Higher oil content and differentiated composition of the oil, outside of high oleic and low linolenic, are very early in the development.
9. **Primary Audiences?:** Farmers, Food Sector

## Freedom to Operate – Sustainability

### 1. Program overview (no more than 2-3 sentences) – define constraints/opportunities

Farmers can capture additional agronomic, marketing and stakeholder acceptance benefits through a collaborative effort to benchmark and continuously improve performance against sustainability metrics.

### 2. FTO Action Team ranked 1 out of 8 constraints/opportunities

### 3. Which target area goals and measurements does this program impact?

Quality and Component Value (DO1) – Fifteen brands endorse a USB-supported sustainable soybean sourcing program by 2020.

Feed (DO2) – Soybean meal and other products (i.e. soy protein concentrate) use in domestic feed rations reaches 28.5 million metric tons by 2016.

Customer Preference (IO1) – Net Promoter Score

Differentiate (IO2) – Differentiate the value, sustainability and competitive advantage of U.S. soy from other competing products and origins to increase value and/or market share.

Market Access (IO3) – Progress in addressing of Barriers to Trade of U.S. Soy.

Sound Science (IO4) – Volume of “Certified Sustainable” U.S. Soy exported. Number of neutral to positive articles appearing in the international trade/consumer media about the U.S. soybean industry.

Consumer Awareness (CO1) – Percentage of consumers who believe today’s ag is moving in the right direction increases from 43 percent to 47 percent. Percentage of influencers who are ‘comfortable’ with the way that meat, grains and produce are grown and raised increases from 54 percent to 56 percent.

Leverage (CO3) – 10% growth in leveraged dollars with QSSBs and value chain from \$8.4 million to \$9.2 million.

Sustainable Yield Production (SU3) – Increase average U.S. soybean yield by 35% per acre through (A) translation of research results into new higher yielding varieties and better management practices and (B) capturing 10% more genetic yield potential per acre by 2025 by managing biotic and abiotic stresses that impact yield.

### 4. What target areas are funded with this program?

Domestic Opportunities, International Opportunities, Supply and Communications

### 5. What is the desired impact and what is USB’s ability to achieve this impact?

Increase farmer awareness and acceptance of U.S. soybean producers’ sustainability performance. Maintain and expand market access through the U.S. Soy Sustainability Assurance Protocol. Achieve continuous improvement goals - 10% improvements in land use efficiency, energy efficiency, and greenhouse gas emissions, and 25% reduction in soil loss by 2025.

### 6. What does USB’s involvement (level of effort) look like?

- Educate farmers on the high sustainability performance of their soybean crop.
- Fund research in cooperation with industry partners to identify, communicate and support implementation of BMPs for fertilization requirements, weed control recommendations and pesticide rates and timing for optimum soybean growth
- Promote acceptance of the U.S. Soybean Sustainability Assurance Protocol to industry partners and exporters/importers along with international government officials and NGOs.
- Support benchmarking of Protocol against industry criteria or other sustainability programs
- Integrate soy sustainability messages into customers’ product marketing efforts to increase acceptance of soy’s sustainability performance.
- Highlight the audit and measurement system that ensures conservation compliance and provides measurements to track the impact of improved conservation practices

### 7. Who is already working on this issue, what are they addressing, and what are the opportunities for partnerships to leverage this investment?

Universities, USDA and commercial partners are conducting research to identify management practices that reduce the development of herbicide resistant weed populations and identify best management practices for soybean production systems. Many multi-national feed and food companies and NGOs are closely involved in this issue; drive positive progress through multi-stakeholder groups; collaborate with brand owners to reach consumers; increase coordination on sustainability issues with other U.S. ag commodities

### 8. Where are we in the cycle of this issue, e.g., is this an emerging issue?

U.S. agriculture created conservation programs over 75 years ago, and therefore the concept is not new. However, in the last decade the sustainability issue emerged and many organizations have now implemented sustainability requirements. This program is needed to achieve recognition of U.S. soy meeting government or customer requirements. In terms of capturing the U.S. competitive advantage in this area, it is an emerging issue.

### 9. Priority Audience(s) – Farmers, Food Industry Stakeholders, Foreign Government Officials/Regulators; consumers would be a secondary audience under food industry stakeholders, collaborating with downstream brands and their significant consumer-facing resources to carry soy sustainability messages

## Freedom to Operate – Water

### 1. Program overview (no more than 2-3 sentences) – define constraints/opportunities

Regional/local organizations lack the coordinated resources (information, leveraged funding, accurate models, collaborative strategy, etc.) to support farmers in maintaining a farmer-led approach to water stewardship.

### 2. FTO Action Team ranked 2 out of 8 constraints/opportunities

### 3. Which target area goals and measurements does this program impact?

Quality and Component Value (DO1) –Fifteen brands endorse a USB-supported sustainable soybean sourcing program by 2020.

Sustainable Yield Production (SU3) – Increase average U.S. soybean yield by 35% per acre through (A) translation of research results into new higher yielding varieties and better management practices and (B) capturing 10% more genetic yield potential per acre by 2025 by managing biotic and abiotic stresses that impact yield.

Leverage (CO3) – 10% growth in leveraged dollars with QSSBs and value chain from \$8.4 million to \$9.2 million

Consumer Awareness (CO1) – Percentage of consumers who believe today’s ag is moving in the right direction increases from 43 percent to 47 percent. Percentage of influencers who are ‘comfortable’ with the way that meat, grains and produce are grown and raised increases from 54 percent to 56 percent.

Sound Science (IO4) – Increase the awareness of globally recognized sound science associated with U.S. soy with regards to biotech food safety and security and sustainability.

### 4. What target areas are funded with this program?

Domestic Opportunities

### 5. What is the desired impact and what is USB’s ability to achieve this impact?

By creating strategic tools, partnerships and information sharing mechanisms, USB can help prepare QSSBs and the broader agriculture industry for better planning and stewardship as water-related threats and opportunities continue to evolve. While regional and local organizations must address their area water issues individually, common challenges exist which impacts their effectiveness. USB can have an impact by providing regional organizations with access to consolidated research, leveraging of best practices related to technology transfer, and increasing accuracy of models to identify local best management practices in order to increase water stewardship, dispel misconceptions and boost the reputation of farmers and agriculture on water issues. The health of that reputation has the potential to reduce future regulation/restrictions and promote reasoned cooperation on future water issues.

### 6. What does USB’s involvement (level of effort) look like?

Leverage dollars with regional/local organizations to provide access to research, leverage best practices related to technology transfer, and increase accuracy of models to identify local best management practices; build coalitions that generate regional funding for farmer-led, voluntary management of water resources; provide information and educational materials to strategically support policy organizations.

### 7. Who is already working on this issue, what are they addressing, and what are the opportunities for partnerships to leverage this investment?

As water issues are regionalized and can vary greatly throughout the country, USB plans to partner and work closely with QSSBs, other agricultural groups, agribusinesses, national and regional water-focused organizations and land grant universities. Universities, USDA and commercial partners are conducting research to explain soybean physiological responses to environmental stress and develop new conservation practices to protect soils from erosion and surface and groundwater from contamination.

### 8. Where are we in the cycle of this issue, e.g., is this an emerging issue?

This is a continuing issue, but the risk posed to producer profitability is rapidly increasing and multi-faceted. USB still has an opportunity through collaboration to proactively neutralize the risk. Soybean producers have dealt with water-related regulations in the past, but these regulations are evolving faster than ever before, with new and different methods of enforcement. As a result, management practices (and evaluation of those practices) need to evolve and improve as knowledge is gained and improvements continue to be made. Technology transfer, always a complex issue, also has to evolve as the nature of water-related regulations become less voluntary and cooperative.

### 9. Priority Audience(s) – Regional/local organizations that support farmers on water issues (soil & water conservation districts, co-ops, etc.); farmer advisors (extension, agronomists)

## Freedom to Operate – Biotechnology

### 1. Program overview (no more than 2-3 sentences) – define constraints/opportunities

The freedom to utilize biotechnology is being threatened for U.S. farmers due to a lack of education and understanding about modern technology among influential consumers, students, and overseas government officials. This lack of education reduces opportunities for U.S. soy farmers to use varieties that support the health of the soy industry.

### 2. FTO Action Team ranked 3 out of 8 constraints/opportunities

### 3. Which target area goals and measurements does this program impact?

Quality and Component Value (DO1) – Fifteen brands endorse a USB-supported sustainable soybean sourcing program by 2020.

Feed (DO2) – Soybean meal and other products (i.e. soy protein concentrate) use in domestic feed rations reaches 28.5 million metric tons by 2016.

Sound Science (IO4) – % improvement in Global Biotechnology Environment Scan. Volume of “Certified Sustainable” U.S. Soy exported. Number of neutral to positive articles appearing in the international trade/consumer media about the U.S. soybean industry.

Differentiate (IO2) – % of target that understands how to value U.S. soy’s competitive advantage with regard to transparency, supply, contractual issues and risk reduction.

Consumer Awareness (CO1) – Percentage of consumers who believe today’s ag is moving in the right direction increases from 43 percent to 47 percent. Percentage of influencers who are ‘comfortable’ with the way that meat, grains and produce are grown and raised increases from 54 percent to 56 percent.

Leverage (CO3) – 10% growth in leveraged dollars with QSSBs and value chain from \$8.4 million to \$9.2 million.

### 4. What target areas are funded with this program?

Domestic Opportunities, International Opportunities and Communications

### 5. What is the desired impact and what is USB’s ability to achieve this impact?

USB aims to increase understanding of the technology and benefits of biotechnology in farming and food among consumers and domestic and international influencers. USB will work to protect the opportunities for U.S. soy producers to use existing and future technologies that support the health of the soy industry.

### 6. What does USB’s involvement (level of effort) look like?

Communicate with a variety of audiences including influential consumers, students, larger industry customers/partners and overseas government officials on the science of biotechnology and overall safety. The international strategy includes activities to educate key opinion leaders, international government officials and regulators, buyers and end-users of soy and soy products regarding the safety of biotechnology and the role biotech plays in wealth creation, reduction of environmental impact and overall sustainability.

### 7. Who is already working on this issue, what are they addressing, and what are the opportunities for partnerships to leverage this investment?

- CommonGround, USFRA and the Center for Food Integrity are organizations that communicate with the non-ag public on issues related to biotech. These groups are also funded by other organizations, creating a leveraging opportunity for USB.
- Leverage access to students and the public with partners such as the Smithsonian Museum, public schools and universities, the Council for Biotechnology Information and International Food Information Council.
- Support is limited, but growing positive acceptance by industry and government in markets such as the UK.
- Defend key international markets with sound science in coordination with local industry.

### 8. Where are we in the cycle of this issue, e.g., is this an emerging issue?

While there has been controversy surrounding biotechnology for years, the issue has heated up in the past several years because of efforts to label all foods grown with biotech seeds, and even meat raised with feed from biotech seeds. This very public battle over labeling has increased the public’s focus on biotechnology, which provides an opportunity to share information on the positive impacts of biotech on agriculture, the food supply and on food costs.

### 9. Priority Audience(s) – Influential Consumers, Students, Overseas Government Officials, and Larger Industry Partners which includes but is not limited to: opponents of biotechnology, buyers and end-users of soy and soy products, international governmental officials and decision-makers, domestic decision-makers, and U.S. consumers/grocery shoppers.

## Freedom to Operate – Animal Ag (Domestic)

### 1. Program overview (no more than 2-3 sentences) – define constraints/opportunities

A key opportunity for increasing profit potential for U.S. soybean farmers is through assisting domestic animal agriculture by addressing concerns from consumers, non-government organizations and others that can inhibit industry.

### 2. FTO Action Team ranked 4 out of 8 constraints/opportunities

### 3. Which target area goals and measurements does this program impact?

Quality and Component Value (DO1) – Fifteen brands endorse a USB-supported sustainable soybean sourcing program by 2020.

Feed (DO2) – Soybean meal and other products (i.e. soy protein concentrate) use in domestic feed rations reaches 28.5 million metric tons by 2016. U.S. broiler exports increase 5% by volume from 3.1 million metric tons by 2015. U.S. broiler exports increase 7% by value from \$3.6 billion by 2015. U.S. turkey exports increase 7% by volume from 319 thousand metric tons by 2015. U.S. turkey exports increase 10% by value from \$599 million by 2015. U.S. pork exports increase 12% by volume from 2.3 million metric tons by 2015. U.S. pork exports increase 15% by value from \$6.1 billion by 2015.

Food (DO 4) – \*Proposed Measurement to be Reviewed by SMC\* Raise consumer perceptions of soy as healthy from 75% to 80% by 2018.

Consumer Awareness (CO1) – Percentage of consumers who believe today's ag is moving in the right direction increases from 43 percent to 47 percent. Percentage of influencers who are 'comfortable' with the way that meat, grains and produce are grown and raised increases from 54 percent to 56 percent.

### 4. What target areas are funded with this program?

Domestic Opportunities and Communications

### 5. What is the desired impact and what is USB's ability to achieve this impact?

USB will partner with the U.S. animal agriculture industry through outreach and education efforts with a variety of audiences including food influencers, students, grocery shoppers and larger industry customers/partners. Ultimately, this will improve consumers' and stakeholders' perceptions of animal agriculture:

- Consumers stating the food system is headed in the right direction on the Center for Food Integrity Consumer Trust Survey will rise to 45 percent in 2016 from 42 percent in 2014.
- Increase the percentage of consumers who believe today's ag is moving in the right direction by 5 points to 47 percent according to the USFRA Omnibus research.
- Increase the percentage of influencers who are 'comfortable' with the way that meat, grains and produce are grown and raised by 2 points to 56 percent according to the USFRA Omnibus research.
- Benchmark consumer awareness of today's ag practices following a CommonGround event/conversation through farmer-executed surveys.

### 6. What does USB's involvement (level of effort) look like?

Serve as a catalyst to engage the food industry, NGOs and other partners with animal agriculture information including economic and production data. This includes providing tools, information and training to coalitions, industry partners and stakeholders.

### 7. Who is already working on this issue, what are they addressing, and what are the opportunities for partnerships to leverage this investment?

- Center for Food Integrity (CFI) is a partner and provides multiple opportunities to leverage USB investment alongside other industry allies.
- QSSB cost-sharing also is component of this program.

### 8. Where are we in the cycle of this issue, e.g., is this an emerging issue?

This is an ongoing issue. USB's original vision was to act as a catalyst to help the food system build and maintain coalitions that support its long-term health. These programs have realized USB's vision and their continued success provides many opportunities to continue support of the very critical food and feed markets.

### 9. Priority Audience(s) – Influential Consumers, Food Industry, NGOs

## Freedom to Operate – Transportation / Infrastructure

### 1. Program overview (no more than 2-3 sentences) – define constraints/opportunities

In order to ensure efficient transportation for the agriculture industry, USB supports and communicates on issues related to the soy transportation infrastructure. This includes managing the communications process with consistent messaging and tools for effective and timely response to emerging issues.

### 2. FTO Action Team ranked 5 out of 8 constraints/opportunities

### 3. Which target area goals and measurements does this program impact?

Customer Preference (IO1) - Net Promoter Score

Differentiate (IO2) - % of target that understands how to value U.S. soy's competitive advantage with regard to transparency, supply, contractual issues and risk reduction

Leverage (CO3) – 10% growth in leveraged dollars with QSSBs and value chain from \$8.4 million to \$9.2 million.

### 4. What target areas are funded with this program?

International Opportunities and Communications

### 5. What is the desired impact and what is USB's ability to achieve this impact?

- Invest soybean checkoff dollars to communicate various ways for U.S. soy transportation infrastructure improvements to be achieved.
- Transportation is a competitive advantage for the U.S. soy export industry. In the international marketplace the U.S. is seen as the global leader in efficient and reliable transportation. This message of complete delivery confidence should be highlighted to international customers.

### 6. What does USB's involvement (level of effort) look like?

- Analysis to highlight growing concerns with U.S. infrastructure
- Support for the Soy Transportation Coalition
- Promote complete delivery confidence to international customers
- Analyze opportunities to address the lack of infrastructure to support hi-speed internet access in rural U.S.

### 7. Who is already working on this issue, what are they addressing, and what are the opportunities for partnerships to leverage this investment?

- Soy Transportation Coalition (STC)
- QSSBs
- U.S. soy/ag industry transportation divisions
- Transportation focused trade associations
- Port authority organizations

### 8. Where are we in the cycle of this issue, e.g., is this an emerging issue?

The need for U.S. soy transportation infrastructure to be improved is not an emerging issue, but it is now approaching the point for significant investment funding due to the confluence of several factors:

- The realization that this inadequate transportation infrastructure could impede U.S. economic recovery and growth
- The realization that rebuilding/improving this inadequate transportation infrastructure could generate a significant number of jobs as part of an economic stimulus package
- The realization that a fraction of the funds required to rebuild/improve U.S. transportation infrastructure could come from non-government funding sources, such as user fee-type mechanisms.

In the international marketplace the efficiency of the U.S. transportation and export infrastructure is seen as an increasing advantage for purchasing U.S. soy.

### 9. Priority Audience(s) – Overseas Customers, Policy Influencers

## Freedom to Operate – Market Access

**1. Program overview (no more than 2-3 sentences) – define constraints/opportunities**

Opportunity to increase U.S. soy exports to global markets by reducing market access trade barriers or addressing trade issues such as differential export taxes, chemical maximum residue limits, use of food grade mineral oil as dust suppressant, sustainability, and analysis and impact of possible Free Trade Agreements.

**2. FTO Action Team ranked 6 out of 8 constraints/opportunities**

**3. Which target area goals and measurements does this program impact?**

Sound Science (IO2) – Differentiate the value, sustainability and competitive advantage of U.S. soy from other competing products and origins to increase value and/or market share.

Market Access (IO3) – Progress in addressing of Barriers to Trade of U.S. Soy.

Sound Science (IO4) – Targeted buyers rating of effectiveness of U.S. Soy in contributing to their country/region food safety and security. % improvement in Global Biotechnology Environment Scan. Volume of “Certified Sustainable” U.S. Soy exported. Number of neutral to positive articles appearing in the International trade/consumer media about the U.S. soybean industry.

**4. What target areas are funded with this program?**

International Opportunities

**5. What is the desired impact and what is USB’s ability to achieve this impact?**

The desired impact is the reduction or elimination of trade barriers in the global marketplace leading to a more competitive opportunity for U.S. soy exports. USB programs can help support this and must work in partnership with the greater U.S. soy and agricultural industry and occasionally local importers.

**6. What does USB’s involvement (level of effort) look like?**

Work with U.S. and international soy and ag industry to seek solutions to technical and perception related trade issues through sound science and communication efforts.

**7. Who is already working on this issue, what are they addressing, and what are the opportunities for partnerships to leverage this investment?**

U.S. soy and agriculture industry are working to reduce market trade issues and it is important to increasing all types of U.S. ag exports that a strong partnership exists with U.S. producers, U.S. commercial exporters, and U.S. government technical staff involved in ag export.

**8. Where are we in the cycle of this issue, e.g., is this an emerging issue?**

Market access issues are a combination of both long-term and emerging issues. Several issues such as chemical residues on ag products have been around for decades but the situation is always changing in regard to new regulations and their interpretations by various countries or use of new chemical or different applications.

**9. Priority Audience(s) – Overseas Government Officials, Overseas Industry, U.S. Exporters**

## Freedom to Operate – Animal Ag (International)

**1. Program overview (no more than 2-3 sentences) – define constraints/opportunities**

U.S. soy, grain, meat and poultry market access is impeded in some international markets because of concerns over food security and safety. In addition, importing countries have created artificially high import restrictions (published and unpublished) in an effort to protect their processing industry. U.S. soy farmers could benefit from greater food safety confidence in foreign countries in order to potentially increase consumption of meat, poultry and fish and therefore generate greater demand for U.S. soy.

**2. FTO Action Team ranked 7 out of 8 constraints/opportunities**

**3. Which target area goals and measurements does this program impact?**

Customer Preference (IO1) – Net Promoter Score

Market Access (IO3) - Progress in addressing barriers to trade of U.S. soy

Sound Science (IO4) - Targeted buyers rating of effectiveness of U.S. soy in contributing to their country/region food safety and security

**4. What target areas are funded with this program?**

International Opportunities

**5. What is the desired impact and what is USB's ability to achieve this impact?**

Provide leadership in building and maintaining strong industry coalitions to support U.S. animal agriculture and soy industry in international markets

**6. What does USB's involvement (level of effort) look like?**

- Convey to local country government and industry officials that U.S. agriculture is their committed partner in achieving a long-term goal of sustainable food security and safety.
- Introduce, review and discuss issues that affect the expansion of meat and poultry consumption such as cold chain, consumer marketing and meat production safety as well as other issues impacting agriculture trade between countries.
- Countries of focus would include China, Colombia, other countries with on-going Free Trade Agreement discussions and West Africa.

**7. Who is already working on this issue, what are they addressing, and what are the opportunities for partnerships to leverage this investment?**

Collaboration with other U.S. agriculture cooperators to stage high level industry in-country conferences focusing on the animal production industries.

**8. Where are we in the cycle of this issue, e.g., is this an emerging issue?**

Ongoing issue; USB has long been involved in helping to build and maintain coalitions that support the health of the animal ag industry in the domestic U.S. market and is increasing focus on the importance of international market acceptance of U.S. ag products and importance of a safe food supply.

**9. Priority Audience(s) – International Livestock Industry, Influential Customers, International Regulators**

## Freedom to Operate – Longevity of the Industry (Next Generation)

**1. Program overview (no more than 2-3 sentences) – define constraints/opportunities**

Budget cuts and reduced awareness of the career opportunities in agriculture among young scientists constrain the potential for continuous improvement in soybean production. In today's standard curriculum, graduate students are not encouraged to pursue educational tracks that train them in soybean sciences and lead them to become the next generation of soybean researchers.

**2. FTO Action Team ranked 8 out of 8 constraints/opportunities**

**3. Which target area goals does this program impact?**

Yield Research (SU2) – Identify molecular techniques and genetic pathways that enhance soybean yield potential and stress resistance.

Sustainable Yield Production (SU3) – Increase average U.S. soybean yield by 35% per acre through (A) translation of research results into new higher yielding varieties and better management practices and (B) capturing 10% more genetic yield potential per acre by 2025 by managing biotic and abiotic stresses that impact yield.

**4. What target areas are funded with this program?**

Supply

**5. What is the desired USB impact?**

Provide professional training opportunities for graduate students in soybean science. Encourage and promote graduate student interest in soybean sciences by supporting Ph.D. level graduate student programs with a focus on soybean science, breeding and research. Education and training of students is a long-term investment in soybean yield improvement.

**6. What does USB's involvement look like?**

USB support of educational and training programs for the next generation of soybean researchers will provide for a continuous supply of well-trained soybean researchers. In cooperation with industry partners, develop training opportunities to provide for Ph.D. level graduate research fellowships.

**7. Who is already working on this issue, what are they addressing, and what are the opportunities for partnerships to leverage this investment?**

Universities, USDA, commercial partners. This program provides support for Ph.D. students at universities to complete Ph.D. training in soybean science, research and breeding programs. This program also coordinates with other industry and FTO-funded programs that promote biotechnology career paths to young scientists.

**8. Where are we in the cycle of this issue, e.g., is this an emerging issue?**

This is a continuing issue. There is a continual need for trained scientists to advance soybean science.

**9. Priority Audience(s) – Ph.D. level graduate students**



## USB Customer Focus Action Team FY16 Program Brief

### Customer Engagement & Relationships

1. Customers in food, feed and industrial markets lack the knowledge of the benefits and value-added services provided by the U.S. soybean industry and its products; therefore, we must engage with them, build trusting relationships and educate them on our products and the services and resources we offer.
2. Customer Focus Action Team ranked 1 out of 4 constraints/opportunities
3. What target areas are funded with this program? Domestic Opportunities, International Opportunities
4. Which target area goals and measurements does this program impact?  
Customer Preference (IO 1) – Net Promoter Score  
Differentiate (IO 2) - % of target that understands and acts on the value of U.S. soy on the basis of digestible protein, amino acid profile and energy; % of target that understands how to value U.S. soy's competitive advantage with regard to transparency, supply, contractual issues and risk reduction. (Net differentiation score)  
Food (DO4) Increase the value and consumption of soy products for food use  
Industrial (DO3) Grow the use of soybean components for industrial and other new applications.
5. What is the desired impact and what is USB's ability to achieve this impact?  
The desired impact is that key customer segments are aware of the benefits and competitive advantages of U.S. soy. Current customers are serviced and maintained, and new markets are opened. The amount of soy products used in food, feed and industrial is increased. USB has a strong ability to make an impact.
6. What does USB's involvement (level of effort) look like?  
Building and strengthening relationships through trade servicing, education, outreach and marketing efforts with existing and potential customers in various industry segments. Facilitating trial and adoption of soy products by key customers.
7. Who is already working on this issue, what are they addressing, and what are the opportunities for partnerships to leverage this investment?  
Internationally and domestically, we are promoting the benefits and strengths of the U.S. soybean industry, leveraging Checkoff dollars by creating partnerships and relationships with customers and markets. Current food, feed and industrial partners are working the issue; and their efforts are enhanced by USB investment in research and development.
8. Where are we in the cycle of this issue?  
The issue varies in each geographic market and industry segment.
9. Priority Audiences?  
Top tier priority: Exporters and importers of U.S. soy and value added product, feed and food companies, feed mills, nutritionists, regulators and influencers, crushers and refiners, manufacturers of industrial products, health professionals, federal and state procurement personal.  
Second tier priority: Academia, industry associations, traders, seed technology companies.



## USB Customer Focus Action Team FY16 Program Brief

### Production Coordination & Outreach

1. Operating in a constantly evolving ag production industry, U.S. soybean farmers lack recently-tested methods and information that allow them to more efficiently produce a high-quality supply of soybeans. (Recently tested methods: Any new soybean farming practice, discovered as a result of recent research, designed to improve production efficiency.)
2. Customer Focus Action Team ranked 2 out of 4 constraints/opportunities
3. What target areas are funded with this program? Supply, Communications
4. Which target area goals and measurements does this program impact?  
Sustainable Yield Production (Supply 3) - Increase average U.S. soybean yield by 36% per acre by 2025.  
Customer Awareness (COMM 2) - % of U.S. soybean farmers who say they would be willing to change the seeds they plant if export markets like China demanded soy with higher protein and oil content increases from 32 % to 35 %  
Leverage (COMM 3) - 10% growth in leveraged dollars with QSSBs and value chain from \$8.4 million to \$9.2 million; Increase number of QSSB communication partnerships from 27 to 30  
Farmer Support (COMM 4) - Maintain at least 76 percent of U.S. soybean farmers who say they believe the soy checkoff is a “good deal” for soybean farmers
5. What is the desired impact and what is USB’s ability to achieve this impact?  
U.S. soybean farmers satisfy customer needs through improved production efficiency and soybean quality desired by the global marketplace. USB’s relationship with the research community and U.S. soybean farmers positions the checkoff with a strong ability to reach and influence soybean production.
6. What does USB’s involvement (level of effort) look like?  
Production research, research coordination, and outreach to farmers regarding production, customer needs and checkoff investments
7. Who is already working on this issue, what are they addressing, and what are the opportunities for partnerships to leverage this investment?  
USDA, universities, QSSBs and industry are conducting research to improve production and communicating with farmers about ag issues. Numerous opportunities exist for USB to partner with others to coordinate research and communications to maximize impact.
8. Where are we in the cycle of this issue?  
There’s an ongoing need to develop and communicate information to U.S. soybean farmers that impacts their farming decisions and methods, their awareness of customers’ needs and the investments of the checkoff.
9. Priority Audiences?  
U.S. Soybean Farmers, Production Researchers



## USB Customer Focus Action Team FY16 Program Brief

### Value Capture

1. In order to meet our customers' needs with quality soy products and services to enhance and expand our markets, we must help them capture the intrinsic (protein, amino acid, metabolizable energy, etc.) and extrinsic (sustainability, transparency, consistency of supply, etc.) advantages of U.S. soybeans and soybean products.
2. The Customer Focus Action Team ranked this 3 out of 4 constraints/opportunities
3. What target areas are funded with this program?  
Domestic Opportunities, International Opportunities, Supply
4. Which target area goals and measurements does this program impact?  
Quality & Component Value (DO 1) - Fifteen brands endorse a USB-supported sustainable soybean sourcing program by 2020.  
Customer Preference (IO 1) - Net Promoter Score  
Differentiate (IO 2) - Net Differentiation Score  
Feed (Supply 4) - Standard analytical measures for digestible amino acids developed by 2020; standard analytical measures for metabolizable energy accepted worldwide by 2016. Document the composition profile and resulting value of U.S. soybeans and soybean meal compared to South American competitors by 2015.  
Food (DO4) - Raise consumer perceptions of soy as healthy from 75-80 percent by 2018; Soy oil usage for food will reach 14 billion lbs. by 2020.
5. What is the desired impact and what is USB's ability to achieve this impact?  
Customers capture additional value from the benefits of U.S. soybeans, such as logistics, availability, quality, sustainability and service, building customer preference. Globally accepted analytical methods and standards are developed that differentiate the compositional quality advantages of U.S. soybeans over competitive products. USB will use its relationships and prior work in these areas to make an impact.
6. What does USB's involvement (level of effort) look like?  
Research to identify and improve analytical methods and standards for key soybean compositional characteristics. Programs to help customers promote benefits of U.S. soy and capture value.
7. Who is already working on this issue, what are they addressing, and what are the opportunities for partnerships to leverage this investment?  
Universities, USDA, and industry partners are working on the research, and USB will leverage this knowledge and expertise to advance and implement new practices that ensure additional component value is captured by farmers. USB is working with the soy value chain, including customers, to demonstrate the strengths and benefits of the U.S. soybean industry. Through this, we create partnerships and relationships with customers which increase overall value and expand market opportunities.
8. Where are we in the cycle of this issue, e.g., is this an emerging issue?  
Value capture for U.S. soy's intrinsic and extrinsic benefits is not a new concept, but it will take years to develop new protocols, pilot, and rollout new trading procedures to the entire market. Meanwhile, customer partnership programs are ongoing.
9. Priority Audience(s): Industry Partners, Food, Feed & Industrial Soybean / Soybean Products Customers



## USB Customer Focus Action Team FY16 Program Brief

### Market Intelligence

1. Gathering and providing current information, data and analyses about customers and global market conditions for soy and competitive products will arm us with intelligence critical to USB's and the U.S. soybean industry's ability to make strategic decisions that positively impact U.S. soybean farmers.
2. Customer Focus Action Team ranked 4 out of 4 constraint)/opportunities
3. What target areas are funded with this program? Domestic Opportunities, International Opportunities, Supply
4. Which Target Area Goals and Measurements does this program impact?
  - Quality and Component Value (DO 1) – A component value marketing platform for U.S. is established by 2016.
  - Feed (DO 2) – Soybean meal and other products (i.e. soy protein concentrate) use in domestic feed rations reaches 28.5 million metric tons by 2016.
  - Industrial (DO 3) – Soybean meal component use in industrial uses reaches 0.081 million metric tons by 2016; Soybean oil component use in biodiesel and other industrial uses reaches 5.6 billion lbs by 2016.
  - Food (DO 4) - Soy oil usage for food will reach 14 billion pounds by 2020; Raise consumer perceptions of soy as healthy from 75% to 80% by 2018
  - Customer Preference (IO 1) – Net promoter score.
  - Differentiate (IO 2) - % of target that understands and acts on the value of U.S. soy on the basis of digestible protein, amino acid profile and energy
  - Market Access (IO 3) – Progress in addressing barriers to trade of U.S. soy
  - Component Value (Supply 1) – Increase domestic use of U.S. soy by the animal feeding industry by 25% by 2025
  - Feed (Supply 4) – Document the composition profile and resulting value of U.S. soybeans and soybean meal compared to South American competitors by 2015.
5. What is the desired impact and what is USB's ability to achieve this impact?

A consistent source of domestic and global soybean market data will be available for informed decision making. Drivers of soybean markets and supplies will be readily identified for strategic planning and messaging. USB has a strong track record of high-impact success in providing leading soybean industry data that depicts supply and utilization.
6. What does USB's involvement (level of effort) look like?

Funding development and provision of key current and historical data on the use and availability of soybeans and soybean-based products; economic analyses of soybean markets/opportunities that hold the greatest strategic potential to increase profitability; and analyses of the soybean industry which are important to the functionality of the market place but otherwise unavailable.
7. Who is already working on this issue, what are they addressing, and what are the opportunities for partnerships to leverage this investment?

Universities, USDA, industry partners, U.S. Dept of Energy, and others are engaged in providing various data and analyses. USB can fill gaps in public soybean market information.
8. Where are we in the cycle of this issue, e.g., is this an emerging issue? This is a continuing issue.
9. Priority Audience(s) USB and U.S. Soybean Industry