USB Action Plan
July 2016
Long-Range Strategic Plan FY17-21: Goals

Board approved July 9, 2015, Effective October 1, 2016

**CORE VALUE:** The United Soybean Board works with honesty and integrity to achieve maximum value for the U.S. soybean farmer’s checkoff investments.

**MISSION:** Maximize profit opportunities for U.S. soybean farmers by investing and leveraging soybean checkoff resources.

**VISION:** U.S. soy drives soybean innovation beyond the bushel.

**STRATEGY:** Create and enhance partnerships that increase the value and preference for U.S. soy.

<table>
<thead>
<tr>
<th>SUPPLY</th>
<th>MARKETPLACE</th>
<th>DEMAND</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
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<tr>
<td>2</td>
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</tbody>
</table>

**SUSTAINABLE PRODUCTION**

Soybean producers use improved seed varieties and the latest production techniques to maximize profit opportunities while meeting the standards of the U.S. Soybean Sustainability Assurance Protocol.

**TECHNOLOGY**

Farmers use big data and technological advances to maximize their profit opportunities.

**INFRASTRUCTURE**

Potential partners and influencers use new information to communicate to appropriate target audiences why improvements to the transportation infrastructure are needed.

**VALUE**

The soy value chain is using an accurate definition of the U.S. soy advantage and bringing that value back to farmers.

**MEAL**

Animal and aquaculture producers seek meal made from U.S. soybeans in their feed rations because of the superior component value.

**OIL**

End users recognize, use and communicate the advantage of both conventional and high oleic U.S. soy oil.

**INDUSTRIAL USES**

Manufacturers of high value or high volume industrial products prefer U.S. soybean oil or meal as a feedstock/ingredient.

**SUSTAINABILITY**

Buyers and end users recognize U.S. soy as a sustainable and responsible choice for food, feed and industrial applications.

**FOOD EXPORTS**

Targeted food manufacturers in export markets prefer U.S. soy protein.
<table>
<thead>
<tr>
<th>TARGET AREAS</th>
<th>ACTION TEAMS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MEAL</strong></td>
<td>SUPPLY</td>
</tr>
<tr>
<td></td>
<td><img src="image" alt="Sustainable Production" /></td>
</tr>
<tr>
<td></td>
<td>Production Research</td>
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<tr>
<td></td>
<td><img src="image" alt="Value" /></td>
</tr>
<tr>
<td></td>
<td>Communications</td>
</tr>
<tr>
<td><strong>OIL</strong></td>
<td>SUPPLY</td>
</tr>
<tr>
<td></td>
<td><img src="image" alt="Sustainable Production" /></td>
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<td></td>
<td>Production Research</td>
</tr>
<tr>
<td></td>
<td><img src="image" alt="Value" /></td>
</tr>
<tr>
<td></td>
<td>Communications</td>
</tr>
<tr>
<td><strong>SUSTAINABILITY</strong></td>
<td>SUPPLY</td>
</tr>
<tr>
<td></td>
<td><img src="image" alt="Sustainable Production" /></td>
</tr>
<tr>
<td></td>
<td>Production Research</td>
</tr>
<tr>
<td></td>
<td><img src="image" alt="Value" /></td>
</tr>
<tr>
<td></td>
<td>Communications</td>
</tr>
</tbody>
</table>
Priority Audience by Action Team

**SUPPLY**

- Farmers
- Public and Private Researchers
- Input and Seed Companies

**MARKETPLACE**

- Regulators and Influencers
- Transportation Users
- Transportation Companies
- Elevators
- Sales Desk
- Crushers
- Buyers (Feed Mills and Oil Refiners)

**DEMAND**

- Crushers
- Buyers (Feed Mills and Oil Refiners)
- Feed Mill Nutritionists
- End Users

# United Soybean Board

## For Fiscal Year Ending September 30, 2017

## Budgeted Operating Revenue

<table>
<thead>
<tr>
<th></th>
<th>FY2017</th>
<th>FY2017</th>
<th>FY2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>QSSB Collections</td>
<td>76,712,500</td>
<td>76,712,500</td>
<td>76,593,750</td>
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<tr>
<td>Investment Income</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td><strong>Total Budgeted Operating Revenue</strong></td>
<td>$ 76,712,500</td>
<td>0</td>
<td>76,712,500</td>
</tr>
<tr>
<td></td>
<td>$ 76,712,500</td>
<td>0</td>
<td>76,593,750</td>
</tr>
</tbody>
</table>

## Budgeted Program Expenditures

<table>
<thead>
<tr>
<th></th>
<th>FY2017</th>
<th>FY2017</th>
<th>FY2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meal Target Area</td>
<td>22,300,017</td>
<td>22,300,017</td>
<td>N/A</td>
</tr>
<tr>
<td>Oil Target Area</td>
<td>19,931,421</td>
<td>19,931,421</td>
<td>N/A</td>
</tr>
<tr>
<td>Sustainability Target Area</td>
<td>14,569,420</td>
<td>14,569,420</td>
<td>N/A</td>
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<tr>
<td>Seed Industry Partnership - HOS</td>
<td>8,000,000</td>
<td>8,000,000</td>
<td>8,000,000</td>
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<tr>
<td>Meal Action Team</td>
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<td>17,028,647</td>
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<tr>
<td>Oil Action Team</td>
<td>N/A</td>
<td>N/A</td>
<td>11,692,845</td>
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<td>Freedom to Operate Action Team</td>
<td>N/A</td>
<td>N/A</td>
<td>11,255,170</td>
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<td>Customer Focus Action Team</td>
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<td>N/A</td>
<td>11,255,170</td>
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<tr>
<td>Allocations to Strategic Objectives</td>
<td>56,800,858</td>
<td>(56,800,858)</td>
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<tr>
<td>USB Managed - Program Implementation</td>
<td>19,000,000</td>
<td>19,000,000</td>
<td>18,080,301</td>
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<tr>
<td>USB Managed - Other Programs</td>
<td>5,000,000</td>
<td>5,000,000</td>
<td>4,926,229</td>
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<tr>
<td><strong>Total Program Funding</strong></td>
<td>$ 88,800,858</td>
<td>0</td>
<td>90,408,717</td>
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<tr>
<td>USB Evaluation of Programs</td>
<td>1,776,017</td>
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<tr>
<td><strong>Total Programs &amp; Evaluation</strong></td>
<td>$ 90,576,875</td>
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<td>92,216,891</td>
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## Budgeted Non-Program Expenditures

<table>
<thead>
<tr>
<th></th>
<th>FY2017</th>
<th>FY2017</th>
<th>FY2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>USDA (RFR-2014, Mgmt Review 2015)</td>
<td>275,000</td>
<td>275,000</td>
<td>275,000</td>
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<tr>
<td>Administrative</td>
<td>3,835,625</td>
<td>3,835,625</td>
<td>3,829,688</td>
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<tr>
<td>QSSB Assessment Credits</td>
<td>25,000</td>
<td>25,000</td>
<td>25,000</td>
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<tr>
<td><strong>Total Non-Program Expenditures</strong></td>
<td>$ 4,135,625</td>
<td>0</td>
<td>4,129,688</td>
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</table>

## Total Budgeted Operating Expenditures

<table>
<thead>
<tr>
<th></th>
<th>FY2017</th>
<th>FY2017</th>
<th>FY2016</th>
</tr>
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<tbody>
<tr>
<td><strong>Total Budgeted Operating Expenditures</strong></td>
<td>$ 94,712,500</td>
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<td>96,346,579</td>
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## Budgeted Operating Surplus (Shortfall)

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<th>FY2017</th>
<th>FY2017</th>
<th>FY2016</th>
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<tr>
<td><strong>Budgeted Operating Surplus (Shortfall)</strong></td>
<td>(18,000,000)</td>
<td>0</td>
<td>(19,752,829)</td>
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### FEBRUARY 2016 PROGRAM FUNDING

**FY2017 ALLOCATION by Strategic Objective**

<table>
<thead>
<tr>
<th>Target Areas:</th>
<th>MEAL</th>
<th>OIL</th>
<th>SUSTAINABILITY</th>
<th>USB MGD</th>
<th>PIC &amp; Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SUPPLY</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S1: Sustainable Production</td>
<td>5,418,904</td>
<td>2,706,687</td>
<td>3,267,921</td>
<td>11,393,512</td>
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<tr>
<td>S2: Technology</td>
<td>512,900</td>
<td>697,600</td>
<td>2,743,422</td>
<td>3,953,922</td>
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<tr>
<td><strong>MARKETPLACE</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M1: Infrastructure</td>
<td>3,055,207</td>
<td>3,055,207</td>
<td>2,743,422</td>
<td>10,519,104</td>
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<tr>
<td>M2: Value</td>
<td>4,192,403</td>
<td>3,874,668</td>
<td>2,452,033</td>
<td>13,574,311</td>
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<tr>
<td>D1: Meal</td>
<td>9,254,507</td>
<td>9,254,507</td>
<td>3,050,837</td>
<td>22,300,017</td>
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<tr>
<td>D2: Oil</td>
<td>6,409,945</td>
<td>6,409,945</td>
<td>3,050,837</td>
<td>13,870,727</td>
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<tr>
<td>D3: Industrial Uses</td>
<td>2,029,302</td>
<td>6,242,521</td>
<td>8,271,823</td>
<td>16,543,646</td>
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<tr>
<td>D4: Sustainability</td>
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<td></td>
<td></td>
<td>3,050,837</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D5: Food Exports</td>
<td>892,001</td>
<td>892,001</td>
<td>3,050,837</td>
<td>27,879,113</td>
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<td></td>
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<tr>
<td><strong>DEMAND</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Committed Allocation to Strategic Objective</td>
<td>22,300,017</td>
<td>19,931,421</td>
<td>14,569,420</td>
<td>56,800,858</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Additional Allocation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Allocation to Strategic Objective</strong></td>
<td>22,300,017</td>
<td>19,931,421</td>
<td>14,569,420</td>
<td>0 56,800,858</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seed Industry Partnership - HOS</td>
<td>8,000,000</td>
<td>8,000,000</td>
<td>24,000,000</td>
<td>36,000,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USB Managed - PIC and Other</td>
<td></td>
<td></td>
<td>24,000,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Program Funding for FY2017</strong></td>
<td>22,300,017</td>
<td>27,931,421</td>
<td>14,569,420</td>
<td>24,000,000 88,800,858</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Board Percent of TA funding, excl. SIP-HOS | 22,300,017 | 19,931,421 | 14,569,420 | 24,000,000 | 56,800,858 | 100.00% |

**ACTION TEAMS**

<table>
<thead>
<tr>
<th>SUPPLY</th>
<th>MARKETPLACE</th>
<th>DEMAND</th>
</tr>
</thead>
<tbody>
<tr>
<td>15,347,434</td>
<td>13,574,311</td>
<td>27,879,113</td>
</tr>
</tbody>
</table>

**Board Percent of TA funding, excl. SIP-HOS**

- **MEAL**: 39.26%
- **OIL**: 35.09%
- **SUSTAINABILITY**: 25.65%
- **USB MGD PIC & Other**: N/A
- **Total**: 100.00%
FY2017 Market Environment

Fiscal year 2017 for the soy checkoff approaches with a rebound in soybean prices, thanks to the intersection of continued strong global demand and significant production shortfalls from the early 2016 harvest in South America. While the 2016/2017 crop year supply is still being determined, U.S. soybean farmers had planted a record 83.7 million acres, as reported in the U.S. Department of Agriculture’s (USDA) June 30 report. With a little over two months remaining in the marketing year, it is too early to predict yield, but favorable weather has provided a good start across much of the soybean-growing region.

Soybean exports for 2015/2016 are projected at 1.760 billion bushels, still lower than the 2014/15 level of 1.843 billion bushels. The revised 2015/2016 export projection is 20 million bushels higher than prior USDA projections due to reduced soybean production in South America.

U.S. whole soybean exports have reached 96-percent of the USDA estimate for 2015/2016 in the June WASDE with just under two months remaining in the marketing year, which runs from Sept. 1 to Aug. 31 for the soybean crop year and from Oct. 1 to Sept. 30 for soybean meal and oil, according to USB calculations of export data provided by USDA. While exports will still be down from the record level of 2014/2015, the pace of export sales for the last quarter will be unusually high if sales reported in June continue their pace for the remainder of the marketing year.

In addition, projections for soybean crush in 2015/2016 are 10 million bushels above prior expectations, at 1.890 billion bushels. That’s because domestic growth in soybean meal consumption are growing faster than export demand is decreasing.

The increase in soybean prices has impacted feed prices, but USDA still projects higher production of red meat and poultry for the United States in 2016/2017.

The following observations were compiled from contractor reports and strategic-reporting materials in early summer 2016 and are designed to provide broad context to United Soybean Board farmer-leaders as they consider investments for the 2017 fiscal year.

**MEAL**

In the face of what had been projected to be a more challenging year with decreased exports for soybeans and soybean meal, domestic utilization continues to be a bright spot. Later in the 2015/2016 marketing year, the weather impacts on South America hampered international soybean supplies, leading to gains in U.S. exports – but still not to the levels seen in 2014/2015. The United States exported 11.93 million metric tons of soybean meal in 2014/2015, which represents the meal from 546.56 million bushels. Top destinations for meal exports include Mexico, the Philippines, the European Union, Canada and Colombia.
In addition, the U.S. exported poultry equal to the meal from 101.69 million bushels and pork equal to 72.54 million bushels in 2014/15. Top importers of U.S. poultry were Mexico, Canada, China and Hong Kong, Angola and Taiwan. Top importers of U.S. pork were Mexico, Japan, Canada, South Korea, and China and Hong Kong.

Two new soybean-processing plants are being built – one in South Dakota and another in Pennsylvania – by major processors. However, new synthetic amino-acid-production facilities are also under construction, and canola meal, a result of canola crushed for oil, continues to compete for meal market share.

The need for the U.S. soy industry to provide a value-enhanced soybean variety with higher protein is vital to U.S. soybean meal’s competitiveness. In addition, the intrinsic and extrinsic values of U.S. soybean meal need to be communicated with end users to build preference for meal made from U.S. soybeans. Continuing to work closely with processors and animal nutritionists also remains important.

USB’s Meal strategy addresses these issues with a focus on building preference in the animal feed market by differentiating U.S. soy through promotion and research. Through its work with the Value Task Force, USB will build upon its work to find value-enhanced opportunities for soybean meal.

**OIL**

Approximately 450,000 acres of high oleic soybeans are being grown in 11 states this year. There were approximately 1,000 farmers growing high oleic soybeans in 2015. Collaboration between USB and the individual seed companies continues throughout the planting and growing seasons. The approval process on these traits continues. Both seed companies need full EU approval, and one company is still waiting on Chinese approval. It’s anticipated that these approvals will come by the end of 2016.

Two case studies, one with a regional restaurant chain and the other with a conference and events center, provided further proof that there are benefits to using high oleic soybean oil in the commercial space.

Commodity soybean oil remains important to USB and the soy industry as there are applications where this is the preferred oil. One of these is biodiesel, which saw record use of nearly 2.1 billion gallons in 2015.

In 2014/2015, U.S. soybean oil exports reached 910,000 metric tons, which is the oil from 176.37 million bushels. Top importers of U.S. soybean oil include Mexico, the Dominican Republic, Peru, Morocco and Venezuela.
Through research that shows the functionality and versatility of U.S. soybean oil and promotion of these benefits, USB’s strategy in Oil is to build preference in both the food and industrial uses sectors. Both commodity soybean oil and high oleic soybean oil will be part of this strategic approach.

**SUSTAINABILITY**

The U.S. Soybean Sustainability Assurance Protocol (SSAP) continues to gain support abroad. In March, the (SSAP) was positively benchmarked against the European Feed Manufacturers’ Federation’s (FEFAC) Soy Sourcing Guidelines through the independent International Trade Centre (ITC) customized benchmark tool. As of early-July 2016, 1,138 SSAP certified shipments, totaling 4.595 million metric tons (168.856 million bushels), had been exported.

To build preference for U.S. soy and help U.S. soy’s end users meet their sustainability goals, USB’s strategic approach in the area of sustainability is to enhance and communicate U.S. soy’s sustainability performance. Measurements, transparency and a track record of continuous improvement will be critical to building trust in the sustainability of U.S. soy.
**TARGET AREAS**

**MEAL**

**SUMMARY STRATEGY:**
The soy checkoff is focused on building preference for U.S. soybean meal primarily in the feed markets, with some additional opportunity in industrial uses and the food markets in Taiwan and Indonesia. USB accomplishes this by differentiating U.S. soybean meal through promotion and research, with an emphasis on high value and constituent/component-based meal that will meet the needs of end users.

**STRATEGIC APPROACH:**
USB will help develop, communicate and capture the full value of U.S. soybean meal in feed, food and industrial applications.

**OIL**

**SUMMARY STRATEGY:**
The soy checkoff is focused on building preference for U.S. soybean oil in the food and industrial markets. USB accomplishes this by differentiating U.S. soybean oil through promotion and research.

**STRATEGIC APPROACH:**
Build preference for U.S. soybean oil in the food and industrial markets differentiating U.S. soybean oil through promotion, as well as research. Research will showcase the functionality and versatility of U.S. soybean oil specifically as it relates to high oleic soybean oil.

**SUSTAINABILITY**

**SUMMARY STRATEGY:**
U.S. soy will be the preferred raw material choice for buyers and end users to meet their sustainability and responsibility goals.

**STRATEGIC APPROACH:**
Effectively enhance and communicate U.S. soy sustainability performance so that buyers and end users prefer U.S. soy as the best raw material choice to meet their own sustainability and social responsibility goals. Drive a coordinated sustainability message across the entire value chain.
Users of oil seeds have many choices. It’s no longer enough to simply grow soybeans; now’s the time to grow better soybeans in order to increase preference and continue building demand. Differentiating our soybeans based on meal and oil quality and sustainability will help our products stand out in this highly competitive environment.

The soy checkoff helped farmers build the U.S. Soy Advantage, but it’s not something we should take for granted – it should be grown just like we grow our soybean crop. Improvements are needed in our meal, oil and sustainability programs to stay ahead of the competition.

Below, you’ll see how USB plans to make those improvements. Divided by target area, this is the story of how USB will lead U.S. soybean farmers to greater profit opportunities. Though written as three separate stories, the work of each target area comes together as a single plan to benefit U.S. farmers. For example, sustainability plays a role in meal and oil sales; market access is critical to all three target areas; and the ability to identity preserve soybeans with new and improved composition is relevant to both meal and oil. Each target area and each goal must work together to achieve USB’s mission and vision.
**MEAL EXECUTIVE SUMMARY**

The soy checkoff will build preference for U.S. soybean meal primarily in the feed markets by differentiating U.S. soybean meal through promotion and research, with an emphasis on high value and constituent/component-based meal that will meet the needs of end users. USB will pursue additional opportunities in industrial uses and the food markets in Taiwan and Indonesia.

Part of the soy checkoff’s role is to know what end users need from U.S. soybean meal and make sure those needs are met through research, development and adoption of seed technology. USB is committed to continually staying up to date on end-user demands. We have a system in place to keep the research pipeline full of meal innovations, keep the marketplace happy and keep the demand pulling the value through the system.

There is a lot more value in soybean meal that can be realized by everyone from the farmer to the end user. USB’s six goals in the Meal Target Area focus on how to unlock it. For most meal end users, the value of soybean meal is in the nutritional bundle – the protein/amino acids, energy and minerals – that animals eat. So by maximizing those constituents, the product’s value increases. USB’s meal strategy focuses on demand pull-through of innovative and value-enhanced meal products and capture of the value throughout the chain. In addition to animals, meal improvements can also be pulled through by food and industrial markets.

Here are the desired outcomes and what it will take to achieve USB’s meal strategy.

<table>
<thead>
<tr>
<th>SUPPLY</th>
<th>MARKETPLACE</th>
<th>DEMAND</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved nutritional bundle in U.S. soybean meal supply</td>
<td>Ability and willingness to capture value of higher-quality meal throughout chain</td>
<td>End users demanding and paying for higher-quality meal</td>
</tr>
<tr>
<td><strong>Genetic Improvements</strong>&lt;br&gt;Research to improve nutritional bundle.</td>
<td><strong>Industry Research</strong>&lt;br&gt;Gather market intelligence on marketplace audiences.</td>
<td><strong>Feed Industry Outreach</strong>&lt;br&gt;Demonstrate U.S. meal quality and communicate it with feed mills and nutritionists around the world. Continue to help optimize feed formulas to drive efficiency and demand.</td>
</tr>
<tr>
<td><strong>Variety Improvements</strong>&lt;br&gt;Engage seed companies to improve meal in commercial varieties.</td>
<td><strong>Value Chain Outreach</strong>&lt;br&gt;Communicate how to attain greater value from high-quality meal.</td>
<td><strong>Meat Exports</strong>&lt;br&gt;Promote U.S. meat and poultry abroad through food service and grocery.</td>
</tr>
<tr>
<td><strong>Farmer Adoption</strong>&lt;br&gt;Encourage planting of new, high-quality varieties.</td>
<td><strong>Partnerships</strong>&lt;br&gt;Collaborate with partners to explore the feasibility of incentive program based on IP or quality.</td>
<td><strong>Industrial Research</strong>&lt;br&gt;Develop technology and communicate to enable greater meal use.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Human Consumption</strong>&lt;br&gt;Build preference through technical support in targeted markets.</td>
</tr>
</tbody>
</table>
**OIL EXECUTIVE SUMMARY**

The soy checkoff will build preference for U.S. soybean oil in the food and industrial markets by differentiating U.S. soybean oil through promotion and research.

There’s value in soybean oil – lots of it. Even though oil makes up only about one-fifth of the soybean, it makes up at least one-third of the value. There are opportunities for farmers and the rest of the U.S. soy industry to capitalize on that value by promoting and improving upon soy oil’s attributes to create demand from end users to be pulled through the value chain.

USB has five goals in the Oil Target Area, and all are crucial to improving value, demand and farmer profitability. To maximize value, every link in the value chain must work together. For most end-users, the value of soy oil is in its functionality. So, by increasing functionality to meet those needs, true value can be realized, but must be captured and shared throughout the chain to benefit farmers. For this to happen, USB will conduct research to identify beneficial genetics, partner with seed companies to use the oil improvements in their germplasm and promote new technology adoption to farmers. But, other parts of the value chain are also critical to success. USB will help the value chain understand the U.S. soy advantage, along with supporting methods to help capture and share the value. In the end, it’s about getting the end users to pay for the value of the product they need.

Here are the desired outcomes and what it will take to achieve USB’s oil strategy.

<table>
<thead>
<tr>
<th>SUPPLY</th>
<th>MARKETPLACE</th>
<th>DEMAND</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased soybean oil concentration and quality, increased supply of high-oleic</td>
<td>Ability and willingness to capture value of higher-quality oil, including high-oleic, throughout chain</td>
<td>End users demanding and paying for better quality soybean oil/attributes/functionality, including high oleic</td>
</tr>
<tr>
<td>Public Researcher Collaboration Support research to use genetic variation, physiological pathways and markers to increase oil content.</td>
<td>Gather Intelligence Conduct research to increase understanding of key audiences.</td>
<td>Educate On Advantage Communicate U.S. Soy Advantage vs. competition.</td>
</tr>
<tr>
<td>Tech Transfer Inform farmers how to increase value through better quality, including high-oleic.</td>
<td>Component Pricing Conduct outreach among industry based on oil advantages and benefits of component pricing.</td>
<td>Performance Benefits Showcase U.S. soy oil’s performance benefits for food in new ways.</td>
</tr>
<tr>
<td><em>Industrial Research</em> Support research and promotion of biodiesel and other industrial products.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SUSTAINABILITY EXECUTIVE SUMMARY

U.S. soy will be the preferred raw materials choice for buyers and end users to meet their sustainability and responsibility goals.

In order to increase preference for and the value of U.S. soy, we must promote not only soy’s product attributes, but also its sustainability because end users demand both. Producing a sustainable supply of high-quality soy takes a lot more than just caring for the environment. It requires matching the outcomes of sustainable farming practices – energy efficiency, nutrient reduction, water quality, soil health – to the attributes end users most desire. Ultimately, we want to connect those outcomes to value that gets transferred to every link in the chain all the way back to the farmer. End users in the U.S. and around the world want to know how their food is produced, and U.S. soy has a great story to tell.

Getting the industry ahead of end user demands will help USB achieve the five goals across the Sustainability Target Area. For farmers, it starts with management systems that position them ahead of end-user demands, being able to deliver the sustainable outcomes end users need before they need it. For the value chain, USB must share U.S. soy’s sustainability story, the value of sustainability to end users and the need to capture it throughout the industry. Regulators, influencers and the transportation sector play an important part in providing sustainable soy through technology acceptance, market access and infrastructure improvements. Sharing our sustainability metrics with buyers and end users will make them more comfortable with U.S. soy and the value it brings to them.

Here are the desired outcomes and what it will take to achieve USB’s sustainability strategy.

<table>
<thead>
<tr>
<th>SUPPLY</th>
<th>MARKETPLACE</th>
<th>DEMAND</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved sustainability performance of U.S. soy</td>
<td>Value of U.S. soy’s sustainability captured and shared throughout the chain</td>
<td>Buyers and end users recognize and pay a premium for U.S. soy because of its sustainability.</td>
</tr>
</tbody>
</table>

**Researcher and Stakeholder Collaboration**
Research to identify BMPs and data services that enhance on-farm sustainability.

**Farmer Adoption**
Drive awareness and use of technology and management systems that result in the sustainability outcomes desired by end users.

**Multi-Stakeholder Efforts**
Drive coordinated key messages related to the U.S. soy advantage which includes the positive sustainability story of U.S. soy.

**Market Access**
Drive understanding of the role of on-farm innovations, including biotechnology and nutrient management to enable sustainability; the need for quick approvals for those innovations; and how those innovations connect to sustainability. Build awareness of the U.S. Soybean Sustainability Assurance Protocol.

**Infrastructure Investments**
Communicate competitive advantage of transportation infrastructure and understand the investments needed to improve it. Collaborate on a public/private partnership to create funding sources for infrastructure improvements.

**Anticipate Needs of Buyers and End Users**
Communicate the metrics that show the sustainability of U.S. soy and how those metrics match the needs of end users, which translates into increased demand. Build on international approval of the U.S. Soy Sustainability Assurance Protocol to differentiate and build preference for U.S. soy.
Goal: Sustainable Production – Meal  $5,418,904

Audience: Public Researchers - Rating: High

Objective A: Public researchers will create innovation in soybean meal composition that can be incorporated into commercial products.

Framework of Program Activities:
1. **WHAT? What are the program activities to accomplish the objective?** To improve the nutritional bundle of the U.S. soybean crop by increasing soybean protein concentration, quality, mineral composition, and metabolizable energy it will be necessary to identify new sources of genetic variation for protein synthesis and storage in seeds and develop markers for the genes responsible. To accomplish this, we recommend engaging public researchers to conduct research studies that will explore new sources of genetic variation for soybean seed protein content, amino acid composition, mineral content, and sugar composition, resulting in an improved nutritional bundle. In addition, research to determine the physiological pathways involved in protein synthesis and seed storage and identification of the genes controlling these processes will be needed. Research to improve meal composition will be an essential part of the Unified Research Strategy, which will ensure that various research projects undertaken throughout the checkoff family will complement one another without overlaps. There is a need to focus efforts at increasing protein content in the Upper Midwest (Dakotas, Western Minnesota, Northwest Iowa and parts of Nebraska) in soybean maturity groups 0-II to address low protein levels in the region. Once the traits and the genes controlling them are identified and genetic markers are developed, USB will work with seed companies to incorporate these new traits into their elite germplasm to develop new high-yielding, high-protein soybean varieties. Ultimately, farmers will need to plant these new varieties in order to increase protein and metabolizable energy in the U.S. soybean crop. Elevators and crushers will need to develop identity preservation practices that allow the full capture of the value of these seed trait improvements and allow end users to realize these soybean meal quality benefits. These improvements will better meet the needs of the animal feeding sector for protein, amino acids, and energy and help maximize the use of soybean meal in feed rations compared to other protein/amino acid sources. A constituent pricing system will ultimately be needed to enable farmers to capture the full value of the soybeans they grow. The Marketplace Action Team is developing a five-year plan to address the steps that need to be taken moving forward to implement this plan. The Supply Action Team will work toward educating farmers as to how to measure their soybeans in order to capture their full value once a constituent pricing system is in place.

WHY? Why does this target audience need us and how can we address that need through the objective? Soybean variety development has historically focused on increasing yield and protecting yield from stresses that decrease yield because the commodity pricing system is based on price per unit volume. This approach has resulted in a significant
decline in soybean seed protein concentration as yield has increased, since the selection pressure has been for seed weight increase and not seed composition. It is therefore necessary to increase soybean protein levels while maintaining soybean seed oil levels so the total value of soybeans to the value chain is maintained. Processors obtain 33-37% of soybean value from oil so increasing protein at the expense of oil is not acceptable. Farmers will continue to demand high yield as long as they receive payment for soybeans on a per bushel basis. Soybean seed protein concentration has decreased an average of 0.05 percentage units per year since 1985. This decline has resulted in it being difficult for processors to make 47.5% protein meal with available soybeans, the minimum trade rule level for high protein soybean meal. If high protein meal is not available, the door is opened for livestock and poultry feeders to use other less expensive protein sources, such as DDGS, and synthetic amino acids that otherwise would not be as desirable as soybean meal. Livestock and poultry feeders rely on soybean meal as a source of essential amino acids. As protein is increased it will be necessary to ensure that protein quality is maintained. In addition, there are anti-nutritional components in soybean meal, like oligosaccharides, that should be reduced and replaced with digestible sugars like sucrose to increase metabolizable energy so livestock and poultry feeders can increase soybean meal inclusion rates in rations. To maintain market share and provide the protein levels nutritionists require so feed rations maximize the soybean meal in the diet, it is necessary to increase soybean protein concentration and improve protein quality.

Rating: Most Important

Strategies:
- USB will work with seed companies, and public and private researchers to help develop commercially available soybeans with improved meal composition characteristics using conventional, molecular and genomic breeding techniques.
- USB will support work of public research toward identifying two new varieties with improved nutritional bundles.

2017 Milestone: Dialogue with USB to identify new varieties with an improved nutritional bundle for commercialization.
2021 Milestone: At least two new traits with an improved nutritional bundle are available to the seed companies.

FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams:

Broad Activities to Influence the Objective:
There are a number of key soybean seed compositional components that make up the soybean meal nutritional bundle. These include protein and its constituent amino acids, soluble carbohydrates that include both digestible and indigestible sugars, insoluble carbohydrates that
are primarily the fiber components of cell walls and the seed hull, and minerals that are also important to end users. Some specific areas of research that are needed include:

- **Research to identify new sources of genetic variation for protein concentration that increases seed protein content by at least one percent while maintaining or increasing yield without impacting oil content.**
  - Identify new sources of genetic variation for protein concentration from diverse soybean resources including exotic germplasm, soybean ancestors, wild soybean and related species.
  - Develop adapted soybean germplasm with increased protein content, competitive yield and acceptable oil levels.
- **Research to reduce seed content of raffinose family oligosaccharides (RFOs) and increase sucrose content to improve soybean meal metabolizable energy levels.**
- **Research to improve amino acid balance in soybean seed proteins to increase essential amino acids, especially the sulfur-containing amino acids.**
- **Research to improve mineral composition of soybean seed to better meet human and livestock nutritional requirements for magnesium and other essential minerals.**
- **Explore soybean meal composition improvements using both GMO and non-GMO approaches.**

**Rationale:** The action team felt that a small increase in protein (<1%) would not bring enough value to farmers for the investment and provided direction that research conducted to increase protein levels should aim for an increase of one percent or greater. It was noted that increasing protein and improving amino acid composition could not be at the expense of decreasing either oil content or yield. In fact there was a desire to continue to increase yield while increasing protein content. The farmer-leaders also discussed the desire to have some increased varieties available in both GMO and non-GMO varieties to increase market opportunities in view of food processors’ interest in using non-GMO labeling as a marketing tool.

**Potential Partners:** Public universities, USDA-ARS, Seed Companies, Animal Nutrition Working Group

**Rationale:** Coordination of effort among public and private researchers, seed companies and livestock/poultry nutritionists is critical in order to make progress in developing new soybean varieties with improved meal nutritional bundle. Basic exploratory research by public researchers is needed to identify new sources of variation. This would be followed by incorporation of these new genes into elite, high-yielding varieties. Ultimately meal resulting from these new varieties needs to be evaluated by nutritionists to see if there are benefits that are derived from these improved varieties.

**Activities to Start Now to Meet 2021 Milestone: All**

**Rationale:** Research activities need to be started now in order for the FY21 milestones to be realized. Initial research work related to identifying new sources of variation for meal composition traits is necessary now in order for those traits to be developed into germplasm that can be commercially developed by FY21.
Analyst comments:

- **Focus on soybean protein.** In the past 40 years, prioritizing input traits and oil has distracted from the needed emphasis on where the majority of the soybean profits are derived.

- **Focus on "pull demand."** Like HO oil, we need to engage, communicate, educate and prove (through objective calculations) the true value bundle of soybean meal, especially as we improve meal traits and protein. Animals, primarily poultry and swine, are our most important customers, and nutritionists are their parents, dictating what they eat.

- **Constituent Pricing is essential.** It will take time, we must show margin loss or market loss for non-adopters, and there will be lots of detractors. A sequence of value determination, measurement, communication and participation is required. If a processor or elevator realizes they might lose volume and/or margin, they will listen.

- **Time to play offense vs. defense.** We have more clout than we think. However, many perceive us as reactionary and polite. It's time to advertise new goals and priorities, and even talk about how much money we will spend to improve soybean protein. The new high protein, HO oil, non-GMO canola varieties scare me, and the multiple new synthetic amino acids plants all over the world terrorize me! Proactive communication will stem competition growth.

- **Don't stop shaking the organization.** It's not fun or easy to disrupt past programs, roles and structure. And, the past was not a failure. However, after working with a hedge funds, private companies and very successful organizations, it feels like there are opportunities in terms of both expectations and past structure. Patience is a virtue, but, tangible, prompt, focused success is the key to sustained viability and profit.

- **Ignore the noise.** There are many organizations surrounding USB that are looking out for their own best interests. USB needs to focus on their own priorities so that there is no detraction from goal attainment and proper goal alignment.

- **Seed Tech Company efforts.** USB has a big seat at their table based on HO bean investment, farmer communication tools and altruistic value chain goals. Focus on Pioneer soybean seed folks, even with the merger confusion. The bottom quality seed varieties must go!

- **Education is Key.** Meet with and speak to key value chain members to relay a "get on board, or get out of the way" message. Connections, board meetings, Commodity Classic, etc., are good and have their place. An additional meeting, "here are our current successes and here are our future successes" would serve multiple purposes. "This will impact your P&L" has to be the subliminal message. It could get processors, seed techs, nutritionists, exporters and select farmers on the same sheet of music. You have done tremendous work and taken big chances, all with the goal of a better USB.
**Audience:** Seed Companies - **Rating:** Medium

**Objective B:** Seed companies will develop and commercialize improved seed varieties and help convert research innovation into applications.

1. **WHAT? What are the program activities to accomplish the objective?** To improve the nutritional bundle of in the U.S. soybean crop by increasing soybean protein concentration, quality, mineral composition and metabolizable energy, it will be necessary for seed companies to incorporate new traits identified by public researchers and their own breeding programs into their elite germplasm to develop new high-yielding, high-protein soybean varieties. There is a need to focus efforts at increasing protein content in the Upper Midwest (Dakotas, Western Minnesota, Northwest Iowa and parts of Nebraska) in soybean maturity groups 0-II to address low protein levels in the region. Ultimately farmers will need to plant these new varieties in order to increase protein and metabolizable energy in the U.S. soybean crop. These improvements will better meet the needs of the animal feeding sector for protein, amino acids and energy and help maximize the use of soybean meal in feed rations compared to other protein/amino acid sources.

2. **WHY? Why does this target audience need us and how can we address that need through the objective?** Soybean variety development has historically focused on increasing yield and protecting yield from stresses that decrease yield because the commodity pricing system is based on price per unit volume. This approach has resulted in a significant decline in soybean seed protein concentration as yield has increased, since the selection pressure has been for seed weight increase with no focus on seed composition. It is therefore necessary to increase soybean protein levels while maintaining soybean seed oil levels so the total value of soybeans to the value chain is maintained. Processors obtain 33-37% of soybean value from oil so increasing protein at the expense of oil is not acceptable. Farmers will continue to demand high yield as long as they receive payment for soybeans on a per bushel basis. Soybean seed protein concentration has decreased an average of 0.05 percentage units per year since 1985. This decline has resulted in it being difficult for processors to make 47.5% protein meal with available soybeans, the minimum trade rule level for high protein soybean meal. If high protein meal is not available the door is opened for livestock and poultry feeders to use other less expensive protein sources that otherwise would not be as desirable as soybean meal. Livestock and poultry feeders rely on soybean meal as a source of essential amino acids. As protein is increased it will be necessary to ensure that protein quality is maintained. In addition, there are anti-nutritional components in soybean meal, like oligosaccharides that should be reduced and replaced with digestible sugars like sucrose to increase metabolizable energy so livestock and poultry feeders can increase soybean meal inclusion rates in rations. To maintain market share and provide the protein levels nutritionists require so that feed rations maximize the soybean meal in the diet, it is necessary to increase soybean protein concentration and improve protein quality.

**Rating:** None
Strategy: USB will work with seed companies, and public and private researchers to help develop commercially available soybeans with improved meal composition characteristics using conventional, molecular and genomic breeding techniques.

2017 Milestone: One new trait (not currently marketed) each for disease, environmental stress, and composition developed by USB-funded research is identified for adoption into company germplasm development.

2021 Milestone: At least one new trait is commercialized each for nutritional bundle.  
2021 Milestone: Private researchers licensing and/or using, public research results.

FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams:

Broad Activities to Influence the Objective:
Seed companies will be engaged to encourage incorporation of new soybean nutritional bundle traits including increased protein, improved amino acid balance, reduced oligosaccharides, increased sucrose, and improved mineral composition, while maintaining oil content and increasing yield.

- Work with seed companies to initiate development of new high-protein, improved meal composition high-yielding soybean varieties.
- Encourage seed companies to incorporate new sources of genetic variation for improved meal nutritional bundle developed by public researchers.

Rationale: Most or all seed companies currently develop varieties based on yield potential as desired by farmers. USB needs to communicate with these companies the demand for varieties with increased protein, improved amino acid composition, and reduced anti-quality components to meet end-user demands.

Potential Partners: Seed Companies, University researchers, USDA-ARS

Rationale: Coordination of effort among public and private researchers, seed companies and livestock/poultry nutritionists is critical in order to make progress in developing new soybean varieties with improved an improved meal nutritional bundle. Basic exploratory research by public researchers is needed to identify new sources of variation. This would be followed by incorporation of these new genes into elite, high-yielding varieties. Ultimately meal resulting from these new varieties needs to be evaluated by nutritionists to see if there are benefits that are derived from these improved varieties.

Activities to Start Now to Meet 2021 Milestone: All Activities

Rationale: Conversations and plans need to be developed with seed companies now so that FY2021 goals of commercializing soybean varieties that can produce an improved nutritional bundle meal are able to be met. Most or all seed companies currently develop
varieties based on yield potential. USB needs to communicate with these companies about the demand for varieties with increased protein to meet customer demands.

**Analyst comments:**
See analyst comments for Objective A.
**Audience:** Farmers - **Rating:** Medium

**Objective C:** Farmers will use improved seed varieties in a timely manner as they become available.

**Framework of Program Activities:**

1. **WHAT? What are the program activities to accomplish the objective?** To encourage farmers to use improved seed varieties with increased protein levels, USB will reach farmers as part of a larger communications effort throughout the value chain to increase the value of U.S. soybean meal through increased protein levels. This includes education efforts, like providing research and data, within the USB family to ensure all understand the benefits and value as well as an external outreach effort to make farmers aware of the decline in soy protein levels in recent years. This effort will include an explanation of how market share has been affected due to this decline in protein and, if not addressed, has the potential to have a much bigger effect on market share in the future. Messaging will include references to increasing protein content without sacrificing yield. An understanding of the issue is the first step in the larger, end goal of having farmers select varieties with greater protein concentrations to meet those end user needs. At the same time, movement will be made throughout the value chain towards a component-pricing system, beginning with the development of a five-year summary plan, with the end goal that farmers will be paid on the basis of the value components contained in soybean seed, not yield.

2. **WHY? Why does this target audience need us and how can we address that need through the objective?** U.S. soybean farmers clearly play an important role in the goal of increasing soy protein available to end users. Public researchers and seed companies must work to identify and develop the germplasm that increases protein concentration and make that germplasm available in varieties for farmers to grow. To achieve success, farmers must grow these new, higher-protein, improved nutritional bundle varieties instead of focusing solely on high-yielding varieties as is the case now. This begins first with an understanding of the threat of declining market share due to increasing competition from synthetics and other sources of protein (canola, South American soy) and then a move to encourage farmers to plant varieties with higher protein levels.

**Rating:** Least Important

**Strategy:** USB will inform farmers about the availability and benefits of improved seed varieties.

2017 Milestone: Farmers adopt 1 or more improved varieties (i.e. improved composition) as they become available.

2021 Milestone: Farmers adopt at least one trait with improved composition.

**FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams:**
**Broad Activities to Influence the Objective:**

- Share with the USB family (board members, contractors, staff) research and data on the potential value to be gained through component pricing and how this can help to better meet end-user needs through an increase in value-added meal.

- Communicate with farmers about declining protein levels and the increasing risk of lost market share due to competition from other commodities and synthetics. Share how growing varieties with higher protein levels can reduce the risk of lost market share and better meet end user needs.

- Communicate to and work with seed dealers to share more information on higher protein varieties and have conversations with farmers about varieties that can help meet end-user needs.

**Rationale:** It is important that all within the USB family understand the momentum being made towards a component pricing system and how this could benefit U.S. soybean farmers. Research and data is available to support this point and every effort should be made to share this to increase awareness and support for the system. As part of an external education effort, farmers should first understand that they stand to lose market share due to declining soy protein levels and next that choosing varieties with higher protein levels can help avoid this loss. Movement made in the rest of the value chain towards a component pricing system will be an incentive for farmers to choose different varieties and this movement will be communicated as appropriate. Seed dealers find themselves at the farm gate at least once every fall, if not more often. They have a lot of influence on the varieties each farmer selects. Having a partner in seed dealers to communicate about increased protein levels will be essential to encouraging more farmers to grow varieties with increased protein.

**Potential Partners:** Seed companies/dealers

**Rationale:** Seed dealers find themselves at the farm gate at least once every fall, if not more often. They have a lot of influence on the varieties each farmer selects. Having a partner in seed dealers to communicate about increased protein levels will be essential to encouraging more farmers to grow varieties with increased protein.

**Activities to Start Now to Meet 2021 Milestone:**

- Share with the USB family (board members, contractors, staff) research and data on the potential value to be gained through component pricing and how this can help to better meet end-user needs.

- Communicate with farmers about declining protein levels and the increasing risk of lost market share due to competition from other commodities and synthetics. Share how growing varieties with higher protein levels can reduce the risk of lost market share and better meet end user needs.

**Rationale:** It is important that all within the USB family understand the momentum being made towards a component pricing system and how this could benefit U.S. soybean farmers. Having a strong understanding at the board, contractor and staff level will aid in the
understanding and selling of this system to all other soybean farmers. Additionally, communications to farmers to increase awareness of the benefits of a component pricing system will make the transition smoother when the rest of the value chain makes the change.

**Analyst Comments:**
See analyst comments for Objective A.
Goal: Sustainable Production – Oil $2,706,687

Audience: Public Researchers - Rating: Medium

Objective A: Public researchers will create innovation in soybean oil composition that can be incorporated into commercial products.

Framework of Program Activities:

1. **WHAT? What are the program activities to accomplish the objective?** It will be necessary to increase soybean seed oil content while maintaining protein content and increasing yield to meet processor and farmer requirements and maintain the entire value proposition of soybeans throughout the value chain. To increase soybean oil concentration and quality in the U.S. soybean crop it is necessary to identify new sources of genetic variation for oil synthesis and seed storage and develop markers for the genes responsible. To accomplish this, we recommend engaging public researchers to conduct research studies that will explore new sources of genetic variation for soybean seed oil content and high oleic acid content. New sources of high oleic soybean (HOS) may include natural mutations in the FAD2 genes as represented by the two-gene combination identified at the University of Missouri, or new sources of high oleic oil composition developed through new genome editing technologies like CRISPR or TALENs. In addition, research to determine the physiological pathways involved in oil synthesis and seed storage and identification of the genes controlling these processes will be needed. Then it will be necessary to work with seed companies to incorporate these new traits into their elite germplasm to develop new high-yielding, high-oil soybean varieties. It will be necessary to determine the market potential of non-GMO high oleic soybean to determine whether the potential market warrants the investment that would be necessary to pursue development of this trait. One study on the market potential of non-GMO high oleic soybean has been conducted by Informa Economics at the request of the Missouri Soybean Merchandising Council. The need for additional evaluation of the market potential for non-GMO HOS is being evaluated by the Marketplace Action Team. The Supply Action Team will work with researchers to develop non-GMO HOS soybean varieties if the market analysis determines that this market is of sufficient size to warrant USB investment and it doesn’t compete with GM HOS developments currently supported by USB. Ultimately farmers will need to plant these new varieties in order to improve the oil content of the U.S. soybean crop. Elevators and crushers will need to develop identity preservation systems that maintain the value of high oleic soybeans so it can be realized by the end users who can benefit from the superior functional properties of high oleic oil. A constituent pricing system will ultimately be needed to enable farmers to capture the full value of the soybeans they grow. The Marketplace Action Team is developing a five-year plan to address the steps that need to be taken moving forward to implement this plan. The Supply Action Team will work toward educating farmers as to how to measure their soybeans in order to capture their full value once a constituent pricing system is in place. The Supply Action
Team will also work with Public Researchers and Seed Companies to develop soybean varieties that have improved oil composition that provide the opportunity to provide more value.

2. **WHY? Why does this target audience need us and how can we address that need through the objective?** Soybean processors rely on soybean oil for a significant portion (33-37%) of their value stream. Increasing oil content in soybean seed while maintaining protein content and maintaining or increasing yield meets the needs of crushers to increase overall soybean value. The development of high oleic soybean varieties resulted from a loss of market share for soybean oil in the U.S. food market, declining by 4 billion lbs. after the 2005/06 advent of trans-fat labeling. Another 2 billion lbs. of soybean oil demand is at risk due to the loss of GRAS (generally regarded as safe) status for partially hydrogenated oils. These market share losses have resulted in the need for dependable supply of soybean oil with high oxidative stability and shelf life. High oleic soybean oil has been developed to meet these demands of the food industry. High oleic soybean oil also offers significant health benefits. The food industry is also demanding non-GMO sources of soybean oil in response to consumer demands for non-GMO foods.

**Rating: Most Important**

**Strategies:**
- Work with both public and private industry researchers to create innovation in oil composition that can be incorporated into commercial products by seed companies.
- Promote higher value soybeans, new technology opportunities and how they meet end user demands to enable farmers to grow an improved supply of soybean oil.

2017 Milestone: Develop the timeline for non-GMO (conventional) HOS handoff.

2017 Milestone: Gather information and evaluate opportunities in high-oil and low-saturate traits

2021 Milestone: Establish program for commercialization

**FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams:**

**Broad Activities to Influence the Objective:**
Oil represents a significant portion of the value of soybean to the entire value chain. Research to increase seed oil content while maintaining protein content and increasing yield through identification of genetic variation for oil content is a key focus of this program. General activities that will be required to achieve this objective include:
- Research to understand the physiology and genetic control of oil synthesis and seed storage in soybean.
- Research to identify new sources of genetic variation for oil concentration from diverse soybean resources including exotic germplasm, soybean ancestors, wild soybean and related species.
o Research to determine and exploit genetic control of oil synthesis and storage in soybean seed.
o Development of adapted soybean germplasm with increased oil content, competitive yield and acceptable protein levels.

• Development of new sources of high oleic soybean oil by developing soybean varieties that express high oleic oil content through natural genetic variation or genome editing.

Rationale: USB Directors discussed the need to develop non-GMO high oleic varieties to meet customer demand for non-GMO high oleic oil. The importance of increasing soybean seed oil content was noted with respect to maintaining the overall value proposition of soybean to the entire value chain. Further input from the USB Board has directed staff to evaluate the market potential of non-GMO HOS. This effort is being handled by the Marketplace Action Team.

Potential Partners: Public universities, USDA-ARS, Seed Companies, Qualisoy, Food manufacturers

Rationale: Coordination of effort among public and private researchers, seed companies and livestock/poultry nutritionists is critical in order to make progress in developing new soybean varieties with improved meal nutritional bundle. Basic exploratory research by public researchers is needed to identify new sources of variation. This would be followed by incorporation of these new genes into elite, high-yielding varieties. Ultimately meal resulting from these new varieties needs to be evaluated by nutritionists to see if there are benefits that are derived from these improved varieties.

Activities to Start Now to Meet 2021 Milestone: All

Rationale: Research activities need to be started now in order for the FY21 milestones to be realized. Initial research work related to identifying new sources of variation for oil composition traits is necessary now in order for those traits to be developed into germplasm that can be commercially developed by FY21.

Analyst comments:

Environment for soybean Oil in 2016

• The crushing industry is cyclical, and we appear to be heading into a 3 – 5 year downtrend on profitability.
• Oil value share will remain between 33 – 37 percent of the meal / oil relationship.
• Processors will scale back their crushing assets in order to keep meal margins around a $1.00 per bushel, slowing down the availability of oil.
• Cheap petroleum prices will constrict opportunities in the nonfood area.

Opportunities for Oil in 2017

• Expand the dialogue with Elevators and Processors to insure they’re aware of new seed varieties. High Oleic soybean, then future meal traits will require investment at both locations. (bins, dumps, tanks)
• Develop a storyline demonstrating the value proposition for U.S. soybean oil that can be adapted for each point on the value chain, both for domestic and export markets.

• Determine how the farmers want to demonstrate their traceability platforms and decide what organization is the best vehicle to drive that discussion throughout the chain with specific understanding of end use customer requirements.

• Assess and qualify opportunities in the nonfood sector specific to high oleic soybean oil. We need to understand what segments will benefit from the extended stability and which are large enough to invest in going forward. Ideally, that segmentation is completed in 2016 and potential partners
**Audience:** Seed Companies - **Rating:** High

**Objective B:** Seed companies will develop and commercialize improved seed varieties and help convert research innovation into applications.

**Framework of Program Activities:**

1. **WHAT? What are the program activities to accomplish the objective?** In order to increase soybean oil concentration and quality in the U.S. soybean crop it will be necessary for seed companies to incorporate new oil traits identified by public researchers and their own breeding programs into their elite germplasm to develop new high-yielding, high-oil soybean varieties. USB will continue to engage seed companies to develop more seed sources of high oleic soybean with broader adaptation to ensure a consistent supply of high oleic soybean oil to food and industrial users. Ultimately farmers will need to plant these new varieties. These improvements will better meet the needs of the entire value chain by providing higher oil yield to processors and resulting in higher protein concentration in the meal, benefiting livestock and poultry feeders.

2. **WHY? Why does this target audience need us and how can we address that need through the objective?** Soybean processors rely on soybean oil for a significant portion (33-37%) of their value stream. Increasing oil content in soybean seed while maintaining protein content and maintaining or increasing yield meets the needs of crushers to increase overall soybean value. The development of high oleic soybean varieties resulted from a loss of market share for soybean oil in the U.S. food market, declining by 4 billion lbs. after the 2005/06 advent of trans-fat labeling. Another 2 billion lbs. of soybean oil demand is at risk due to the loss of GRAS (generally regarded as safe) status for partially hydrogenated oils. These market share losses have resulted in the need for dependable supply of soybean oil with high oxidative stability and shelf life. High oleic soybean oil has been developed to meet these demands of the food industry. High oleic soybean oil also offers significant health benefits. The food industry is also demanding non-GMO sources of soybean oil in response to consumer demands for non-GMO foods.

**Rating:** None

**Strategies:**

- Work with both public and private industry researchers to create innovation in oil composition] that can be incorporated into commercial products by seed companies.
- Promote higher value soybeans, new technology opportunities and how they meet end user demands to enable farmers to grow an improved supply of soybean oil.

2017 Milestone: 1.0 MM acres of high oleic soy planted
2021 Milestone: 11.71 MM acres (equivalent to 5.9 B lbs) of high oleic soy planted
2021 Milestone: High-yielding, high-oleic varieties are available from Monsanto and Pioneer in maturity groups 1-5.
2021 Milestone: Private researchers licensing and/or using, public research results
FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams:

**Broad Activities to Influence the Objective:**
To improve the value of U.S. soybeans, USB will engage seed companies to develop soybean varieties with improved oil content, included expansion of high oleic variety offerings. Several approaches will be used including:

- Continue to support and encourage the development of expanded variety/maturity group offerings of high oleic soybeans.
- Engage with seed companies to initiate development of new high-oil content, high-yielding soybean varieties.
- Encourage seed companies to incorporate new sources of genetic variation for increased oil content developed by public researchers.

**Rationale:** Seed companies should continue to increase availability of high oleic soybeans through a greater variety of maturity groups and increased supply through a more robust seed production program. Development of increased oil content soybean varieties will result in a better value proposition for processors while increasing the protein concentration of the resulting soybean meal.

**Potential Partners:** Seed Companies, University researchers, USDA-ARS

**Rationale:** Coordination of effort among public and private researchers, seed companies and livestock/poultry nutritionists is critical in order to make progress in developing new soybean varieties with an improved meal nutritional bundle. Basic exploratory research by public researchers is needed to identify new sources of variation. This would be followed by incorporation of these new genes into elite, high-yielding varieties. Ultimately meal resulting from these new varieties needs to be evaluated by nutritionists to see if there are benefits that are derived from these improved varieties.

**Activities to Start Now to Meet 2021 Milestone:** All Activities

**Rationale:** Conversations and plans need to be developed with seed companies now so that FY2021 goals of commercializing soybean varieties that can produce improved oil content can be met. Most or all seed companies currently develop varieties based on yield potential. USB needs to communicate with these companies about the demand for varieties with improved oil content to meet customer demands.

**Analyst comments:**
See analyst comments for Objective A.
Audience: Farmers - Rating: High

Objective C: Farmers will use improved seed varieties, including high oleic, in a timely manner as they become available.

Framework of Program Activities:

1. **WHAT? What are the program activities to accomplish the objective?** USB will communicate to farmers about improved oil traits and the varieties that contain them, as well as the potential premiums offered for growing and selling these varieties. This includes communication about yield performance/parity compared with conventional varieties as well as available options for delivery to processors. The outreach will also detail how the product meets end-user needs. An important piece of this effort will involve working closely with Monsanto and Pioneer, as they currently have higher-value oil traits on the market (high oleic). These companies will help drive the purchasing of seed and planting of these varieties through their communication to and interaction with farmers. Outreach efforts will be impacted by continued maturity group expansion (as developed by seed companies) and the resulting expanded reach of high oleic soybeans. Similarly, anticipated global regulatory approval on all high oleic traits will shape future communication activities.

2. **WHY? Why does this target audience need us and how can we address that need through the objective?** Farmers need to understand the value of using improved seed varieties, like high oleic, and how this has the potential to meet end user needs and increase on-farm profitability. This understanding is an important part of getting them to actually select varieties with these traits. USB has a goal to have at least one million acres of high oleic soy planted by 2017, more than double the expected acreage in 2016, so it is important that USB continue to increase awareness among farmers of the potential of high oleic soy.

Rating: Least Important

Strategies:

- Promote higher value soybeans, new technology opportunities and how they meet end user demands to enable farmers to grow an improved supply of soybean oil.
- USB will inform farmers about the availability and benefits of improved seed varieties.

- 2017 Milestone: 1.0 MM acres (equivalent to 744MM lbs) of high-oleic soy planted
- 2021 Milestone: 11.71 MM acres (equivalent to 5.9 B lbs) of high-oleic soy planted

FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams:

N/A
Broad Activities to Influence the Objective:

- Continue a targeted communications plan to farmers in areas where high oleic soybean varieties and delivery points are currently available or those areas where high oleic soybeans are expected to be grown in the near future. This communications effort will expand if global regulatory approvals are received in the near future, as anticipated. This communications plan will include:
  - An emphasis on proven yield performance/parity of high oleic soybeans with conventional soybeans. Provide yield and agronomic information compared to commodity high yield elite varieties.
  - Information on delivery points and timing.

- Continue to work closely with seed companies to communicate to farmers about high oleic soybeans.

Rationale: Because high oleic soybeans are currently only available in certain areas of the country, a targeted communications plan to those areas is much more effective in actually getting farmers to grow high oleic than a blanket national campaign. Though farmers are paid a premium to grow high oleic, they still need and want to know how the performance of those varieties compares with the varieties they grow now, as they are still paid by the bushel and yields must be comparable for the premium to pay off. Part of the communications plan must include information on delivery points so farmers understand that soybeans must be delivered to a certain processor in order to receive a premium. USB will continue to work with seed companies and their seed dealers to ensure a consistent message on high oleic soybeans is reaching the farmers.

Potential Partners: University/USDA/ARS performance trials, Seed representatives, Processors

Rationale: Unbiased performance data, like that from public universities and the USDA, should be shared with farmers to demonstrate yield performance of high oleic varieties. Seed representatives have a major influence on seed decisions and their communications to farmers about high oleic should be consistent across all parties. As the ones actually receiving the product, processors must be prepared to handle questions and promote the growing of high oleic, too, so value can be passed on through the value chain to food companies.

Activities to Start Now to Meet 2021 Milestone: All activities should begin now to help meet in the 2021 milestones.

Rationale: USB’s outreach to farmers, both direct outreach and what is done through partners, has a lot of momentum. The activities listed above will carry forward this momentum and help reach the 2021 milestone of nearly 12 million acres of high oleic planted.

Analyst comments:
See analyst comments for Objective A
Goal: Sustainable Production – Sustainability $3,267,921

Audience: Public Researchers - Rating: High

Objective A: Public researchers will collaborate with the checkoff to identify BMPs that enhance the overall sustainability of the U.S. soy crop and that avoid potential increased regulations.

Framework of Program Activities:
1. **WHAT? What are the program activities to accomplish the objective?** To help farmers improve production efficiency and profitability while protecting the environment, improved best management practices for soybean production that address sustainability metrics need to be developed and proven. To accomplish this, we recommend engaging public researchers to conduct research that develops and evaluates production practices related to soybean fertilization, soil protection, pest management, disease management, weed management and production efficiency. These measures ensure continued demand by end-user customers for U.S. soybeans since the crop is documented as a sustainably-produced raw material. Public researchers serve as a source for developing and evaluating best management practices to determine their impact on soybean productivity, environmental impact and profitability. Adherence to proven best management practices also reduce the potential for development of new regulations that impact farmer freedom to operate. Development of a Unified Research Strategy will increase coordination of research activities among public researchers, USB, regional checkoff programs, QSSBs and private companies to improve the effectiveness of checkoff investments and ensure that the appropriate organization is conducting research and outreach activities for maximum impact. Initial activities to establish a framework for the Unified Research Plan have centered on engaging QSSBs, regional checkoff programs and seed companies. The consensus that has surfaced through our interaction with these groups is that the Unified Research Plan should focus on two or more key issues impacting the soybean industry that would benefit from broad coordination. Then the assembled parties would determine how best to address the researchable components of these key issues. Initially the participants are planning on working toward a unified approach to one new key issue (e.g. protein improvement) and one existing key issue (e.g. SCN management) that can benefit from this approach.

2. **WHY? Why does this target audience need us and how can we address that need through the objective?** U.S. soybean customers throughout the value chain are demanding documentation of continuous improvement against soybean production sustainability metrics. They want assurance that the production practices used to produce their food and raw materials are not damaging the environment or depleting natural resources. The national Field to Market sustainability effort defines sustainable agriculture as meeting the needs of the present while improving the ability of future generations to meet their own demands by:
   - Increasing productivity to meet future food, fuel and fiber demands
• Improving the environment
• Improving human health
• Improving the social and economic well-being of agricultural communities

In order for farmers to meet these goals, researchers must develop best management practices that address them and then ensure that farmers are aware of these practices through communications efforts and partnerships with agricultural supply chain companies and consultants to promote their adoption. Collaboration throughout the industry in the development of technologies and practices that promote sustainability make more efficient use of research investments, resulting in a greater ability to address all the key issues. Many issues benefit from local or regional sustainable production practices that address specific environmental differences that impact results. These are best addressed at the state or regional level and require coordination to have the greatest impact. The adoption of best management practices will improve farm productivity, profitability and reduce the potential for development of future regulations.

Rating: None

Strategy: Work with universities, USDA and commercial partners to identify and gain acceptance for optimal management practices for soybean production system.

2017 Milestone: Are participating with USB and QSSBs to create a unified soybean research strategy.
2021 Milestone: Unified soybean research strategy will be updated to reflect needs for next decade.
2017 Milestone: Public researchers recommend improved varieties and BMPs.
2021 Milestone: Public researchers will publicly recommend improved varieties and BMPs.

FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams:

Broad Activities to Influence the Objective:
USB will work with QSSBs, regional research programs, universities, USDA and commercial companies to develop unified, collaborative research and outreach programs that address key production factors that improve production efficiency, enhance crop productivity and reduce environmental impacts by reducing pesticide application, promoting effective fertilizer application, improving soil health and protecting water quality.

In addition, research will be conducted to:
• Reduce production inputs to eliminate over-application fertilizers, water and pesticides while maintaining yield.
• Evaluate production system components that reduce environmental impact, improve soil health and reduce input costs while maintaining soybean yield and quality.
• Identify and promote sustainable production practices that enhance the sustainability U.S. soybean crop and address the goals of the U.S. Soybean Sustainability Protocol.
• Identify sustainable production practices for managing soybean tolerance to environmental stresses.
• Identify and develop best management practices to reduce soybean disease incidence and impact.
• Create management strategies to overcome and prevent pathogen resistance to fungicides commonly used in soybean production.

  **Rationale:** Many environmental stressors exist for farmers all over the country but it is important for USB to focus on the stressors that impact the greatest number of farmers across the entire U.S. growing region. The stressors above were identified as the most important but it was also determined that a survey of the biggest stressors was needed to adequately determine what to fund at a national level. Farmer-leaders suggested adding the impact of insects to the existing survey of soybean diseases.

**Potential Partners:** Universities, USDA-ARS, Seed Companies, Regional checkoff research programs, QSSBs.

  **Rationale:** To make most efficient use of research investments it is critical that all these groups collaborate their efforts. The checkoff should invest in research to develop new technologies that will actually be adopted by seed companies so farmers will realize the benefits of the research results.

**Activities to Start Now to Meet 2021 Milestone:** Begin with survey to determine most important or impactful environmental stressors and then begin other broad activities.

  **Rationale:** Determine what stressors are most important at a national level to adequately fund research.

**Analyst comments:**

• Keep the end-goal in mind: **U.S. Soy will be the preferred raw material choice for buyers and end users to meet THEIR sustainability and responsibility goals.**
• Each action plan proposal should be challenged with whether or not it helps meet the goal of our supply chain: Does this action plan promote or hinder our ability to meet our customers’ sustainability and responsibility goals.
• As we continue to promote our sustainability message, there will be increasing scrutiny and challenges by competitors and others to our claims. Measurements, transparency and a growing track record of continuous improvement are essential to maintaining the supply chain’s trust in the U.S. soybean producer metrics.
• Some producers seemed to be confused with sustainability terminology; some view sustainable production as the ability to produce, period; whereas others believe sustainable production is synonymous with responsible soy production as in ability to produce profitably while quantifying benefits for soil, air, water, community and environment. Clarifying this understanding is needed.
• As BMPs are created and technology developed, methods to track sustainability metrics (water quantity/quality, soil health, soil loss, energy, greenhouse emissions/sequestration, should be considered in a parallel track with production and efficiency benefits of BMPs and technology. Incorporating this thought process from the public and private research, seed
and input companies in the beginning will help frame a consistent and coherent message. This is a prime opportunity for meeting the milestone of producers’ understanding of how their production practices result in a sustainably produce crop with metrics to demonstrate it.

- Recognizing the U.S. Soy Sustainability Assurance Protocol is not static, how can aggregated producer metrics be acquired and used to add additional confidence to the marketing appeal of the protocol?

- In Tampa, I met many growers who were enthusiastic about their production practices and showed great pride in their on-farm stewardship practices. My experience is that many growers who are not represented in the leader meetings often have a negative tone about sustainability. We need to seek creative ways to channel negativism into a positive message; having farmer facing groups such as extension, seed salesmen and elevators convey the importance of our sustainability efforts will be effective—unless, of course, the messenger also has a negative tone.
Objective B: Input companies will support and recommend improved varieties and BMPs.

Framework of Program Activities:

1. **WHAT? What are the program activities to accomplish the objective?** To help farmers improve production efficiency and profitability while protecting the environment, best management practices for soybean production need to be developed, proven, and communicated. To accomplish this, we recommend engaging with input companies to ensure they use proven best management practice messaging in their farmer outreach related to soybean fertilization, soil protection, pest management, disease management, weed management and production efficiency. The focus of these outreach efforts should be on improving on-farm sustainability and farmer profitability rather than selling more product. Improving sustainability of the U.S. soybean crop ensures continued demand by end-user customers since the crop will be documented as a sustainably-produced raw material.

2. **WHY? Why does this target audience need us and how can we address that need through the objective?** U.S. soybean customers throughout the value chain are demanding documentation of continuous improvement against soybean production sustainability metrics. They want assurance that the production practices used to produce their food and raw materials are not damaging the environment or depleting natural resources. The national Field to Market sustainability effort defines sustainable agriculture as meeting the needs of the present while improving the ability of future generations to meet their own demands by:
   - Increasing productivity to meet future food, fuel and fiber demands
   - Improving the environment
   - Improving human health
   - Improving the social and economic well-being of agricultural communities

   To help farmers meet these goals, collaboration throughout the industry in the development of technologies and practices that promote sustainability makes a more efficient use of research investment resulting in a greater ability to address all the key issues. Coordinated practices and messaging by industry partners will amplify the work of the checkoff.

Rating: None

Strategy: Work with universities, USDA and commercial partners to identify and gain acceptance for optimal management practices for soybean production system.

2017 Milestone: 15 percent of input companies will agree to use BMP messaging in farmer outreach.
2017 Milestone: A group of local/regional organizations/companies will have awareness of data/products available to public researchers to test and share results with farmers. 2021 Milestone: 75 percent of input company partners include agreed upon BMP messaging in their farmer outreach.

FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams:

**Broad Activities to Influence the Objective:**
Work with input companies to ensure they are using best management practice messaging in their outreach to farmers as well as conducting trials to validate best management practices for their region. The focus should be on farmer profitability and on-farm sustainability rather than selling more product. Part of the effort will include ensuring that sustainable-production promotional materials are available to input companies.  
**Rationale:** When addressing sustainable production practices, a national agenda will not provide the greatest results. Rather, companies should focus on best practices for farmers by region. Also, USB needs to work with input companies to support a long-term sustainability agenda (Example provided by farmer-leader: sales of chemicals to address weeds this year vs. sales of chemicals to help address weeds for years to come).

**Potential Partners:** Crop consultants, Co-ops, National chemical companies  
**Rationale:** Most farmers seek production recommendations from either independent crop consultants or agronomists affiliated with their local input provider. These groups need to have a unified message regarding best management practices so farmers are all hearing the same message, regardless of their preferred source of information.

**Activities to Start Now to Meet 2021 Milestone:** Start activities now.  
**Rationale:** All activities should begin now in order to meet the FY21 milestone.

**Analyst comments:**
See analyst comments for Objective A.

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**Audience:** Seed Companies - **Rating:** Medium

**Objective C:** Seed companies will develop and commercialize improved seed varieties, recommend BMPs, and help convert research innovation into applications.

**Framework of Program Activities:**
1. **WHAT? What are the program activities to accomplish the objective?** As public researchers identify valuable soybean genetics that address ongoing production challenges faced by farmers, USB will work with seed companies to incorporate these traits into commercially available varieties. Improved traits not only protect yield potential but also help improve on-farm sustainability due to a reduction in pesticide use. Improvement in performance against sustainability metrics will ensure continued demand by end users for U.S. soybeans since the crop will be documented as a sustainably produced raw material.

2. **WHY? Why does this target audience need us and how can we address that need through the objective?** U.S. soybean end users throughout the value chain are demanding documentation of continuous improvement against soybean production sustainability metrics. They want assurance that the production practices used to produce their food and raw materials are not damaging the environment or depleting natural resources. The development and commercialization of new varieties to address ongoing production challenges is a key part of efforts to increase overall on-farm sustainability. Because the majority of U.S. soybean farmers purchase varieties through private companies it is imperative that yield-protection genetics identified through public and private research are made commercially available through seed companies.

**Rating:** Most Important

**Strategy:** Work with universities, USDA and commercial partners to identify and gain acceptance for optimal management practices for soybean production system.

- 2017 Milestone: One new trait each for disease, or environmental stress developed by USB-funded research is identified for adoption into company germplasm development.
- 2021 Milestone: At least one new trait is commercialized each for disease resistance and environmental stress tolerance.
- 2021 Milestone: Private researchers licensing and/or using, public research results.

**FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams:**

**Broad Activities to Influence the Objective:**
Seed companies will be engaged to encourage incorporation of new soybean pest/disease resistance and environmental stress tolerance traits identified and developed by public researchers to protect soybean yield from these stressors.

- Engage with seed companies to initiate development of new stress tolerant high-yielding soybean varieties.
- Encourage seed companies to incorporate new sources of genetic variation for improved stress tolerance developed by public researchers.

**Rationale:** Work with seed companies to ensure germplasm identified from checkoff-funded research continues to make its way to seed companies, who can commercialize...
varieties making these traits available to farmers. Increase relationships between seed companies and universities who can address problems identified in the field.

**Potential Partners:** Seed companies, Universities, University extension, Input companies  
**Rationale:** All parties will have to work together to develop and commercialize seed varieties that address pest, disease and environmental stress.

**Activities to Start Now to Meet 2021 Milestone:** Start activities now.  
**Rationale:** All activities should begin now in order to meet the 2021 milestone.

**Analyst comments:**  
See analyst comments for Objective A.
Audience: Farmers - Rating: Medium

Objective D: Farmers will adopt BMPs with an emphasis on pest and nutrient management, as well as harvest and reducing foreign materials, to enhance the overall sustainability of the U.S. soy crop and to avoid potential increased regulations.

Framework of Program Activities:
1. **WHAT? What are the program activities to accomplish the objective?** An outreach effort to farmers is essential for communicating the need to adopt and use improved sustainable production practices. It will be imperative that outreach efforts have a state or regional focus, as production practices used in the one part of the country may not be relevant to others (for example, practices for furrow irrigation in the Midsouth would not be relevant to farmers in the Midwest, where furrow irrigation is sparse or non-existent). Messaging of the outreach effort would focus on the need for continuous improvement, rather than a pre-determined end goal. Elements of an outreach effort could/would include printed materials, online resources, in-person communications at meetings and tradeshows, paid advertising, earned media efforts and partnerships with extension agents, seed companies and input companies (consider the Take Action model of share messaging and resources).

2. **WHY? Why does this target audience need us and how can we address that need through the objective?** The stressors that face soybean farmers are constantly changing. To maximize efficiency and profitability, the management techniques for these stressors must also change. USB can share with farmers the practices to best address the problems in their fields while also tying these practices to on-farm sustainability, which is a growing demand from end users. It is especially important that USB continue to provide resources and information on sustainable production practices as university extension systems continue to face funding decreases and are not as relevant as they were previously. Additionally, as more products enter the market (e.g. seed treatments) it is important that farmers have access to unbiased sources of information on the effectiveness and overall ROI on such products.

Rating: None

Strategy: Drive farmer awareness of improved and on-farm BMPs, pest and nutrient management, harvest and the importance of reducing foreign materials as it relates to the overall sustainability of the U.S. soy crop.

2017 Milestone: X percent of farmers implement proactive, diversified management plans to slow the development of resistance to:
- herbicides (36 percent)
- insecticides (benchmark needed)
- fungicides (benchmark needed)

2017 Milestone: Benchmark percent of acres that are soil tested every one to three years.
2021 Milestone: 50 percent of farmers implement a proactive, diversified weed management plan.
2017 Milestone: 50 percent of farmers test their soil for fertility every one to three years.
2021 Milestone: 58 percent of farmers test their soil for fertility every one to three years.

FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams:

Broad Activities to Influence the Objective:

- Share sustainable production practices with farmers on a state or regional basis as coordinated with local experts (extension, area agronomists, input companies) through a variety of mechanisms, including print and online resources.
- Communicate to farmers several key points related to pesticide best management practices, including:
  - Continued education on weed management BMPs, with information on herbicide classes and effectiveness and new herbicide-tolerant seed varieties entering the market.
  - Increased communication efforts related to fungicide and insecticide resistance.
- Develop communications related to nutrient management, including the process of soil sampling and using results to develop a fertilizer plan. An important piece of the communication effort will include a tie between sound nutrient management and the long-term sustainability of the U.S. soybean crop and the individual farm.

  **Rationale:** It is important that farmers have access to the most up-to-date information available for dealing with ever-evolving problems on the farm. USB can share with farmers the BMPs to best address the problems in their fields while also tying these BMPs to on-farm sustainability, which is a growing demand from end users. It is especially important that USB continue to provide resources and information on BMPs as university extension systems continue to face funding decreases and are not as relevant as they were previously.

**Potential Partners:** Seed companies, University extension, Input companies, crop consultants, Co-ops.

  **Rationale:** All farmer influencers and suppliers can and should be used to help share messaging related to production practices. These groups often have much more in-person contact with farmers than the checkoff and have influence over decisions made on the farm.

**Activities to Start Now to Meet 2021 Milestone:** Begin all activities now.

  **Rationale:** All activities should begin now to help achieve the 2021 milestone.

**Analyst comments:**
See analyst comments for Objective A.
Audience: Farmers - Rating: Medium

Objective E: Farmers continue to use and/or adopt production systems that meet the requirements of major end users for a U.S. sustainably produced soy crop.

Framework of Program Activities:

1. **WHAT? What are the program activities to accomplish the objective?** USB will communicate to farmers about the connection between on-farm practices and sustainability and help add definition to what defines a sustainable production system. This can be something as simple as crop rotation or managing nutrients from year to year and across various crops, or as complex as monitoring changes in soil health. An outreach effort could include printed materials, online resources, in-person communications at meetings and tradeshows, paid advertising, earned media efforts and partnerships with extension agents, seed companies and input companies. Messaging will include the idea of continuous improvement: U.S. soybean farmers raise the most sustainable soy in the world but they cannot rest on their laurels. It is important that soybean farmers continue to look for and implement ways to improve their operation to stay ahead of the curve.

2. **WHY? Why does this target audience need us and how can we address that need through the objective?** As end user demands for sustainably-produced products grow, it is important that U.S. soybean farmers understand those demands and how they can be met at the farm level. All farmers in the country are being told they need to be sustainable but sustainability means many things to different people. USB needs to help the country's soybean farmers understand what this actually means at the farm level and why it is becoming so important in the marketplace.

Rating: None

Strategies:

- Drive farmer awareness of improved and on-farm BMPs, pest and nutrient management, harvest and the importance of reducing foreign materials as it relates to the overall sustainability of the U.S. soy crop.
- Inform farmers of current sustainability protocols and the on-farm relationship of these protocols.

2017 Milestone: 50 percent of farmers know that their production practices result in a sustainably produced U.S. soy crop
2017 Milestone: 40 percent farmers understand end user sustainability needs as it relates to on-farm practices.
2021 Milestone: 90 percent of farmers know that their production practices result in a sustainably produced U.S. soy crop.

2021 Milestone: 90 percent farmers understand end user sustainability needs as it relates to on-farm practices.

FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams:

Broad Activities to Influence the Objective:
- USB will communicate to soybean farmers about sustainability on several fronts:
  - What and why end users are demanding sustainability
  - The practices and management techniques that can contribute to on-farm sustainability.
  - How and why sustainability equates to profitability.
  - The message of continuous improvement.
  - Tools to help measure on-farm sustainability like Field to Market.
- Communication can and will take a variety of forms, including publications like Beyond the Bean, but an important piece of all communications will be testimonials and demonstrations from farmers that have found ways to be both sustainable and profitable.
- Communications will recognize/address the regional biases of certain practices and production systems and will take this into account in materials. This includes support of other local and regional partners (like Farm Bureau) who can carry the sustainability messages of USB.
  **Rationale:** In order for any business to make a change, an economic incentive or value must first be recognized for that change. In the case of individual farmers, they must understand the demands of the end user and the changes that can be made on-farm to be more sustainable while also remaining profitable. The easiest way to show farmers how on-farm sustainability can work and be profitable is to show the ways other farmers have been able to make it on their farms.

Potential Partners: Public universities, private companies, industry groups
  **Rationale:** Though the potential partners on this effort are wide and varied, the sustainability message is one that can be carried by many as their business or organization can and will be impacted by the sustainability of a crop. If end users no longer demand U.S. soy due to a lack of sustainability, each of the potential partners above will be impacted in some way, so each has a responsibility in making strides towards increased sustainability.

Activities to Start Now to Meet 2021 Milestone: Continue current efforts of USB’s sustainability communications while adapting messaging and beginning some of the additional elements to reach the 2021 milestone.
Rationale: USB currently communicates to farmers about on-farm sustainability but the messaging will continue to be adapted based on increased customer demands and sensitivities to the economic environment.

Analyst comments: See analyst comments for Objective A.

Audience: Farmers - Rating: Medium

Objective F: Farmers will use improved seed varieties in a timely manner as they become available.

Framework of Program Activities:
1. **WHAT? What are the program activities to accomplish the objective?** As public researchers work to identify new sources of genetic resistance and improved germplasm and USB works with seed companies to incorporate this germplasm into varieties available to farmers, farmers must then be aware of the varieties and the benefits (yield, in most cases) that can be gained from using them. USB can provide information, in an unbiased manner, that can help farmers best address the problems they face in their fields through new sources of genetic resistance. Using improved varieties will help increase farmer profitability and, in many cases, will also contribute to on-farm sustainability as improved varieties may decrease the need for additional inputs. USB will address this on a regional basis, necessary both due to differences in maturity groups and variety in soybean stressors due to geographical differences, working closely with extension to provide unbiased yield and performance data and the seed companies as they begin to promote new varieties.

2. **WHY? Why does this target audience need us and how can we address that need through the objective?** Variety selection is one of the biggest decisions faced by soybean farmers each year and can have a major impact on profitability. As new sources of resistance or new traits are identified and varieties are developed by seed companies, it is important that farmers are aware of the varieties and the impact they may, or may not, have on profitability (for example, a new source of genetic resistance may be incorporated into a variety but if the variety yields poorly, then the farmer will not benefit). The checkoff has the opportunity to serve as an unbiased resource for promoting these new traits and the potential gains.

Rating: Least Important

Strategy: Inform farmers of current sustainability protocols and the on-farm relationship of these protocols.

2017 Milestone: Farmers adopt 1 or more improved varieties (i.e. resistance packages, [improved composition]) as they become available.

2021 Milestone: Farmers adopt one or more improved traits that address disease or environmental stress.
FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams:

Broad Activities to Influence the Objective:
- Increase farmer-awareness of the work being done to improve varieties and how new sources of genetic resistance can help address problems seen in the field.
- As seed companies release varieties with new traits, coordinate with extension to share information on varieties with farmers, including important agronomic information and yield trial data.
- Place an emphasis on new traits that are widely promoted (new herbicide tolerance traits) and share with farmers how this technology can be used as well as an necessary cautions to using the technology (like the threat of further increasing herbicide resistance).

**Rationale:** It is important that farmers first understand that public researchers work with private companies to identify and release new sources of genetic resistance that will help address problems seen in the field. This understanding will help as USB demonstrates to farmers the value of planting new and improved varieties and how those varieties may help improve yield and overall value. This includes demonstrating how certain varieties may yield lower on paper but may actually be better suited for a field and yield better due to resistance to a particular environmental stressor. Of particular importance for USB are new traits that are widely promoted by seed companies, mainly those traits with new herbicide-tolerance technology, so that expectations for the new technology are appropriately managed (i.e. this is not a “silver bullet”) and appropriate production practices for using that technology are shared.

**Potential Partners:** Public universities and private companies

**Rationale:** The public universities are the ones that will both be working to identify new traits and test varieties after those new traits are picked up by seed companies and made commercially available in varieties. USB will work with seed companies so they are aware of varieties that incorporate these new traits that are coming on the market.

**Activities to Start Now to Meet 2021 Milestone:** Increase farmer awareness of the work being done to identify new sources of genetic resistance and communicate to farmers about the new varieties coming on the market in the near future, particularly those with new herbicide-tolerance traits.

**Rationale:** As researchers work towards new sources of genetic resistance and new traits, farmers should understand that work is being done to continually improve varieties available and to address in-field issues. At the same time, new herbicide-tolerance traits are expected to hit the market soon and it is imperative that farmers understand the BMPs for using these new traits to avoid an increase in herbicide-resistance issues, which already cause great losses for soybean farmers.

**Analyst comments:**
See analyst comments for Objective A.

Audience: Public Researchers - Rating: High

**Objective G:** Public researchers will create innovation in soybean yield protection and yield improvement that can be incorporated into commercial products.

**Framework of Program Activities:**

1. **WHAT? What are the program activities to accomplish the objective?** Public researchers have long been a source of basic research that identifies key genetics for improving yield through tolerance to sources of soybean stress. These public researchers will continue to look for and identify traits that offer benefits to soybean farmers. Once these valuable traits are identified, they must be incorporated into commercially available products sold by mostly private companies in the U.S.

2. **WHY? Why does this target audience need us and how can we address that need through the objective?** Soybean farmers face a variety of pest, disease and environmental stressors each year. Private seed companies, from whom the large majority of soybean farmers purchase seed, often focus their breeding programs on yield improvements and not necessarily through resistance to these stressors. However, traits that protect yield through resistance can not only increase yield but also help improve on-farm sustainability due to a reduction in pesticide use. Public research is the primary vehicle for identifying these resistance traits which are then transferred to seed companies to incorporate into commercially available varieties.

**Rating:** None

**Strategy:** Work with universities, USDA and commercial partners to identify valuable yield improvement and protection traits for incorporation into commercially available varieties.

2017 Milestone: Identify new traits and create new innovations to protect soybeans from disease and environmental stress.

2021 Milestone: At least one new trait is made available to seed companies for commercialization for disease and environmental stress.

**FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams:**

**Broad Activities to Influence the Objective:**

USB will work with QSSBs, regional research programs, universities, USDA and commercial companies to develop unified, collaborative research and outreach programs that identify traits to improve yield.
• Survey the most important disease and insect pests of soybeans to direct research investments and variety development efforts.

• Develop soybean germplasm with increased tolerance to drought, heat and flooding stresses through identification of physiological mechanisms responsible for soybean tolerance, determination of genes responsible for those traits, and discovery of new sources of genetic variation for those traits.

• Identify new genetic sources of SCN resistance and develop management practices that reduce the impact of SCN on soybean yield.

• Develop soybean germplasm with increased resistance to diseases including soybean sudden death syndrome and white mold, through identification of new sources of genetic resistance, and development of markers for those genes.

   **Rationale:** Many environmental stressors exist for farmers all over the country but it is important for USB to focus on the stressors that impact the greatest number of farmers across the entire U.S. growing region. The stressors above were identified as the most important but it was also determined that a survey of the biggest stressors was needed to adequately determine what to fund at a national level. Farmer-leaders suggested adding the impact of insects to the existing survey of soybean diseases.

**Potential Partners:** Public universities and USDA-ARS

   **Rationale:** The public universities are the ones that will both be working to identify new traits and test varieties after those new traits are picked up by seed companies and made commercially available in varieties. USB will work with seed companies so they are aware of varieties that incorporate these new traits that are coming on the market.

**Activities to Start Now to Meet 2021 Milestone:**

   **Rationale:**

**Analyst comments:**

See analyst comments for Objective A.
Goal: Technology – Meal $512,900

Audience: Farmers – Rating: Medium

Objective A: Farmers are aware of and adopt new technologies that measure constituent/component levels.

Framework of Program Activities:

1. WHAT? What are the program activities to accomplish the objective? Several activities are needed to accomplish this objective. The first step is to develop a five-year plan to roll out an overall component pricing program. The work on this plan is being done in the Marketplace Action team. This plan will be built upon the findings of the Value Task Force’s work, projecting the feasibility of success within five years and emphasizing the role technologies will play in evaluating soybean nutrient composition. The second step is to use a "Figure-It-Out (FIO)" approach that will result in narrowing down the focus of the protein and amino acid technologies to those with the highest probability of farmer adoption. The second phase to accomplish the objective is the actual deployment of the five year plan and includes communication to farmers about the opportunities to increase the value and attractiveness of U.S. soybean meal for livestock and poultry feeders through increasing protein levels and how technology can be used to help realize this value. This effort also includes an orientation/educational effort within the USB family to ensure all understand the benefits and value of component pricing. Then, as more movement is made towards a component pricing system within the rest of the value chain, a larger communications and education effort will be needed to share with farmers how improvements in technology can aid in value capture from increased protein soybeans. These efforts are one piece of a larger plan in the move towards component pricing.

2. WHY? Why does this target audience need us and how can we address that need through the objective? Farmers must be aware of available technologies they can use to capture increased-value opportunities. U.S. soybean farmers clearly play an important role in the goal of increasing soy protein content and desired amino acid profiles to end users. Public researchers and seed companies must work to identify and develop the germplasm that increases protein concentration, amino acid content, and make that germplasm available in varieties for farmers to grow for farmers to be paid on the basis of protein and oil content, not just yield. In order to be paid for protein and yield, technology must be used to measure and capture that component value. Adoption of measurement technologies at the point of sale, such as NIR, will empower farmers to capture the value represented by new, improved composition soybean varieties developed through public research and seed company development and ensure that value is passed along throughout the entire value chain.

Rating: Most Important
**Strategy:** USB will build farmer awareness and drive farmer adoption of new technology measurements that will capture constituent/component value

2021 Milestone: X percent of farmers are aware of technologies that measure constituent/component value.

2021 Milestone: X percent of farmers adopt technologies that measure constituent/component value.

**FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams:**

2017 Milestone: Establish baseline that X percent of farmers are aware of technologies that measure constituent/component pricing.

2021 Milestone: X percent of farmers are aware of and adopt technologies that measure constituent/component pricing

**Broad Activities to Influence the Objective:**

- Formulate a five year plan to roll out the overall component pricing program, built upon the findings of the Value Task Force’s work; projecting the feasibility of success within five years; and emphasizing the role technologies will play in evaluating soybean nutrient composition

- Share with the USB family (board members, contractors, staff) research and data on the potential value to be gained through component pricing and how this can help to better meet end-user needs.

- Communicate with farmers about declining protein levels and the increasing risk of lost market share due to competition from other commodities and synthetics. Share information regarding the development of a potential component pricing system with farmers to increase understanding and acceptance of such a system. This could include information on deductions that aren’t always seen or realized on the farmer’s sale ticket but do happen on the macro level when soybeans or components are purchased. Communications would also stress the potential value to be gained from a component pricing system and the interest of end users in a soybean with improved composition.

- Consider the high oleic soybean model and if elements of that model would be successful in driving a value capture system for meal.

**Rationale:** It is important that all within the USB family understand the momentum being made towards a component pricing system and how this could benefit U.S. soybean farmers. Research and data are available to support this point and every effort should be made to share this to increase awareness and support for the system. As part of an external education effort, farmers should first understand that they stand to lose market share due to declining soy protein levels. Acceptance by the value chain of a component pricing system will be an incentive for farmers to choose soybean varieties with more desired composition and this change will be communicated as appropriate.

**Potential Partners:** Elevators, Processors, Seed Companies.

**Rationale:** Elevators and processors are the point at which this technology is currently used (mainly processors, most elevators do not yet have this technology) and will likely
remain the point at which component value is measured. Working with seed companies to promote value-added traits contributes to the overall larger conversation about a component pricing system and value to be captured from improved traits.

Activities to Start Now to Meet 2021 Milestone: Create a plan for above activities.  
Rationale: The area of Technology is a very new opportunity for USB. It is important that a carefully thought-out plan to best address the objectives in this goal be developed first to maximize the strategic investment of resources in this area.

Analyst Comments:
- **Focus on soybean protein.** In the past 40 years, prioritizing input traits and oil has distracted from the needed emphasis on where the majority of the soybean profits are derived.
- **Focus on "pull demand."** Like HO oil, we need to engage, communicate, educate and prove (through objective calculations) the true value bundle of soybean meal, especially as we improve meal traits and protein. Animals, primarily poultry and swine, are our most important customers, and nutritionists are their parents, dictating what they eat.
- **Constituent Pricing is essential.** It will take time, we must show margin loss or market loss for non-adopters, and there will be lots of detractors. A sequence of value determination, measurement, communication and participation is required. If a processor or elevator realizes they might lose volume and/or margin, they will listen.
- **Time to play offense vs. defense.** We have more clout than we think. However, many perceive us as reactionary and polite. It's time to advertise new goals and priorities, and even talk about how much money we will spend to improve soybean protein. The new high protein, HO oil, non-GMO canola varieties scare me, and the multiple new synthetic amino acids plants all over the world terrify me! Proactive communication will stem competition growth.
- **Don't stop shaking the organization.** It's not fun or easy to disrupt past programs, roles and structure. And, the past was not a failure. However, after working with a hedge funds, private companies and very successful organizations, it feels like there are opportunities in terms of both expectations and past structure. Patience is a virtue, but, tangible, prompt, focused success is the key to sustained viability and profit.
- **Ignore the noise.** There are many organizations surrounding USB that are looking out for their own best interests. USB needs to focus on their own priorities so that there is no detraction from goal attainment and proper goal alignment.
- **Seed Tech Company efforts.** USB has a big seat at their table based on HO bean investment, farmer communication tools and altruistic value chain goals. Focus on Pioneer soybean seed folks, even with the merger confusion. The bottom quality seed varieties must go!
- **Education is Key.** Meet with and speak to key value chain members to relay a "get on board, or get out of the way" message. Connections, board meetings, Commodity Classic, etc., are good and have their place. An additional meeting, "here are our current
successes and here are our future successes" would serve multiple purposes. "This will impact your P&L" has to be the subliminal message. It could get processors, seed techs, nutritionists, exporters and select farmers on the same sheet of music. You have done tremendous work and taken big chances, all with the goal of a better USB.
Goal: Technology – Oil $697,600

Audience: Farmers – Rate: Medium

Objective A: Farmers are aware of and adopt new technologies that measure constituent/component levels.

Framework of Program Activities:

1. **WHAT? What are the program activities to accomplish the objective?** Several activities are needed to accomplish this objective. The first step is to develop a five-year plan to roll out an overall component pricing program. The work on this plan is being done in the Marketplace Action team. This plan will be built upon the findings of the Value Task Force’s work, projecting the feasibility of success within five years and emphasizing the role technologies will play in evaluating soybean nutrient composition. The second step is to use a "Figure-It-Out (FIO)" approach that will result in narrowing down the focus of the protein and amino acid technologies to those with the highest probability of farmer adoption. The second phase to accomplish the objective is the actual deployment of the five year plan and includes communication to farmers about the opportunities to increase the value and attractiveness of U.S. soybean oil for end users around the world. Through larger efforts already conducted or that will be conducted, USB will communicate to farmers about improved oil traits and the varieties that contain them, as well the potential premiums offered for growing and selling these varieties. As part of this larger conversation about value-added oil traits, such as high oleic, farmers need to be aware of the current technologies that can measure the components of the soybeans. Communication efforts related to value-added traits and the technology to measure components will contribute to USB’s larger goal of moving to a component-pricing system. As moves are made towards this pricing system, it is important that USB stress the incentives for using technologies, which capture component value and potentially increase on-farm profitability.

2. **WHY? Why does this target audience need us and how can we address that need through the objective?** Increasing farmer awareness and acceptance of component-pricing and measurement technologies is one piece of a larger puzzle in the move towards using and accepting component pricing as a way to capture more value for U.S. soybean farmers. Farmers need to understand the value of using improved seed varieties, such as high oleic or increased oil content varieties, and how these have the potential to meet end-user needs and thereby increase on-farm profitability. Understanding and using composition measurement technologies is the link that ensures the farmer is paid for his/her value-added commodity.

Rating: Most Important

Strategy: USB will build farmer awareness and drive farmer adoption of new technology measurements that will capture constituent/component value.
FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams:

- Change “2021: X percent of farmers are aware of technologies that measure constituent/component value.” to “2021: X percent of farmers accept technologies that measure constituent/component value.”
- Delete “2021: X percent of farmers adopt technologies that measure constituent/component value.”
- Add “2017: Determine baseline for percentage of farmers who accept technologies that measure constituent/component value.”

Broad Activities to Influence the Objective:

- Formulate a five year plan to roll out the component pricing program, built upon the findings of the Value Task Force’s work; projecting the feasibility of success within five years; and emphasizing the role technologies will play in evaluating soybean nutrient composition
- Share with the USB family (board members, contractors, staff) research and data on the potential value to be gained through component pricing and how this can help to better meet end-user needs.
- Orientate and provide the tools which will enable farmers to engage and convince influencers, such as elevators, processors and seed companies, who reach the greater U.S. soybean farmer community, to help encourage farmer use of technologies that measure soybean composition.
- Through work being conducted in the Sustainable Production – Oil program, USB will communicate with farmers about opportunities for increased profitability thanks to value-added oil traits, like high oleic soybeans. USB will also communicate to farmers to begin an understanding and awareness of technology that measures component value and is the link that ensures farmers are paid for the product they produce.

Rationale: It is important that all within the USB family understand the momentum being made towards a component pricing system, measurement technologies available that enable value capture, and how this could benefit U.S. soybean farmers. Research and data are available to support this point and every effort should be made to share this to increase awareness and support for the system. As part of an external education effort, farmers should first understand that they have the potential for increased profitability through value-added oil traits and that technology exists to realize and capture this value.

Potential Partners: Elevators, Processors, Seed Companies.

Rationale: Elevators and processors are the point at which this technology is currently used (mainly processors, most elevators do not yet have this technology) and will likely remain the point at which component value is measured. Working with seed companies to promote value-added traits contributes to the overall larger conversation about a component pricing system and value to be captured from improved traits.
Activities to Start Now to Meet 2021 Milestone: Create a plan for above activities.

Rationale: The area of Technology is a new opportunity for USB. It is important that a carefully thought-out plan be developed to best address the objectives in this goal so strategic investment of resources in this area can be maximized.

Analyst comments:

Environment for soybean Oil in 2016

- The crushing industry is cyclical, and we appear to be heading into a 3 – 5 year downtrend on profitability.
- Oil value share will remain between 33 – 37 percent of the meal / oil relationship.
- Processors will scale back their crushing assets in order to keep meal margins around a $1.00 per bushel, slowing down the availability of oil.
- Cheap petroleum prices will constrict opportunities in the nonfood area.

Opportunities for Oil in 2017

- Expand the dialogue with Elevators and Processors to insure they’re aware of new seed varieties. High Oleic soybean, then future meal traits will require investment at both locations. (bins, dumps, tanks)
- Develop a storyline demonstrating the value proposition for U.S. soybean oil that can be adapted for each point on the value chain, both for domestic and export markets.
- Determine how the farmers want to demonstrate their traceability platforms and decide what organization is the best vehicle to drive that discussion throughout the chain with specific understanding of end use customer requirements.
- Assess and qualify opportunities in the nonfood sector specific to high oleic soybean oil. We need to understand what segments will benefit from the extended stability and which are large enough to invest in going forward. Ideally, that segmentation is completed in 2016 and potential partners
DRAFT: U.S. Soy Advantage Definition

The foundation of the U.S. Soy Advantage is innovation, which is focused on investment in continuous improvement and meeting customer needs. Today, the U.S. Soy Advantage is anchored by superior composition and consistent supply of our soy and soy products, as well as the sustainability practices of U.S. soybean farmers.

**Superior Composition** – U.S. soybeans have an elite meal nutritional bundle (protein, amino acids, and energy) and superior oil functionality and performance. These attributes give U.S. soy an edge over the competition with continuous innovation in the pipeline to ensure the U.S. remains the leader in the soy industry.

**Consistent Supply** – We have an abundant supply of soy that can be reliably moved from the field to domestic end users or to the coasts for export using the best transportation infrastructure in the world.

**Sustainable Farming Practices** – U.S. soybean farmers are the most sustainable in the world. Through their commitment to continuous improvement, U.S. soybean farmers are committed to taking care of the environment, being good citizens, and producing their crop as efficiently as possible to deliver the most sustainably-grown soy in the world.

**Innovation Beyond the Bushel** - The soybean industry is constantly innovating whether it be in seed development, production practices or marketing opportunities. The U.S. soy industry vows to meet the needs of a growing world while protecting our natural resources.
Objective A: Elevator managers and relevant staff will understand the constituents/components of soybeans that contribute to the U.S. Soy Advantage.

Framework of Program Activities:

WHY? Why does this target audience need us and how can we address that need through the objective? Many elevator managers lack a thorough knowledge of soybean constituents and how they are utilized and valued by end-users. They may have an opportunity to capture more value for the soybeans they handle if the market adopts a constituent pricing system. A plan, which is currently in the vetting stage, has been developed to explore what such a system would look like. Elevator managers and relevant staff need the checkoff to pull the value chain together, from the farmers growing the soybeans to the end users that demand higher quality constituents/components that make up part of the U.S. Soy Advantage, to establish component pricing. A lack of focus on soy constituents has contributed to the decline of protein levels. The checkoff wants to motivate soybean farmers to improve the quality of the crop and developing a market system that rewards/discounts for quality can help do so. Part of the longer-term constituent pricing plan will include insights on the feasibility and effectiveness of both approaches. But first, all parts of the chain, including elevators, need to recognize that quality matters and they can meet the needs of their end users but having a better understanding of the U.S. Soy Advantage.

WHAT? What are the program activities to accomplish the objective? For elevator managers to understand the constituents/components of soybeans that contribute to the U.S. Soy Advantage, they must first be aware of the quality attributes we are addressing in this plan. Thus, we need to gather data that will help document and define the U.S. Soy Advantage, as well as gather market intelligence on the audience itself. The foundation of the U.S. Soy Advantage is innovation, which is focused on investment in continuous improvement and meeting customer needs. Today, the U.S. Soy Advantage is anchored by superior composition and consistent supply of our soy and soy products, as well as the sustainability practices of U.S. soybean farmers. Ultimately the checkoff wants to change the way farmers are paid for their soybeans. If the value chain were to adopt a constituent pricing system that paid farmers based on quality then not only will they be motivated to select higher-quality seed on the supply side, they will also better meet the needs of end-use customers that demand higher-quality feed ingredients. The checkoff must work with elevators to make sure they are aware of the quality attributes that bring additional value and help employ a system to compensate growers for higher quality soybeans and then invest in systems to segregate soybeans with improved traits.

Rating: None

Strategies:
USB will communicate the U.S. Soy Advantage to help create a preference for U.S. soy and to facilitate the conversation between animal nutritionists and the rest of the value chain while focusing on the specific products needed by end users.

USB will identify and communicate the value of identity preservation as it relates to soybeans with new, improved soybean constituents/components.

2017 Milestone: Establish baseline for the percentage of elevator managers who are aware of top quality attributes that contribute to the U.S. Soy Advantage.

2021 Milestone: At least 70 percent of elevators are aware of top quality meal attributes that contribute to the U.S. Soy Advantage.

2017 Milestone: Establish baseline for the percent who have the ability and willingness to invest in methods for identity preservation of improved traits.

2021 Milestone: Baseline + X percent have ability and willingness to invest in methods for identity preservation of improved traits.

FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams: None

Broad Activities to Influence the Objective:

- Develop consistent definition of the U.S. Soy Advantage and what it means to each target audience in the marketplace.
- Educate and outreach to elevator staff, operators and, in some cases, board members
- Explore feasibility of an incentive program to segregate: IP soybeans or varying quality
- National approach to a poll or survey instrument to gather baseline data and market intelligence

Rationale: Action team members were aware that FY17 milestones for this objective require baseline data, therefore a poll or survey would be required. They also discussed a broad range of activities the checkoff could begin once the surveys have been conducted, but stressed there would be a lot of education needed around this objective and audience. Additionally they discussed coordinating with crushers because elevators deal with crushers. NIR technology and segregation is expensive and some elevators may not voluntarily make these changes.

Potential Partners: Elevators Manager Trade Association, National Grain and Feed Association (NGFA), University Extension, QSSBs

Rationale: Action team members discussed how to best reach elevator managers, particularly through the trade association. Some states have a good working relationship with their elevators so USB could leverage those contacts. These partners could also help us communicate the top quality attribute of the U.S. Soy Advantage.

Activities to Start Now to Meet 2021 Milestone:
Rationale: Action team members determined that data collected in FY17 would be needed before beginning activities to meet the 2021 milestones.

Analyst comments: USB’s market analyst advised that USB needs to engage, communicate, educate and prove (through objective calculations) the true value bundle of soybean meal, especially as we improve meal traits and protein.

Audience: Elevators – Rating: Low

Objective B: Elevators will be able to measure soybean composition at the first point of sale, such that constituent/component pricing can be adopted.

Framework of Program Activities:

WHY? Why does this target audience need us and how can we address that need through the objective? Soybean protein levels have been declining in recent years as farmers and seed companies have focused on yield. Farmers are largely unaware of the composition (protein, oil, etc.) of their soybeans, and elevators have an opportunity to help change that. If we can begin measuring the crop, we can begin motivating quality improvements and improve value for everyone in the chain. A crucial step in the process is elevators having access to the technology they need to measure specific constituents. With NIR technology, the component data can be passed along to the farmer if they are willing to do so. Through discussions at Value Task Force roundtables we know that elevators may not immediately be willing to employ such technology because of costs and logistical constraints, but the checkoff needs to convince them that this level of transparency at the elevator will encourage soybean farmers to plant better varieties with potential rewards/discounts for quality thresholds. Part of the longer-term constituent pricing plan will include insights on the feasibility and effectiveness of both approaches. As soybean quality improves, we will see an increase in demand from end-use customers.

WHAT? What are the program activities to accomplish the objective? To determine how many elevators have the technology available to them and are willing to be transparent about the measurements of protein, [oil,] amino acids, [fatty acids,] and carbohydrates, we must conduct a survey or poll. We know through checkoff-funded research that farmers would be willing to grow higher quality seed if it was a. made available to them b. performed the same as high-yielding varieties or they were paid more for the improved components. But, farmers do not know the quality of their soybeans because elevators and processors are not required to share that information with them. Sharing the component value of each load of soybeans at the point of delivery is the first step in ultimately boosting overall soybean quality to better meet the needs of our end users.

Rating: None

Strategy: USB will promote that acceptable measurement technologies and standards are available for elevators, sales desks and crushers to recognize and capture the complete value proposition represented by U.S. soybean meal.
2017 Milestone: Develop baseline showing the percent of elevator managers (independent versus affiliate) who have the ability to measure for soy constituents such as protein, [oil,] amino acids, [fatty acids,] and carbohydrates.

2021 Milestone: 40 percent of U.S. elevators have a constituent/component statement on the ticket.

FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams: None

Broad Activities to Influence the Objective:
- Conduct a survey of elevator managers on ability and willingness to test measurements of protein, [oil,] amino acids, [fatty acids,] and carbohydrates
- Educate elevator managers about why farmer want to know the composition of their soybeans
- Conduct engagement activities with elevators to get them to understand the complete value proposition.

Rationale: Baseline data and market intelligence will be required to create messaging and plan next steps. There was concern about the cost and accuracy of NIR technology and it was reported that the action team should consider the results and recommendations of Value Task Force as we begin addressing this objective.

Potential Partners: Elevators Manager Trade Association, NGFA, University Extension, Trade Media, QSSBs, Measurement technology industry

Rationale: In terms of partners, action team members determined the board should consider the same targets as Objective A considering it’s the same target audience.

Activities to Start Now to Meet 2021 Milestone:

Rationale: Action team members determined that data collected in FY17 would be needed before beginning activities to meet the 2021 milestones.

Analyst Comments: USB’s market analyst stated that a constituent pricing system is essential. It will take time, but we must show margin loss or market loss for non-adopters, and there will be lots of detractors. A sequence of value determination, measurement, communication and participation is required. If a processor or elevator realizes they might lose volume and/or margin, they will listen.

Audience: Sales Desks – Rating: Low

Objective C: Will be able to accurately and consistently define the U.S. Soy Advantage.

Framework of Program Activities:

WHY? Why does this target audience need us and how can we address that need through the objective? This audience is responsible for selling whole soybeans or soybean products such as meal so it is important they understand the U.S. Soy Advantage and relay that value to the next entity in the value chain. If we target meal
merchandisers under this objective with messaging related to the compositional and nutritional benefits of U.S. meal, we have potential to boost sales and value. The overall U.S. Soy Advantage is differentiated by superior composition, consistent supply, sustainable farming practices and innovation beyond the bushel. The checkoff can help make those distinctions known to the sales desk operators. The checkoff can work with sales desk operators in making certain they understand and recognize the intrinsic value of U.S. soy.

WHAT? What are the program activities to accomplish the objective? In order to get sales desk operators to accurately define the U.S. Soy Advantage, we must first create a consistent definition and communicate that to this audience and then find out how many can recognize the definition. The foundation of the U.S. Soy Advantage is innovation, which is focused on investment in continuous improvement and meeting customer needs. Today, the U.S. Soy Advantage is anchored by superior composition and consistent supply of our soy and soy products, as well as the sustainability practices of U.S. soybean farmers. This total quality spectrum gives us an advantage over the competition, but sales desk operators may not understand what that is currently.

Rating: Least Important

Strategy: USB will communicate the U.S. Soy Advantage to help create a preference for U.S. soy and to facilitate the conversation between animal nutritionists and the rest of the value chain while focusing on the specific products needed by end users.

2017 Milestone: Benchmark the percentage of sales desk operators who can accurately and consistently define the U.S. Soy Advantage.

2021 Milestone: Benchmark +X percent of sales desk operators can accurately and consistently define the U.S. Soy Advantage

2021 Milestone: X percent of target will say that being able to understand and communicate the U.S. Soy Advantage helped to boost their sales.

2021 Milestone: X percent of international sales desks will say they prefer U.S. soy because of the U.S. Soy Advantage.

FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams: None

Broad Activities to Influence the Objective:

- Identify sales desk targets for meal, within crushers
- Create a definition for the U.S. Soy Advantage tailored to this audience
- Conduct engagement activities, such as visits or roundtable discussions, to engage with this audience
- Identify a few key targets or partners to help communicate the U.S. Soy Advantage
**Rationale:** Action team members were aware that FY17 milestones for this objective require baseline data, therefore a poll or survey would be required. They also discussed the need to craft a definition for what the U.S. Soy Advantage means and conduct engagement activities once we find out who these sales desk operators are. The farmer leaders rated this audience low because they do not believe they have much influence.

**Potential Partners:** Multinational Crushers/Grain Traders, Domestic Shippers

**Rationale:** Action team members discussed how to best reach the sales desk operators through multinationals and shippers. USB’s analyst advised that education is key.

**Activities to Start Now to Meet 2021 Milestone:** None offered

**Rationale:** Action team members determined that data collected in FY17 would be needed before beginning activities to meet the 2021 milestones.

**Analyst Comments:** The meal market analyst said that the sales desk operators are the brokers in the middle and typically can be the cause for the break in the communications chain.

Audience: Buyers (Feed Mills) – **Rating: Medium**

Objective D: Will be aware of the latest developments and technology releases of new and improved soy products and will make purchase decisions based on the U.S. Soy Advantage.

**Framework of Program Activities:**

**WHY? Why does this target audience need us and how can we address that need through the objective?** There is an opportunity to better meet the needs of our end use customers, but we must first find out why buyers currently chose U.S. soy and what attributes they use to describe the U.S. soy Advantage. Buyers of U.S. soy tend to be focused on price and volume to meet the needs of their end users, such as animal nutritionists. Once we determine how they perceive U.S. soy, we can then begin communicating the increased value of the digestible protein, amino acid profile and energy.

**WHAT? What are the program activities to accomplish the objective?** In order get buyers to make purchase decisions based on the U.S. Soy Advantage, we must first create a consistent definition and then determine how many buyers use the understanding of that advantage to make purchasing decisions. The foundation of the U.S. Soy Advantage is innovation, which is focused on investment in continuous improvement and meeting customer needs. Today, the U.S. Soy Advantage is anchored by superior composition and consistent supply of our soy and soy products, as well as the sustainability practices of U.S. soybean farmers. We need to encourage partnership between buyers and nutritionists and create and deliver appropriate outreach to bring the two together. Currently, buyers are motivated buy price by volume, but there is tremendous value for the farmer – and the end user demanding the feed ingredients – if the buyer understands the value of the soybean meal it’s purchasing.

**Rating: None**
Strategy: USB will communicate the U.S. Soy Advantage to help create a preference for U.S. soy and to facilitate the conversation between animal nutritionists and the rest of the value chain while focusing on the specific products needed by end users.

2017 Milestone: Benchmark the percentage of key meal [oil] buyers that can accurately identify the U.S. Soy Advantage.

2017 Milestone: Benchmark the percentage of the target that indicate a preference for U.S. soy products.

2017: Benchmark the percentage of the target that makes purchasing decisions based on a perceived increase in the value of U.S. soy on the basis of digestible protein, amino acid profile and energy.

2021: X percent of targeted buyers are purchasing U.S. soy because of its digestible protein, amino acid profile, and energy and sustainable production.

FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams: None

Broad Activities to Influence the Objective:

- Conduct a survey or poll to establish benchmarks
- Coordinate engagement and outreach activities targeting specific buyers (by species, etc.)
- Collaborate with QSSBs to leverage existing relationships.
- Create a targeted definition for the U.S. Soy Advantage

Rationale: Action team members were aware that FY17 milestones for this objective require baseline data, therefore a poll or survey would be required. They also discussed how the national checkoff could learn from the QSSBs and the information they have on the buyers for a geographic approach. They also discussed segmenting buyers by needs.

Potential Partners: University Extension, Animal Nutritionists, Owners, USDA FAS, Technical Consultants

Rationale: Action team members discussed how to best reach buyers through government agencies and mostly through the end users – the feed formulators and animal nutritionists. It was noted the feed buyers and nutritionists are often separate within an organization and both need to be targeted and pulled together.

Activities to Start Now to Meet 2021 Milestone: None given

Rationale: Action team members determined that data collected in FY17 would be needed before beginning activities to meet the 2021 milestones.

Analyst Comments: The oil market analyst said that buyers need to be constantly reminded of the advantage of our soy product quality.
Objective E: Crushers will improve accuracy and standardize NIR soy measurement and will adopt standard measurement practices (weights and measurements) and begin early adoption of component pricing to reward farmers for high value meal [and oil] traits.

Framework of Program Activities:

WHY? Why does this target audience need us and how can we address that need through the objective? Crushers are reliant on a consistent high-quality supply of soybeans to produce the meal their customers demand. However, U.S. soy protein levels are on a decline, which will eventually jeopardize their ability to deliver the quality required. Reversing this downward protein trend will make soybean meal more desirable to end-users and ensure viability for the entire industry. Crushers will capture more value from soybeans that contain higher protein quality, but it will take the leadership of the checkoff to reverse the trend. Crushers can do their part, taking an active role between farmers and end users. Since the current system pays farmers for yield not quality, yield has improved and quality has suffered. To improve quality we must be able to measure it consistently, and therefore improving accuracy and standards of NIR equipment is critical. This objective will eventually enable soybean farmers to be rewarded for high quality constituents within the crop, and motivate continuous improvement. First, crushers need to recognize that quality matters and they can better meet the needs of their end users by engaging and sharing information with farmers to improve quality. Processors are a key part of the value chain and will be an essential partner for the checkoff in developing a constituent/component pricing program. A plan, which is currently in the vetting stage, has been developed to explore what such a system would look like. Part of the longer-term constituent pricing plan will include insights on the feasibility and effectiveness of both approaches.

WHAT? What are the program activities to accomplish the objective? In order for crushers to adopt a component pricing system aimed at rewarding farmers for high value meal [and oil] traits, they must have a dialogue with the checkoff to understand the benefits or working together. If crushers realize they can benefit from a constituent pricing system, they will support transparency and invest in methods to reward farmers for the quality of their crop and better meet the needs of their end users. We will coordinate this with the work of the Value Task Force efforts and begin to plan a measurement pilot program that’s coordinated with the elevator audience to field test a model system of measurement and reporting quality data to farmers.

Rating: Most Important

Strategy: USB will promote that acceptable measurement technologies and standards are available for elevators, sales desks and crushers to recognize and capture the complete value proposition represented by U.S. soybean meal.

2017 Milestone: Baseline the percentage of crushers interested in developing constituent pricing programs.
2021 Milestone: XX percent of crushers have a constituent/component statement on the ticket.

2017 Milestone: Baseline the percentage of targeted crushers that have interest in improving and standardizing measurement technology.

2021 Milestone: Percent of the target that will adopt standard methods to measure soy quality and begin using data to offer constituent/component pricing programs.

FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams: None

Broad Activities to Influence the Objective:

- Survey to determine crushers’ interest in developing a constituent pricing system and how many crushers would be willing to improve and standardize measurement technology
- Engagement and outreach activities to engage with crushers about measurement technology
- Educate processors on the farmers’ point of view

**Rationale:** Action team members were aware that FY17 milestones for this objective require baseline data, therefore a poll or survey would be required. They also discussed how this audience may benefit from hearing the farmers’ point of view on what the value capture is about to them and how the audience needs a better understanding of what measurement technologies may be available. They also discussed the need to standardize NIR across companies.

**Potential Partners:** Land Grant Universities, Industry Organizations (i.e. NOPA), Value Chain Partners (seed/tech), Government, Measurement Companies

**Rationale:** A great deal of the conversation regarding partners focused on NOPA and how they could be very influential in reaching this audience. The farmer leaders also felt that USDA would be a helpful partner in getting crushers to adopt a component pricing system, particularly in helping to standardize measurements across the industry. It was recognized that Value Task Force has conducted work in this area that should serve as a starting point.

**Activities to Start Now to Meet 2021 Milestone:** none given

**Rationale:** Action team members determined that data collected in FY17 would be needed before beginning activities to meet the 2021 milestones.

**Analyst Comments:** UBS’s market analyst agrees that processor engagement must improve. In general, processors are the manufacturers of 98% of the soybean meal consumed in the U.S., and overwhelming majority of exported soybeans and meal. They tend to be focused more on their profits and not loyal to the U.S. farmer or markets. They also ignore most outside groups. They have to see the advantage of change and respect who they meet with.
Objective F: Processors will report protein [and oil] back to farmers with a price correlation.

Framework of Program Activities:

WHY? Why does this target audience need us and how can we address that need through the objective? Crushers have the opportunity to capture more revenue from a higher value soybean, but it will take the leadership of the checkoff to make this happen throughout the chain. Processors have and use NIR to measure basic quality attributes such as oil and protein on soybeans that enter their plant, but they do not always share that information with the farmer. Sometimes this is due to many layers of handling, between the farm and ultimately the processor. Sharing quality data with a price correlation could raise awareness of low quality, and motivate farmers to select varieties that yield, but also deliver better protein and oil levels. If overall quality improves in a region, the resulting products the processor takes to market will either increase in quality, or quantity, (or both), and thus add value to their bottom line. Higher quality meal is in demand and preferred by their end-use customers, who will also benefit.

WHAT? What are the program activities to accomplish the objective? In order to get processors to report oil and protein levels back to farmers, we must first understand how many crushers currently carry out this practice at their facilities. We will conduct baseline survey to document baselines and gather market intelligence related to challenges and barriers to adoption. We will also develop a plan to execute and carry out communications and outreach to convey the importance of this objective in order to move the target toward the necessary behavior change. Many farmers want this information now. Once processors become transparent at this step in the value chain, farmers will be motivated to grow varieties with higher protein and oil content, thus increasing the value proposition overall.

Rating - None

Strategy: USB will promote that acceptable measurement technologies and standards are available for elevators, sales desks and crushers to recognize and capture the complete value proposition represented by U.S. soybean meal.

2017 Milestone: Establish baseline of protein [and oil] reporting to farmers.

2021 Milestone: XX of farmers will be aware of their protein [and oil] content and the resulting price correlation.

FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams: None

Broad Activities to Influence the Objective:

- Survey to determine how many processors report oil and protein levels back to farmers and to gather market intelligence related to potential barriers to adoption
- Educate processors on farmers’ desire to have knowledge of composition
Develop plans to address any barriers identified by market intelligence

Engage with industry leaders such as NOPA to have a dialogue about these issues

**Rationale:** Even though farmers are not the intended audience for this objective, the action team did believe telling their side of the story to crushers would help achieve the objective. They believe telling the crusher that soybean farmers WANT this information, will help make it happen. Additionally, the action team members were aware that FY17 milestones for this objective require baseline data, therefore a poll or survey would be required. Education is needed in this area as well. Like the previous objective, communications with crushers needs to improve according to USB’s market analyst.

**Potential Partners:** NOPA, QSSBs, Animal Nutritionists (from the demand side), Integrators, Elevators, Measurement Companies

**Rationale:** Action team members discussed how NOPA would be the best way to reach the crushers.

**Activities to Start Now to Meet 2021 Milestone:** None given

**Rationale:** Action team members determined that data collected in FY17 would be needed before beginning activities to meet the 2021 milestones.

**Analyst comments:** Processors don’t like being told what to do and they are measured on the inbound quality of the product vs. the outbound meal quality. But, the more transparency throughout the value chain, the better.

**Audience:** Crushers – **Rating: Medium**

Objective G: Crushers will commit to invest in methods for identity preservation of soybeans with new and improved composition traits so that the value of these traits can be captured throughout the value chain. (Ranking: None)

**Framework of Program Activities:**

**WHY? Why does this target audience need us and how can we address that need through the objective?** Processors need a supply of high quality soybeans to meet the needs of their meal customers. New soybean varieties could be developed in the future that contain value-added meal traits that need to be preserved through processing and delivery, to retain their value for end-users. Processors have the opportunity to capture more revenue from these higher valued soybeans also, but it will take the leadership of the checkoff to demonstrate the importance of collaborating across the chain. Processors must realize the benefit of identity preservation of soybeans with new and improved composition traits before committing to investments in changing their current operation. They will not be motivated to make a change unless the change is financially beneficial for them from either a business perspective or from an end-user demand perspective.

**WHAT? What are the program activities to accomplish the objective?** In order to find out if crushers are willing to commit to investing in methods for identity preservation of soybeans with new and improved composition traits, we must first assess their
willingness. This is true for both domestic and international customers. If we are calling for changes at the farmer level to grow specific varieties with quality attributes, then we must make certain processors are willing to capture that value.

Strategy: USB will identify and communicate the value of identity preservation as it relates to soybeans with new, improved soybean constituents/components.

2017 Milestone: Baseline the percentage of crushers willing to commit to investing in preserving the identity of new and improved composition traits.

2021 Milestone: Benchmark +X percent of the target that will commit to invest in methods for identity preservation.

FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams: None

Broad Activities to Influence the Objective:

- Survey processors to determine willingness to commit to investing in preserving the identity of new and improved composition
- Outreach and education to processors/NOPA on why this is needed
- Engage with customers (demand side) demanding IP soybeans for certain quality attributes
- Coordinate with Oil objective

Rationale: Action team members were aware that FY17 milestones for this objective require baseline data therefore a poll or survey would be required. They also discussed how identifying and engaging with the customers demanding IP soybeans would be beneficial.

Potential Partners: Animal Ag Industry/animal feed nutritionists and seed companies

Rationale: End users and the entities that provide the seed need to be our partners to be successful.

Activities to Start Now to Meet 2021 Milestone: None given

Rationale: Action team members determined that data collected in FY17 would be needed before beginning activities to meet the 2021 milestones.

Analyst comments: As stated previously, processors do not like being told what to do and they are measured on the inbound quality of the product vs. the outbound meal quality. The must see a clear financial benefit before making any radical changes, but if the right end user demands it, that might change the conversation.

Audience: Elevators – Rating: None

Objective H: Elevator managers will commit to invest in methods for identity preservation of soybeans with new and improved composition traits so that the value of these traits can be captured throughout the value chain. (Ranking: None)
Framework of Program Activities:

First we need to establish baseline data to document interest level and barriers to identity preservation of soybeans within the elevator audience. This could be conducted simultaneously with the Value-Oil objectives targeting the same audience, and similar value-meal efforts aimed at elevators managers. Outreach to elevator managers, and their board of directors, to explain the rationale business case and importance of segregation to value-chain success would follow. Other barriers identified during market intelligence gathering should also be addressed.

Using market intelligence drawing from analysis of potential end-user demand and supply chain (production from seed, farm-level, etc.), USB can provide analysis of the volumes that may be available and the potential to capture added value from throughout the entire supply chain so that elevator managers and all parts of the value chain share in added profitability. Demonstrating the needs for identity preservation (IP) at certain control points including during crush, USB represents an unbiased source of information to provide Elevators with analysis of the potential value proposition for IP and segmentation of the soybean meal market.

WHY? Why does this target audience need us and how can we address that need through the objective?
In order for value-enhanced meal, or other similar value-added products, to be successful, elevators must commit to the necessary segregation to preserve identity. If soybeans are co-mingled at the elevator, added value is threatened for crushers and end-users, jeopardizing potential higher margins for elevators. Demonstrating the value to the entire supply chain will be required so that elevators and their supply chain partners can participate in capturing and sharing the value of an IP system. USB represents an unbiased partner for the soybean industry to maximize the potential of these new traits and demonstrate how this concept can create higher margins for Elevators.

Strategy: USB will identify and communicate the value of identity preservation as it relates to soybeans with new, improved soybean constituents/components so that value can be captured across the value chain.

2017 Milestone: Establish baseline for the percent who have the ability and willingness to invest in methods for identity preservation of improved traits.

2021 Milestone: Baseline + X percent have ability and willingness to invest in methods for identity preservation of improved traits.

FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams:

Broad Activities to Influence the Objective:

- None given.

Rationale: (This objective was omitted from discussion during the Tampa board meeting.) Elevators will need to see the value associated with segregation in order to
accept and handle new identity preserved varieties. We need to better understand the issues and challenges they face and prepare relevant outreach and solutions for key elevator management.

Potential Partners:

- (None given.) Value Chain, Elevators Manager Trade Association, National Grain and Feed Association, University Extension, Trade Media, QSSBs

**Rationale:** Working with these groups USB can share the long-term value and benefits associated with supporting production and segregation of high oleic soybeans.

**Activities to Start Now to Meet 2021 Milestone:** None given

**Rationale:** A market study to both establish baseline data as well as gather additional market intelligence should be conducted. It was noted that market studies should be combined when possible to create efficiency

**Analyst comments:** The market analyst advised that we expand the dialogue with Elevators to ensure they’re aware of new seed varieties; and develop a story line demonstrating the value proposition for U.S. soybean oil that can be adapted for each point on the value chain, both for domestic and export markets.

- Expand the dialogue with Elevators and Processors to insure they’re aware of new seed varieties. High Oleic soybean, then future meal traits will require investment at both locations. (bins, dumps, tanks)
- I see great risk with specialty traits at the elevator level. This could be the weakest link in the value chain. They’re generally understaffed and underfunded and will need to be clearly informed about what’s headed their way. They will need to understand what and how many new traits are coming and the expectations for segregation. We need to provide support to help manage NIR acquisition and proper training. For high oleic, even a little contamination at any touch point in the chain can lead to a noticeable drop in finished-product quality. Segmentation, and the management of clean product movements, will be key to success.
Goal: Value– Oil  $3,874,668

Audience: Sales Desks - Rating: Medium

Objective A: Will be able to accurately and consistently define the U.S. soy advantage.

Framework of Program Activities:

WHY? Why does this target audience need us and how can we address that need through the objective? This audience is responsible for selling whole soybeans or soybean products such as oil so it is important they understand the U.S. Soy Advantage and relay that value to the next entity in the value chain. Sales desks, oil merchandisers, operate at a pivotal point of exchange between crushers and oil buyers. If we target oil merchandisers under this objective with messaging related to the compositional and nutritional benefits of U.S. meal, we have potential to boost sales and value. The overall U.S. Soy Advantage is differentiated by superior composition, consistent supply, sustainable farming practices and innovation beyond the bushel. The checkoff can help make those distinctions known to the sales desk operators. The checkoff can work with sales desk operators in making certain they understand and recognize the intrinsic value of U.S. soy. With this knowledge, they can better articulate the benefits to buyers and maximize their margins from U.S. soy oil.

WHAT? What are the program activities to accomplish the objective? To ensure market adoption, the value chain, including Sales Desks, must understand the advantages relating to both high oleic and conventional soybean oil. In order to get sales desk operators to accurately define the U.S. Soy Advantage, we must first create a consistent definition and communicate that to this audience and then find out how many can recognize the definition. The foundation of the U.S. Soy Advantage is innovation, which is focused on investment in continuous improvement and meeting customer needs. Today, the U.S. Soy Advantage is anchored by superior composition and consistent supply of our soy and soy products, as well as the sustainability practices of U.S. soybean farmers. This total quality spectrum gives us an advantage over the competition, but sales desk operators may not understand what that is currently.

Rating: None

Strategy: Educate and partner with influencers in the value chain to recognize and promote the U.S. Soy Advantage of food and industrial oil products to end users.

2017 Milestone: Benchmark the percentage of sales desk operators who can accurately and consistently define the U.S. soy advantage.

2021 Milestone: Benchmark +X percent of sales desk operators can accurately and consistently define the U.S. soy advantage

2021 Milestone: X percent of target will say that being able to understand and communicate the U.S. soy advantage helped to boost their sales.
2021 Milestone: X percent of international sales desks will say they prefer U.S. soy because of the U.S. soy advantage.

FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams:

**Broad Activities to Influence the Objective:**

- Use data to define U.S. Soy Advantage, coordinate with Meal and Sustainability
- Focus on promotion of High Oleic Soy Oil
- Conduct education/outreach, with benefit of baseline data or other market intelligence
- A survey, or market intelligence gathering may be needed to develop appropriate baselines and plan outreach activities
- Ensure that activities address needs across the nation.
- Encourage the need for information sharing across value chain, to share consistent messages
- We need market intelligence related to composition, which may be coordinated with Meal.

**Rationale:** The farmer leaders believe that we must further define and segment the sales desk audience to better identify targets before implementation. It was recognized that some sales desk operators reside within crusher organizations and activities will need to be coordinated. It was determined that many of the activities of this objective are the same as Value Meal Objective C, including the need for FY17 milestones baseline data, and the need for the U.S. Soy Advantage to be defined.

**Potential Partners:**

- Industrial uses for technical applications, Crushers, Refiners, key end-users.

**Rationale:** Determine who the key oil merchandisers are based on each end-use segment. The majority of oil produced in the U.S. is marketed domestically due to logistics. Work with end-users to document their needs to create targeted outreach.

**Activities to Start Now to Meet 2021 Milestone:** None given

**Rationale:** It was recognized that conducting a benchmark study would be necessary to set targets and inform planning of specific tactics. It was noted that market studies should be combined when possible to create efficiency.

**Analyst comments:**

- Sales desks are only concerned with finding the price needed to keep the oil moving. We have an opportunity to show the value of soybean oil to them and the farm community so they can sell it based on features and benefits and not just price.
- Expand the dialogue with Elevators and Processors to insure they’re aware of new seed varieties. High Oleic soybean, then future meal traits will require investment at both locations. (bins, dumps, tanks)
- Develop a story line demonstrating the value proposition for U.S. soybean oil that can be adapted for each point on the value chain, both for domestic and export markets.
• Work with industry to identify new names for full hydrogenation and interesterification to be presented to FDA by years’ end.
• Identify key food service distribution companies who will support the rollout of HOS as a premium frying oil in 2017.

Audience: Crushers Rating: Medium

B) Objective: Crushers will commit to invest in methods for identity preservation of soybeans with new and improved composition traits so that the value of these traits can be captured throughout the value chain.

Framework of Program Activities:

WHY? Why does this target audience need us and how can we address that need through the objective? Processors have been able to IP smaller-scale batches of soybean oil – but have regularly been operating in a market that has not regularly required IP or segregation of major types of soybean oil. The broad-scale commercial launch to the level of high oleic soybean oil will require IP of the product to realize the full potential value proposition. Processors have the opportunity to capture more revenue from these higher valued soybeans also, but it will take the leadership of the checkoff to demonstrate the importance of collaborating across the chain. Processors must realize the benefit of identity preservation of soybeans with new and improved composition traits before committing to investments in changing their current operation. They will not be motivated to make a change unless the change is financially beneficial for them from either a business perspective or from an end-user demand perspective.

WHAT? What are the program activities to accomplish the objective? In order to find out if crushers are willing to commit to investing in methods for identity preservation of soybeans with new and improved composition traits, we must first assess their willingness. This is true for both domestic and international customers. If we are calling for changes at the farmer level to grow specific varieties with quality attributes, then we must make certain processors are willing to capture that value.

Rating: None

Strategies:

Educate and partner with influencers in the value chain to recognize and promote the U.S. soy advantage of food and industrial oil products to end users.

USB will identify and communicate the value of identity preservation as it relates to soybeans with new, improved soybean constituents/components so that value can be captured across the value chain.

2017 Milestone: Baseline the percentage of crushers willing to commit to investing in preserving the identity of new and improved composition traits.

2021 Milestone: Baseline +X percent of the target that will commit to invest in methods for identity preservation.
FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams:

Broad Activities to Influence the Objective:

- Working with Meal, we must standardize NIR technology, to ensure accurate and constituent oil measurement technology is available to support segregation.
- A survey and/or market Intelligence gathering will be necessary to establish baseline interest and concern related to supporting identity preservation of oils, like HOS.
- Develop and deliver effective outreach for crushers to illustrate the business case for segregating HOS throughout the value chain.

**Rationale:** The need for technology to measure and identify oil traits, such as high oleic, in whole soybeans in order to preserve identity was recognized. A market study and/or gathering current market intelligence related to segregation will be necessary to establish baselines and identify needs and unknown barriers to success.

Potential Partners:

- Qualisoy, NOPA, Seed Companies
- Potential partners with multiple upstream and downstream stakeholders who all play a role in creating the value proposition for IP of traits (e.g., elevators, end-users)

**Rationale:** The efforts of Qualisoy and other partners should be considered as we move forward to avoid duplication and ensure a consistent industry-wide approach.

**Activities to Start Now to Meet 2021 Milestone:** None given

**Rationale:** It was recognized that developing baseline data and setting goals was important in FY17. It was noted that market studies should be combined when possible to create efficiency.

**Analyst comments:**

- More and more, end users drive the decision making at a crusher-refiner. Their business has now largely migrated away from producers' labels and brands to distributors' products. Crushers need to understand which traits are headed their way so they have time to invest in needed storage and infrastructure. Crushers are well-funded, understand technology and will behave in a manner that maximizes their individual profitability. I have no concerns about them installing NIR technology or managing and interpreting the data. They're using this technology today, so the data does exist, but most chose not to provide that information back to farmers. Crushers, in general, have difficulty looking beyond the price of meal to determine value. They also don't often work cohesively throughout their own value chain.
- Work with industry to develop the standard measurement technique needed to allow a consistent NIR measurement for the industry. Programs to assist with equipment financing and training should be developed now.
- Expand the dialogue with Elevators and Processors to insure they're aware of new seed varieties. High Oleic soybean, then future meal traits will require investment at both locations. (bins, dumps, tanks)
Develop a story line demonstrating the value proposition for U.S. soybean oil that can be adapted for each point on the value chain, both for domestic and export markets.

Four U.S. companies, ADM, Bunge, Cargill and Dreyfus, crush approximately 83 percent of the soybeans, while another three companies, AGP, CHS and Perdue, crush around 12%. Targeting these 7 companies is strategically important, particularly to enable market adoption of high oleic soybean oil.

Audience: Crushers  Rating: Low

C) Objective: Crushers will improve accuracy and standardize NIR soy measurement and will adopt standard measurement practices (weights and measurements) and begin early adoption of component pricing to reward farmers for high value [meal and] oil traits.

Framework of Program Activities:

**WHY? Why does this target audience need us and how can we address that need through the objective?** Crushers are reliant on a consistent high-quality supply of soybeans to produce the oil their customers demand. Crushers need the checkoff to pull the value chain together from the farmers growing the soybeans to the end users that demand higher quality constituents/components that make up the U.S. soy advantage. Since the current system pays farmers for yield not quality, yield has improved and quality has suffered. To improve quality we must be able to measure it consistently, and therefore improving accuracy and standards of NIR equipment is critical. This objective will eventually enable soybean farmers to be rewarded for high quality constituents within the crop, and motivate continuous improvement. First, crushers need to recognize that quality matters and they can better meet the needs of their end users by engaging and sharing information with farmers to improve quality. Processors are a key part of the value chain and will be an essential partner for the checkoff in developing a constituent/component pricing program. A plan, which is currently in the vetting stage, has been developed to explore what such a system would look like. Part of the longer-term constituent pricing plan will include insights on the feasibility and effectiveness of both approaches.

**WHAT? What are the program activities to accomplish the objective?** In order for crushers to adopt a component pricing system aimed at rewarding farmers for high value meal [and oil] traits, they must have a dialogue with the checkoff to understand the benefits or working together. If crushers realize they can benefit from a constituent pricing system, they will support transparency and invest in methods to reward farmers for the quality of their crop and better meet the needs of their end users. We will coordinate this with the work of the Value Task Force efforts and begin to plan a measurement pilot program that’s coordinated with the Elevator audience to field test a model system of measurement and reporting quality data to farmers.

Rating: Most Important
Strategy: USB will promote relevant measurement technologies and standards that are available for elevators, sales desks and crushers to recognize and capture the complete value proposition of U.S. soybean oil.

2017 Milestone: Baseline +X% of international crushers' will understand the value of U.S. soy oil's competitive advantage.

2021 Milestone: Baseline +X% of international crushers' will understand the value of U.S. soy oil's competitive advantage.

FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams:

Broad Activities to Influence the Objective:

- Conduct a coordinated market study to establish baselines and gather intelligence.
- Work to standardize measurement, vertically and horizontally across the value chain.
- Organize and create a dialogue with the target audience.
- Initiate a pilot program as appropriate.
- Work with Qualisoy and take steps toward development of standard AOCS procedures as appropriate.
- Conduct education and promotional efforts based on market intelligence as needed.

**Rationale:** Gathering baseline data and documenting trading rules is important to defining the current state and achieving this objective. We should leverage/combine efforts with Meal, where appropriate, to avoid duplication and create efficiencies.

Potential Partners:

- Qualisoy, USDA, NOPA, AOCS, Measurement Companies

**Rationale:** Farmers encouraged working with these groups and others to define measurement capabilities and standards to enable segregation and financial rewards for producing, processing, and marketing high oleic soybeans and the resulting oil. Coordinate with Meal objective.

Activities to Start Now to Meet 2021 Milestone: None given

**Rationale:** A market study to both establish baseline data as well as gather additional market intelligence should be conducted. It was noted that market studies should be combined when possible to create efficiency.

Analyst comments:

- More and more, end users drive the decision making at a crusher-refiner. Their business has now largely migrated away from producers’ labels and brands to distributors’ products. Crushers need to understand which traits are headed their way so they have time to invest in needed storage and infrastructure. Crushers are well-funded, understand technology and will behave in a manner that maximizes their individual
profitability. I have no concerns about them installing NIR technology or managing and interpreting the data. They're using this technology today, so the data does exist, but most chose not to provide that information back to farmers. Crushers, in general, have difficulty looking beyond the price of meal to determine value. They also don't often work cohesively throughout their own value chain.

- Work with industry to develop the standard measurement technique needed to allow a consistent NIR measurement for the industry. Programs to assist with equipment financing and training should be developed now.
- Expand the dialogue with Elevators and Processors to insure they’re aware of new seed varieties. High Oleic soybean, then future meal traits will require investment at both locations. (bins, dumps, tanks)
- Develop a story line demonstrating the value proposition for U.S. soybean oil that can be adapted for each point on the value chain, both for domestic and export markets.

Audience: Crushers  Rating: Medium

D) Objective: Processors will report [protein and] oil back to farmers with a price correlation.

Framework of Program Activities:

**WHY? Why does this target audience need us and how can we address that need through the objective?** Crushers have the opportunity to capture more revenue from a higher value soybean, but it will take the leadership of the checkoff to make this happen throughout the chain. Processors have and use NIR to measure basic quality attributes such as oil and protein on soybeans that enter their plant, but they do not always share that information with the farmer. Sometimes this is due to many layers of handling, between the farm and ultimately the processor. Sharing quality data with a price correlation could raise awareness of low quality, and motivate farmers to select varieties that yield, but also deliver better protein and oil levels. If overall quality improves in a region, the resulting products the processor takes to market will either increase in quality, or quantity, (or both), and thus add value to their bottom line. Higher quality oil is in demand and preferred by their end-use customers, who will also benefit.

**WHAT? What are the program activities to accomplish the objective?** In order to get processors to report oil and protein levels back to farmers, we much first understand how many crushers currently carry out this practice at their facilities. We will conduct baseline survey to document baselines and gather market intelligence related to challenges and barriers to adoption. We will also develop a plan to execute and carry out communications and outreach to convey the importance of this objective in order to move the target toward the necessary behavior change. Many farmers want this information now. Once processors become transparent at this step in the value chain, farmers will be motivated to grow varieties with higher protein and oil content, thus increasing the value proposition overall.

Rating: None
Strategy: USB will promote relevant measurement technologies and standards that are available for elevators, sales desks and crushers to recognize and capture the complete value proposition of U.S. soybean oil.

2017 Milestone: Establish baseline of [protein and] oil reporting to farmers.

2021 Milestone: XX of farmers will be aware of their [protein and] oil content and the resulting price correlation.

FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams:

Broad Activities to Influence the Objective:

• Market intelligence and baseline survey.
• Demonstrate the importance of composition.
• Conduct outreach to Industrial Customers as appropriate
• Engage the industry organizations such as NOPA, and conduct outreach as needed.
• Use consistent value proposition messaging across the entire value chain

Rationale: Conduct coordinated research to define baselines and engage partners in the value chain to build awareness of oil levels, oil quality, and its important contribution to value. It was determined that many of the activities of this objective are the same as Value Meal Objective F, including helping the Crushers to understand the farmer side of the story in helping achieve the objectives.

Potential Partners:

• Industrial/end users, USDA, Measurement partners, End-users, Seed industry

Rationale: Determine needs of customers and share information throughout the value chain. Coordinate with Meal objective.

Activities to Start Now to Meet 2021 Milestone: None given

Rationale: A market study to both establish baseline data as well as gather additional market intelligence should be conducted. It was noted that market studies should be combined when possible to create efficiency.

Analyst comments:

• Expand the dialogue with Elevators and Processors to insure they’re aware of new seed varieties. High Oleic soybean, then future meal traits will require investment at both locations. (bins, dumps, tanks)
• Develop a story line demonstrating the value proposition for U.S. soybean oil that can be adapted for each point on the value chain, both for domestic and export markets.
• Assess and qualify opportunities in the nonfood sector specific to high oleic soybean oil. We need to understand what segments will benefit from the extended stability and which are large enough to invest in going forward. Ideally, that segmentation is completed in 2016 and potential partners.

• More and more, end users drive the decision making at a crusher-refiner. Their business has now largely migrated away from producers’ labels and brands to distributors’ products. Crushers need to understand which traits are headed their way so they have time to invest in needed storage and infrastructure. Crushers are well-funded, understand technology and will behave in a manner that maximizes their individual profitability. I have no concerns about them installing NIR technology or managing and interpreting the data. They’re using this technology today, so the data does exist, but most chose not to provide that information back to farmers. Crushers, in general, have difficulty looking beyond the price of meal to determine value. They also don’t often work cohesively throughout their own value chain.

• Four U.S. companies, ADM, Bunge, Cargill and Dreyfus, crush approximately 83 percent of the soybeans, while another three companies, AGP, CHS and Perdue, crush around 12%. Targeting these 7 companies is strategically important, particularly to enable market adoption of high oleic soybean oil.

Audience: Buyers Rating: Low

E) Objective: Will be aware of the latest developments and technology releases of new and improved soy products and will make purchase decisions based on the U.S. soy advantage.

Framework of Program Activities:

WHY? Why does this target audience need us and how can we address that need through the objective? Buyers have commanded considerably more power in the marketplace as an end user influencer, according to new information that the USB Oil Analyst provided a month after the ratings from the February Action Team meetings. Buyers (Distributers like Sysco, Gordon’s and U.S. Foods) are a key audience and we must leverage that change in power by influencing them to manage a value-added portfolio of products (i.e. fully hydrogenated and interesterified soybean oil), and away from a commodity mind-set to embrace new components, like high oleic soybean oil so that they can influence their end user customers. The soy advantage includes its reliable supply, performance, functionality, nutrition profile and sustainability. Learning of the latest developments, including oil composition and processing techniques, will help Buyers fill the gaps that came about when partial hydrogenation of oils was banned for health reasons, thus limiting soy oil’s functionality and performance in deep frying, icings and other uses. For Industrial uses, they help Buyers provide functional, economic and sustainable advantages over soybean oil’s competition. In order to maximize market adoption of soybean oil, we must identify and overcome barriers to adoption of soybean oil as it relates to each target audience in the value chain, while demonstrating value propositions for each audience.
WHAT? What are the program activities to accomplish the objective? In order to get buyers to make purchase decisions based on the U.S. Soy Advantage, we must first create a consistent definition and then determine how many buyers use the understanding of that advantage to make purchasing decisions. The foundation of the U.S. Soy Advantage is innovation, which is focused on investment in continuous improvement and meeting customer needs. Today, the U.S. Soy Advantage is anchored by superior composition and consistent supply of our soy and soy products, as well as the sustainability practices of U.S. soybean farmers. Buyers include those positioned at oil processors and refiners, as well as distributors who sell refined oil. Buyers of oil for food and industrial uses base their purchasing decisions on cost and performance. We need to encourage partnership between buyers and all stakeholders in the soy value chain and create and deliver appropriate outreach to bring them together. Currently, buyers are motivated by price and volume, but there is tremendous value for the farmer – and the end user demanding the soybean oil – if the buyer understands the value of the soybean oil it’s purchasing.

Rating: Least Important

Strategy: Educate and partner with influencers in the value chain to recognize and promote the U.S. soy advantage of food and industrial oil products to end users.

2017 Milestone: Benchmark the percentage of key [meal/] oil buyers that can accurately identify the U.S. soy advantage.

2017 Milestone: Benchmark the percentage of the target that indicates a preference for U.S. soy products.

2021 Milestone: X percent of targeted buyers prefer U.S. soybean oil because of the U.S. soy advantage.

FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams:

Broad Activities to Influence the Objective:

- Conduct a survey or poll to establish benchmarks for understanding of soy advantages.
- Define the soy advantage and how it helps the target audience
- Coordinate engagement (Conferences, etc.) and outreach activities targeting specific buyers.
- Collaborate with QSSB’s to leverage existing relationships.
- Survey (understanding soy advantages)
- Focus on High Oleic Soybean Oil market adoption.

Rationale: With high oleic adoption expected to grow over the next five years, we should continue to identify barriers to adoption and cultivate relationships along the entire value chain. Coordinate with Demand action team.

Potential Partners:

- End Users (commercial customers), Nutritionists, Food Industry, Feed Mills

Rationale: End users will need data to justify additional costs associated with high oleic.
Activities to Start Now to Meet 2021 Milestone: None given

Rationale: A market study to both establish baseline data as well as gather additional market intelligence should be conducted. It was noted that market studies should be combined when possible to create efficiency

Analyst comments:

- Develop a story line demonstrating the value proposition for U.S. soybean oil that can be adapted for each point on the value chain, both for domestic and export markets.
- Identify key food service distribution companies who will support the rollout of HOS as a premium frying oil in 2017.
- As the biggest end user of U.S. soybean oil, the food industry continues to be a very important audience. These companies continue to respond to new consumer trends and evolving drivers on what motivates food-purchasing decisions.
- Construct and begin implementation for a Qualified Health Claim for commodity soybean oil. The process will take approximately 9 months from beginning to presentation to FDA. Estimated total cost $150K
- Expand the dialogue with Elevators and Processors to insure they’re aware of new seed varieties. High Oleic soybean, then future meal traits will require investment at both locations. (bins, dumps, tanks)
- Work with industry to identify new names for full hydrogenation and interesterification to be presented to FDA by years’ end.
- Assess and qualify opportunities in the nonfood sector specific to high oleic soybean oil. We need to understand what segments will benefit from the extended stability and which are large enough to invest in going forward. Ideally, that segmentation is completed in 2016 and potential partners

Audience: Elevators Rating: Medium

F) Objective: Elevators will be able to measure soybean composition at the first point of sale, such that constituent/component pricing can be adopted.

Rating: None

Framework of Program Activities:

WHY? Why does this target audience need us and how can we address that need through the objective? Elevators do not understand how they can benefit from constituent/ component pricing. A plan, which is currently in the vetting stage, has been developed to explore what such a system would look like. Farmers are largely unaware of the composition (protein, oil, etc.) of their soybeans, and elevators have an opportunity to help change that. If we can begin measuring the crop, we can begin motivating quality improvements and improve value for everyone in the chain. A crucial step in the process is elevators having access to the technology they need to measure specific constituents. With NIR technology, the component data can be passed along to the farmer if they are willing to do so. Through discussions at Value Task Force roundtables we know that elevators may not immediately be willing to employ such
technology because of costs and logistical constraints, but the checkoff needs to convince them that this level of transparency at the elevator will encourage soybean farmers to plant better varieties with potential rewards/discounts for quality thresholds. Part of the longer-term constituent pricing plan will include insights on the feasibility and effectiveness of both approaches. As soybean quality improves, we will see an increase in demand from end-use customers.

**WHAT? What are the program activities to accomplish the objective?** To determine how many elevators have the technology available to them and are willing to be transparent about the measurements of oil, [protein, amino acids, carbohydrates] and fatty acids, we must conduct a survey or poll. We know through checkoff-funded research that farmers would be willing to grow higher quality seed if it was a. made available to them b. performed the same as high-yielding varieties or they were paid more for the improved components. But, farmers do not know the quality of their soybeans because elevators and processors are not required to share that information with them. Sharing the component value of each load of soybeans at the point of delivery is the first step in ultimately boosting overall soybean quality to better meet the needs of our end users.

Strategy: USB will promote relevant measurement technologies and standards that are available for elevators, sales desks and crushers to recognize and capture the complete value proposition of U.S. soybean oil.

2017 Milestone: Develop baseline showing the percent of elevator managers (independent versus affiliate) who have the ability to measure for soy constituents such as [protein,] oil, [amino acids,] fatty acids, and [carbohydrates].

2021 Milestone: 40 percent of U.S. elevators have a constituent/component statement on the ticket.

**FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams:**

**Broad Activities to Influence the Objective:**

- Perform a quantitative survey to gather market intelligence related to awareness, interest, adoption and barriers to further adoption related to soybean composition testing. (Coordinate with Elevator objectives in Marketplace AT.)
- Conduct education to make elevator managers aware of the importance of composition and that farmers are interested in compositional data of their soybeans
- Consider a pilot testing program with Crushers that could involve leasing NIR technologies to elevators for a thorough, real-world trial.
- Work to standardize NIR technology may be required to ensure accuracy, and to otherwise ensure that NIR meets the needs of the elevator audience.

**Rationale:** To avoid unnecessary duplication of effort, these activities should be coordinated or combined with similar objectives in the Crusher audience and within the Meal target area.
Potential Partners:
- Equipment Manufacturers, Measurement Companies

**Rationale:** Measurement technology will be necessary to test and preserve the identity of HOS. We must ensure cost of technology or other limitations are not barriers to success. Coordinate with Meal target area.

**Activities to Start Now to Meet 2021 Milestone:** None given

**Rationale:** A market study to both establish baseline data as well as gather additional market intelligence should be conducted. It was noted that market studies should be combined when possible to create efficiency.

**Analyst comments:** The market analyst advised that we expand the dialogue with Elevators to ensure they’re aware of new seed varieties, while also developing a story line demonstrating the value proposition for U.S. soybean oil that can be adapted for each point on the value chain, both for domestic and export markets.

- Develop a story line demonstrating the value proposition for U.S. soybean oil that can be adapted for each point on the value chain, both for domestic and export markets.
- Expand the dialogue with Elevators and Processors to insure they’re aware of new seed varieties. High Oleic soybean, then future meal traits will require investment at both locations. (bins, dumps, tanks)
- I see great risk with specialty traits at the elevator level. This could be the weakest link in the value chain. They’re generally understaffed and underfunded and will need to be clearly informed about what’s headed their way. They will need to understand what and how many new traits are coming and the expectations for segregation. We need to provide support to help manage NIR acquisition and proper training. For high oleic, even a little contamination at any touchpoint in the chain can lead to a noticeable drop in finished-product quality. Segmentation, and the management of clean product movements, will be key to success.

**Audience:** Elevators  **Rating:** Low

G) **Objective:** Elevator managers will commit to investing in methods for identity preservation of soybeans with new, improved composition traits so that the value of the new traits can be captured throughout the value chain.

**Rating:** None

**Framework of Program Activities:**

**WHY? Why does this target audience need us and how can we address that need through the objective?**

In order for HOS, or other similar value-added products, to be successful, elevators must commit to the necessary segregation to preserve identity. If soybeans are co-mingled at the elevator, added value is threatened for crushers and end-users,
jeopardizing potential higher margins for Elevators. The broad-scale commercial launch to the level of high oleic soybean oil will require IP of the product to realize the full potential value proposition. Demonstrating the value to the entire supply chain will be required so that Elevators and their supply chain partners can participate in capturing and sharing the value of an IP system. USB represents an unbiased partner for the soybean industry to maximize the potential of these new traits and demonstrate how this concept can create higher margins for Elevators.

**WHAT? What are the program activities to accomplish the objective?**

First we need to establish baseline data to document interest level and barriers to identity preservation of soybeans within the elevator audience. This could be conducted simultaneously with Value-Oil objective F, and similar Meal efforts that target elevators. Outreach to elevator managers, and their board of directors, to explain the rationale business case and importance of segregation to value-chain success would follow. Other barriers identified during market intelligence gathering should also be addressed.

Using market intelligence drawing from analysis of potential end-user demand and supply chain (production from seed, farm-level, etc.), USB can provide analysis of the volumes that may be available and the potential to capture added value from throughout the entire supply chain so that Elevators and all participants share in added profitability. Demonstrating the needs for identity preservation (IP) at certain control points including during crush, USB represents and unbiased source of information to provide Elevators with analysis of the potential value proposition for IP and segmentation of the soybean oil market.

Strategy: USB will identify and communicate the value of identity preservation as it relates to soybeans with new, improved soybean constituents/components so that value can be captured across the value chain.

2017 Milestone: Establish baseline for the percent who have the ability and willingness to invest in methods for identity preservation of improved traits.

2021 Milestone: Baseline + X percent have ability and willingness to invest in methods for identity preservation of improved traits.

**FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams:**

**Broad Activities to Influence the Objective:**

- Gather quantitative market intelligence to document the ability and willingness to segregate value-added soybeans such as HOS. Determine barriers to identity preservation at the elevator level. Ensure this is reflective of all U.S. soybean production nation-wide. (Coordinate all with Elevator objectives in Marketplace AT.)
- Plan and conduct necessary, nation-wide outreach activities to communicate the rationale and importance to everyone up and down the value chain to the success of HOS.
• Develop a plan to address any barriers related to measurement, storage, logistics, that are identified through market intelligence gathering.

**Rationale:** Elevators will need to see the value associated with segregation in order to accept and handle new identity preserved varieties. We need to better understand the issues and challenges they face and prepare relevant outreach and solutions for key elevator management.

**Potential Partners:**

- Value Chain, Qualisoy, Elevators Manager Trade Association, National Grain and Feed Association, University Extension, Trade Media, QSSBs

**Rationale:** Working with these groups USB can share the long-term value and benefits associated with supporting production and segregation of high oleic soybeans.

**Activities to Start Now to Meet 2021 Milestone:** None given

**Rationale:** A market study to both establish baseline data as well as gather additional market intelligence should be conducted. It was noted that market studies should be combined when possible to create efficiency

**Analyst comments:** The market analyst advised that we expand the dialogue with Elevators to ensure they're aware of new seed varieties; and develop a story line demonstrating the value proposition for U.S. soybean oil that can be adapted for each point on the value chain, both for domestic and export markets.

- Develop a story line demonstrating the value proposition for U.S. soybean oil that can be adapted for each point on the value chain, both for domestic and export markets.
- Expand the dialogue with Elevators and Processors to insure they’re aware of new seed varieties. High Oleic soybean, then future meal traits will require investment at both locations. (bins, dumps, tanks)
- I see great risk with specialty traits at the elevator level. This could be the weakest link in the value chain. They're generally understaffed and underfunded and will need to be clearly informed about what's headed their way. They will need to understand what and how many new traits are coming and the expectations for segregation. We need to provide support to help manage NIR acquisition and proper training. For high oleic, even a little contamination at any touchpoint in the chain can lead to a noticeable drop in finished-product quality. Segmentation, and the management of clean product movements, will be key to success.
Goal: Value – Sustainability  $2,452,033

Audience: Elevators – Rating: Medium

Objective A: Elevator managers and relevant staff will understand the constituents/components of soybeans that contribute to the U.S. Soy Advantage.

Framework of Program Activities:

WHY? Why does this target audience need us and how can we address that need through the objective? Elevators are a critical link in the value chain. They are often the first point of contact for the farmer and an important aggregator for the downstream market participants. Elevators may have the opportunity to capture more value and dollars for the soybeans they purchase if the market adopts a component pricing system. A plan, which is currently in the vetting stage, has been developed to explore what such a system would look like. Elevator managers and relevant staff will benefit if the checkoff pulls the value chain together, from the farmers growing the soybeans to the end users that demand higher quality constituents/components that make up part of the U.S. Soy Advantage, to increase the overall value and quality of U.S. soy. A lack of focus on soy constituents has contributed to the decline of protein levels. The checkoff wants to motivate soybean farmers to improve the quality of the crop and developing a market system that rewards/discounts for quality can help do so. Part of the longer-term constituent pricing plan will include insights on the feasibility and effectiveness of both approaches. But first, all parts of the chain, including elevators, need to recognize that quality matters and they can meet the needs of their end users by having a better understanding of the U.S. Soy Advantage, including sustainability performance.

WHAT? What are the program activities to accomplish the objective? For elevator managers to understand the constituents/components of soybeans that contribute to the U.S. Soy Advantage, they must first be aware of the quality attributes we are addressing in this plan. Thus, we need to gather data that will help document and define the U.S. Soy Advantage, as well as gather market intelligence on the audience itself. The foundation of the U.S. Soy Advantage is innovation, which is focused on investment in continuous improvement and meeting customer needs. Today, the U.S. Soy Advantage is anchored by superior composition and consistent supply of our soy and soy products, as well as the sustainability practices of U.S. soybean farmers. Ultimately the checkoff wants to change the way farmers are paid for their soybeans. If the value chain were to adopt a constituent pricing system that paid farmers on the quality attributes of their crop, then not only will they be motivated to grow higher-quality seed on the supply side, they will be able to better meet the needs of their end-used customers that demand higher-quality feed ingredients. The checkoff must work with elevators to make sure they are aware of the quality attributes that bring additional value, understand the value proposition and help employ a system where they are compensated for those higher quality soybeans and can therefore compensate growers for higher quality soybeans. It is likely elevators will need to invest in systems to segregate soybeans with improved traits, but the first must see how they are able to capture additional value from the segregation. The U.S. Soy Advantage is broader than physical quality attributes and
also encompasses some of the characteristics that meet corporate social responsibility needs. This message needs to be clearly defined and communicated with the elevators.

**Rating: Least Important**

**Strategy:** Align with multi-stakeholder groups to create and drive coordinated key messages related to the U.S. Soy Advantage.

2017 Milestone: Establish baseline for the percent who have the ability and willingness to invest in methods for identity preservation of improved traits.

2021 Milestone: Baseline + X percent have ability and willingness to invest in methods for identity preservation of improved traits.

**FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams:** None

**Broad Activities to Influence the Objective:**

- Develop consistent definition of the U.S. Soy Advantage and what it means to each target audience in the marketplace.
- Education and outreach to elevator staff, operators and, in some cases, elevator board members.
- Explore feasibility of an incentive program to segregate: IP soybeans or varying quality.
- National approach to a poll or survey instrument to gather baseline data and market intelligence.
- Gather market intelligence regarding crop composition.
- Make sure elevators are aware of the SSAP and the role sustainability plays in the U.S. Soy Advantage.
- Maintaining trade channels for biotech and specialty soybeans.

**Rationale:** Action team members were aware that FY17 milestones for this objective require baseline data, therefore a poll or survey would be required. They also discussed a broad range of activities the checkoff could begin once the surveys have been conducted, but stressed there would be a lot of education needed around this objective and audience. In addition, there is work that could be conducted to form coalitions and begin building awareness prior to results from surveys.

**Potential Partners:** Elevators Manager Trade Association, NGFA, University Extension, Trade Media, QSSBs, other Commodity Groups

**Rationale:** Action team members discussed how to best reach elevator managers, particularly through the trade association. USB’s market analyst supports the idea that working through national and state trade associations and organizations.

**Activities to Start Now to Meet 2021 Milestone:** Coalition Building, Industry Engagement and Marketing activities

**Rationale:** Action team members determined that data collected in FY17 would be needed before beginning activities to meet the 2021 milestones but there are some activities we can engage upon currently.
Analyst comments:

USB’s market analyst states there will be increasing scrutiny and challenges by competitors and others to our claims. Measurements, transparency and a growing track record of continuous improvement are essential to maintaining the supply chain’s trust in the U.S. soybean producers’ metrics.

Audience: Sales Desks – **Rating: Medium**

Objective B: (Sales Desks) Will be able to accurately and consistently define the U.S. Soy Advantage.

**Framework of Program Activities:**

**WHY? Why does this target audience need us and how can we address that need through the objective?** Sales Desks are a conduit of trade and generally focused on moving product at the market clearing price and less interested or engaged in the other attributes. In fact it is rare they ever handle physical commodity. As such, they often meet the market with the contract specifications and do not consider other factors. The reality is sales desks may be uniquely positioned to capture more value and dollars for the soybeans they sell if the market adopts a component pricing system since they are not constricted by physical inventory. The overall U.S. Soy Advantage is differentiated by superior composition, consistent supply, sustainable farming practices and innovation beyond the bushel. The checkoff can help make those distinctions known to the sales desk operators. The checkoff can work with sales desk operators in making certain they understand and recognize the intrinsic value of U.S. soy.

**WHAT? What are the program activities to accomplish the objective?** For sales desks to understand the constituents/components of soybeans that contribute to the U.S. Soy Advantage, they must first be aware of the quality attributes we are addressing in this plan. The checkoff must work with sales desks to make sure they are aware of the quality attributes that bring additional value, understand the value proposition and help employ a system where they are able to generate value which could be through making additional sales or increasing market share. The U.S. Soy Advantage is broader than physical quality attributes and also encompasses some of the characteristics that meet corporate social responsibility needs. The foundation of the U.S. Soy Advantage is innovation, which is focused on investment in continuous improvement and meeting customer needs. Today, the U.S. Soy Advantage is anchored by superior composition and consistent supply of our soy and soy products, as well as the sustainability practices of U.S. soybean farmers. This message needs to be clearly defined and communicated with the sales desks.

**Rating: None**
Strategy: Align with multi-stakeholder groups to create and drive coordinated key messages related to the U.S. Soy Advantage.

2017 Milestone: Benchmark the percentage of sales desk operators who can accurately and consistently define the U.S. Soy Advantage.

2021 Milestone: Benchmark +X percent of sales desk operators can accurately and consistently define the U.S. Soy Advantage

2021 Milestone: X percent of target will say that being able to understand and communicate the U.S. Soy Advantage helped to boost their sales.

2021 Milestone: X percent of international sales desks will say they prefer U.S. soy because of the U.S. Soy Advantage.

FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams: None

Broad Activities to Influence the Objective:

- Gather market intelligence on the demands for sustainability as well as understand the compositional makeup
- Engagement Activities (Visits, Roundtables)
- Identify key targets within audience
- Make sure sales desks are aware of the SSAP and the role sustainability plays in the U.S. Soy Advantage

Rationale: Action team members were aware that FY17 milestones for this objective require baseline data, therefore a poll or survey would be required. They also discussed the need to craft a definition for what the U.S. Soy Advantage Means, conduct engagement activities once we find out who these sales desk operators are. The farmer leaders rated this audience low because they don’t believe they have much influence.

Potential Partners: Multi Nationals, Domestic Shippers, Industrial Users, Crushers, Refiners, End Users, Farmers

Rationale: Action team members discussed how to best reach the sales desk operators through multinationals, end users and shippers.

Activities to Start Now to Meet 2021 Milestone: None offered

Rationale: Action team members determined that data collected in FY17 would be needed before beginning activities to meet the 2021 milestones.

Analyst Comments:

Sales desks are not a priority place to begin the sustainability message. As crushers and elevators become better engaged, sales desks can be brought along.

Audience: Buyers – Rating: High
Objective C: Will be aware of the latest developments and technology releases of new and improved soy products and will make purchase decisions based on the U.S. Soy Advantage.

Framework of Program Activities:

**WHY? Why does this target audience need us and how can we address that need through the objective?** We must find out why buyers currently chose U.S. soy and what attributes they use to describe the U.S. Soy Advantage. Buyers of U.S. soy tend to be focused on price and volume to meet the needs of their end users, such as animal nutritionists. Once we determine how they perceive U.S. soy, we can then begin communicating the increased value of the digestible protein, amino acid profile, energy and sustainability.

**WHAT? What are the program activities to accomplish the objective?** In order get buyers to make purchase decisions based on the U.S. Soy Advantage, we must first create a consistent definition and then determine how many buyers use the understanding of that advantage to make purchasing decisions. The foundation of the U.S. Soy Advantage is innovation, which is focused on investment in continuous improvement and meeting customer needs. Today, the U.S. Soy Advantage is anchored by superior composition and consistent supply of our soy and soy products, as well as the sustainability practices of U.S. soybean farmers. Currently, buyers are motivated buy price by volume, but there is a growing opportunity to differentiate U.S. soy from other feedstocks through sustainability messaging.

**Rating: None**

**Strategy:** Align with multi-stakeholder groups to create and drive coordinated key messages related to the U.S. Soy Advantage.

2017 Milestone: Benchmark the percentage of key meal/oil buyers that can accurately identify the U.S. Soy Advantage.

2017 Milestone: Benchmark the percentage of the target that indicate a preference for U.S. soy products.

2017 Milestone: Benchmark the percentage of the target that makes purchasing decisions based on a perceived increase in the value of U.S. soy on the basis of digestible protein, amino acid profile and energy.

2021 Milestone: X percent of targeted buyers are purchasing U.S. soy because of its digestible protein, amino acid profile and energy and sustainable production.

**FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams:** None

**Broad Activities to Influence the Objective:**

- Conduct a survey or poll to establish benchmarks
- Coordinate engagement and outreach activities targeting specific buyers (by species, etc.) to better understand their needs and to educate on SSAP and the U.S. soy story
• Collaborate with QSSBs to leverage existing relationships.
• Create a definition for the U.S. Soy Advantage
• Coordinate with Meal and Oil Buyer objectives and activities.

Rationale: Action team members were aware that FY17 milestones for this objective require baseline data, therefore a poll or survey would be required. They also discussed how the national checkoff could learn from the QSSBs and the information they have on the buyers for a geographic approach. They also discussed segmenting buyers by needs. USB’s analyst advised that the organization recognize the U.S. Soy Assurance Sustainability Protocol is not static and asked how producer metrics be acquired and used to add additional confidence to the marketing appeal of the protocol.

Potential Partners: University Extension, Animal Nutritionists, Owners, USDA FAS, Technical Consultants, Animal Ag (Integrators), Media, Farmers, End Users, Food Industry, Feed Mills

Rationale: Action team members discussed how to best reach buyers through government agencies and most through the end users – the feed formulators and animal nutritionists.

Activities to Start Now to Meet 2021 Milestone: Coalition Building, Industry Engagement and Marketing activities

Rationale: Action team members determined that data collected in FY17 would be needed before beginning activities to meet the 2021 milestones but there are some activities we can engage upon prior to having the baseline.

Analyst Comments:

The reality is that in the near-term buyers will not likely pay a premium for sustainably- or responsibly-grown soybeans. However, oil buyers are more likely to be interested in the sustainability metrics than meal buyers because oil is one step closer to the end-use consumer. The sustainability message should be a component of the value of U.S. soybeans, along with nutritional and functional properties.

Audience: Regulators and Influencers – Rating: High

Objective D: Regulators will understand the need for innovation to quickly approve new traits that benefit the value chain.

Framework of Program Activities:

WHY? Why does this target audience need us and how can we address that need through the objective? Regulators do not have an understanding of the challenges farmers face in production and the need for new technologies to address various issues. Domestic regulators do not understand the global nature of the soybean industry and the impact a slow process has on the competitiveness of U.S. soy. Regulators in importing countries are even more removed from the need of farmers and the industry to adopt new technologies. As a result trade barriers or disruption to trade can emerge. Checkoff needs to educate the regulators on the resource concerns that can be addressed by adopting new technology as well as the impact on the competitiveness of
U.S. soy. Conversely, regulators in importing countries need to understand the impact the slow approvals have on supply, price, quality, and food security.

**WHAT? What are the program activities to accomplish the objective?** In order get regulators to understand the need for innovation and impact lengthy approvals has on the industry, we need to provide them the scientific information on the costs associated with slow approvals, the environmental impact of not having technology available, and the potential supply disruptions that can result from slow and asynchronous approvals.

**Rating: Most Important**

**Strategies:**

- Drive understanding among influencers and regulators of the role on-farm innovation, including biotechnology and nutrient management, plays in achieving on-farm sustainability.

- Drive understanding of the U.S. Soybean Sustainability Assurance Protocol with influencers and regulators.

  - 2017 Milestone: Global biotech acceptance will be baselined in major markets.
  - 2021 Milestone: Approval delays are reduced by following transparent, predictable and science based systems.

**FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams:** None

**Broad Activities to Influence the Objective:**

- Educate on the impact slow and asynchronous approvals has on the supply, environment, and price of soy
- Educate on the positive impact biotechnology has on the environment and, food safety and security
- Work with likeminded partners to deliver the message

**Rationale:** Action team members recognize global biotech acceptance will need to be baselined. The team members think it is important to educate the audience on the U.S. soy story and SSAP. For the international marketplace it is important to encourage importing nations to adopt predictable, timely, transparent and science-based regulatory frameworks that avoid disruptions in trade.

**Potential Partners:** Trade Associations, USDA (FAS and others), ASA, Farmers, trait providers, grain trade, other like-minded partners, input companies

**Rationale:** Action team members recognize the need to form coalitions to address the challenges facing biotechnology acceptance.
Activities to Start Now to Meet 2021 Milestone: Coalition Building, Marketing activities, Engagement with Policy Makers (International)

Rationale: Action team members recognize the need to educate on biotechnology and sustainability.

Analyst Comments:

Slow regulatory approvals for biotech traits hurt U.S. soy’s competitive position. We need speedy decisions, but also accurate ones, to build customer trust. If there are examples of a more efficient review process, it is important to understand why and how and cite that as a model.

Audience: Regulators and Influencers – Rating: High

Objective E: Regulators will maintain market access for U.S. soy and avoid major trade disruptions.

Framework of Program Activities:

WHY? Why does this target audience need us and how can we address that need through the objective? Regulators do not have an understanding of the challenges farmers face in production and the need for new technologies to address various issues. Domestic regulators do not understand the global nature of the soybean industry and the impact a slow process has on the competitiveness of U.S. soy. Regulators in importing countries are even more removed from the need of farmers and the industry to adopt new technologies. As a result trade barriers or disruption to trade can emerge. Checkoff needs to educate the regulators on the resource concerns that can be addressed by adopting new technology as well as the impact on the competitiveness of U.S. soy. Conversely, regulators in importing countries need to understand the impact the slow approvals have on supply, price, quality, and food security. In the international marketplace, other trade barriers can emerge as a result of policy changes or sanitary and phytosanitary issues. In these cases, regulators need to understand the impact those issues can have on the market.

WHAT? What are the program activities to accomplish the objective? In order get regulators to understand the need for innovation and impact lengthy approvals has on the industry, we need to provide them the scientific information on the costs associated with slow approvals, the environmental impact of not having technology available, and the potential supply disruptions that can result from slow and asynchronous approvals. In addition to keep trade channels open we need to work to ensure U.S. soy remains in a favorable position to meet the needs of the international market.

Rating: None

Strategy: USB will identify methods of anticipating and addressing market access issues specific to influencers and regulators.
2017 Milestone: Global biotech acceptance will be baselined in major markets.

2021 Milestone: The U.S. will address market access and avoid major trade disruptions.

FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams: None

Broad Activities to Influence the Objective:

- Engagement with the international policy makers to ensure U.S. soy is not disadvantaged against the competitive
- Educate on the positive impact biotechnology has on the environment and, food safety and security
- Educate on SSAP and the U.S. Soy Advantage

Rationale: Action team members recognize global biotech acceptance will need to be baselined and there are many market access threats that need to be closely monitored. The team members think it is important to educate the audience on the U.S. soy story and SSAP.

Potential Partners: Trade Associations, USDA (FAS and others), ASA, Farmers, trait providers, grain trade, other like-minded partners, input companies

Rationale: Action team members recognize the need to form coalitions to address the challenges facing biotechnology acceptance. Again, USB’s analyst advised measurements, transparency and a growing track record of continuous improvement through the SSAP are essential to maintaining the supply chain’s trust in the U.S. soybean producers’ metrics.

Activities to Start Now to Meet 2021 Milestone: Trade Servicing and Marketing Activities, Engagement with Policy Makers (International)

Rationale: Action team members recognize the need to educate on biotechnology and sustainability.

Analyst Comments:

USB’s analyst advised measurements, transparency and a growing track record of continuous improvement through the SSAP are essential to maintaining the supply chain’s trust in the U.S. soybean producers’ metrics. It is also important to recognize SSAP is not a static document and will continuously be updated to address market questions.
Goal: Meal – Meal

**Audience:** Buyers (Feed mills) – **Rating:** High

**Objective:** Feed mills will increase their preference for U.S. soy as a cost effective, high quality feed ingredient because of its meal-composition traits and comparative value.

**Rating:** Most Important

**Strategy:** USB will increase demand for the superior nutritional bundle provided by U.S. soybean meal among livestock and aquaculture feeders.

2017 Milestone: Establish a baseline for the percent of domestic and international feed mill buyers who understand and act upon the value of U.S. soybean meal on the basis of digestible protein, amino acid profile and metabolizable energy.

2021 Milestone: Baseline +X percent of domestic and international feed mill buyers will understand and purchase U.S. soybean meal on the basis of digestible protein, amino acid profile and metabolizable energy.

**Broad Activities to Influence the Objective:**

- Industry Outreach

  **Rationale:**

  - Through working with the feed industry further through communication and education we are able to begin to or further differentiate U.S. soy and create more of a preference.
  - There are groups whose goals are currently self-serving and not helpful to U.S. farmers or U.S. soybeans.

**Potential Partners:**

- NOPA
- Producer Associations
- QSSB

  **Rationale:**

  - Engagement must improve.
  - Multiple segments of agriculture must see the advantage of change and respect who they meet with.

**Activities to Start Now to Meet 2021 Milestone:**

- Educational Materials
- Develop Common Messages

  **Rationale:**

  - Education is key
• “This will impact your P&L” has to be the subliminal message. It could get processors, seed techs, nutritionists, exporters and select farmers on the same sheet of music.

**Audience:** Feed Mill Nutritionists – **Rating:** High

**Objective:** Feed mill nutritionists will increase U.S. soybean meal inclusion rates in feed rations due to recognition of its superior constituent/component value.

**Rating:** None

**Strategy:** USB will increase demand for the superior nutritional bundle provided by U.S. soybean meal among livestock and aquaculture feeders.

- 2017 Milestone: Establish a baseline for the percent of domestic and international feed mill nutritionists who can define the value of U.S. soybean meal and who factor soy in their inclusion rates on the basis of digestible protein, amino acid profile and metabolizable energy.
- 2021 Milestone: Baseline +X percent of domestic and international feed mill nutritionists will understand and make recommendations for formulations based on the value of U.S. soybean meal on the basis of digestible protein, amino acid profile and metabolizable energy.

**Broad Activities to Influence the Objective:**
- Quality sample database
- Education on superior value of U.S. soybean
- Sharing data with educational institutions
- Demonstrating the value
- Improve buyer confidence in nutritionists

**Rationale:**
- We need to engage, communicate, educate and demonstrate the true value bundle of soybean meal, especially as we improve meal traits and protein.

**Potential Partners:**
- Nutritionists
- Feed Company Associations
- Poultry/Swine/Aqua Associations
- QSSB

**Rationale:**
- Animals (many fish and shrimp species, poultry and swine) are our most important customers and consumers of U.S. soy. The nutritionists at various feedmills are key contributors to animal growth and development, as well as key to the influence of purchasing decisions.
Activities to Start Now to Meet 2021 Milestone:

- Seminars and trade shows
- Web-based outreach/e-newsletters

Rationale:

- Education is key
- “This will impact your P&L” has to be the subliminal message. It could get processors, buyers and nutritionists on the same sheet of music.

Audience: End Users (Poultry, Swine and Aquaculture Producers) – Rating: Medium

Objective: End users will understand the benefits of U.S. soy protein for feeding poultry, swine and aquaculture species.

Rating: None

Strategy: USB will increase demand for the superior nutritional bundle provided by U.S. soybean meal among livestock and aquaculture feeders.

2017 Milestone: Establish a baseline for the percent of targeted domestic and international poultry, swine, and aquaculture producers who will seek out feed made with U.S. soy because of its consistency, superior amino-acid profile and uniformity.

2021 Milestone: Overall demand of U.S. soy among targeted domestic and international poultry, swine and aquaculture producers increases to XX.

Broad Activities to Influence the Objective:

- Share the story of U.S. soy
- Educational outreach, seminars
- Creating messaging (species specific if needed)
- Learning from them, asking questions

Rationale:

- We need to engage, communicate, educate and demonstrate the true value bundle of soybean meal, especially as we improve meal traits and protein.

Potential Partners:

- Livestock Producer Associations
- Producers
- Big Integrators
- Extension Groups
- QSSB’s

Rationale:
• Animals (many fish and shrimp species, poultry and swine) are our most important customers and consumers of U.S. soy. The nutritionists at various feedmills are key contributors to animal growth and development, as well as key to the influence of purchasing decisions.

Activities to Start Now to Meet 2021 Milestone:

Rationale:
None captured
Audience: End Users (Poultry, Swine and Aquaculture Producers) – Rating: Medium

Objective: End users will seek out feed made with U.S. soy because of its consistency, superior amino-acid profile and uniformity.

Rating: Least Important

Strategy: USB will increase demand for the superior nutritional bundle provided by U.S. soybean meal among livestock and aquaculture feeders.

2017 Milestone: Establish a baseline for the percent of targeted domestic and international poultry, swine, and aquaculture producers who will seek out feed made with U.S. soy because of its consistency, superior amino-acid profile and uniformity.

2021 Milestone: Overall demand of U.S. soy among targeted domestic and international poultry, swine and aquaculture producers increases to XX.

Broad Activities to Influence the Objective:

- Demonstrations, feeding trials
- Share the U.S. soy story
- Engage the producers in the process
- Continued Education, Seminars

Rationale:

- We need to engage, communicate, educate and demonstrate the true value of U.S. soybean feed ingredients.

Potential Partners:

- Producers Associations
- Producers
- Extension Groups
- QSSB’s

Rationale:

Activities to Start Now to Meet 2021 Milestone:

Rationale:
**Audience:** End Users (International Buyers of US Meat) – **Rating:** Medium

**Objective:** Foreign buyers of U.S. meat will increase demand for U.S. soybean meal by increasing their preference for U.S. origin meat and poultry.

**Rating:** None

**Strategy:** USB will help build demand among foreign importers, food manufacturers and food services for U.S. origin poultry and swine.

2017: The equivalent of **3.6 MMT** of soybean meal are exported in the form of poultry and swine products.

2021: The equivalent of **4.2 MMT** of soybean meal are exported in the form of poultry and swine products.

2017: The market share of US origin poultry and swine products reaches **36 percent** in targeted exported markets (including Mexico, Japan, South Korea, Middle East, Latin American, ASEAN and China).

2021: The market share of US origin poultry and swine products reaches **42 percent** in targeted exported markets (including Mexico, Japan, South Korea, Middle East, Latin American, ASEAN and China).

**Broad Activities to Influence the Objective:**

- Promotion to specific tastes
- Chef seminars
- Retail partnerships
- Trade promotion

**Rationale:**
- Animals, primarily poultry and swine, are our most important customers
- Meat and poultry consumption will rise faster overseas than in the U.S.

**Potential Partners:**

- USAPEEC
- USMEF
- International Food Service (KFC, McDonalds)
- Online Retailers
- QSSB’s

**Rationale:**
- Focus on "pull demand."

**Activities to Start Now to Meet 2021 Milestone:**

- Educational seminars and trade shows
- Newsletters and web-based outreach

**Rationale:**
• Tangible, prompt, focused success is the key to sustained viability and profit.
Goal: Industrial Uses– Meal - $2,029,302

Audience: Meal End Users – Rating: Medium

Objective A: Manufacturers of high value or high volume industrial products will be aware of the availability, proper use, benefits, and technical support for products derived from soybean meal and will be assured that U.S. soybean meal is readily available as a green raw material relative to other materials currently in use.

Framework of Program Activities:

What? What are the program activities to accomplish the objective?
In order to address the needs of manufacturers of industrial products, USB will jointly conduct research to develop technology to define the use of soybean meal and its components in their specific industrial applications leading to trial and adoption and ultimately commercialization. Reinforcing participation in events such as industry trade shows and technical conferences, hosting technical meetings to facilitate exchange of information and networking, and communications through one on one meetings, newsletters, and a website to explain the economic and environmental sustainability, availability and benefits broadly to industry is critical to program success.

Why? Why does this target audience need us and how can we address that need through the objective?
Manufacturers of high volume industrial products such as plastic composites, adhesives and paper desire feedstocks that are more affordable and sustainable than petroleum but are unfamiliar soybean meal’s potential as a sustainable raw material for making products. Petroleum prices are cyclical and it is important to conduct research now to address manufacturer/end user needs. Without awareness of soy’s potential benefits, manufacturers are unlikely to initiate research with soybean meal. Once technology is developed they must be made aware of that new technology and its benefits. Within manufacturers there will be honest resistance to a change to using soybean meal unless management is convinced that soybean meal is available in sufficient quantities and at a reasonable price to meet the business goals of the company.

Rating: Most Important

Strategy: USB will help create demand among manufacturers of high value or high volume industrial products for U.S. soybean meal as a readily available, green, raw material relative to other materials currently in use.

2017 Milestone: Soybean meal and/or component use in industrial applications reaches 105,000 tons (88,000 tons in 2014).

2021 Milestone: Increase soybean meal and/or component use in industrial applications from 88,000 tons in FY14 to 135,000 tons in FY21.
**Broad Activities to Influence the Objective:**
- Research
- Education, Communication (Industry Trade Shows)
- Leveraging Checkoff Dollars with Industry

**Rationale:**
- Research is needed to develop new products and processes to make them. Must investigate where new products can drive sufficient demand and where value to the end user will justify a conversion to soy.
- Research projects should transition to be fewer in number and larger in scope to maximize impact.
- Educating and transferring technology to industry leads to trial and adoption at both the products producer and user level.
- Experience has shown that companies will invest along with USB in new product development and when they do they are more likely to adopt a new product.

**Potential Partners:**
- Universities
- Industry
- Equipment Manufacturers
- Regulatory bodies
- Government Agencies
- QSSB

**Rationale:**
- Universities, industry and equipment manufacturers all participate and cooperate in research and commercialization activities.
- New partners must be recruited and convinced that soy products will work, are affordable and more sustainable than their petroleum competitors.
- Regulatory bodies and government agencies are often required to certify and approve use of new products and may also help to promote or purchase new products with environmental advantages.
- QSSB’s often share the cost of industrial research and are very active in promoting new industrial products in their states.

**Activities to Start Now to Meet 2021 Milestone:** All of the above listed activities.

**Rationale:**
- In order to gain acceptance for soy by manufacturers of high volume and high value products, they must be convinced that new soy products:
  - bring functional and environmental advantages,
  - that soy is readily available and supported by a successful and diverse industry,
  - and that soy is both economical and environmentally sustainable.
• Technical servicing and trade servicing in this area to identify targets, solve problems for industries and align sellers with buyers.

**Analyst Comments:**

• Market Analyst - Cheap petroleum prices will constrict opportunities in the nonfood area.
Goal: Food Exports– Meal $892,001

**Audience:** End Users – **Rating:** Medium

**Objective:** Food manufacturers in Taiwan and Indonesia will view the U.S. as the world's most reliable source of high quality soy protein and whole soybeans and will understand the benefits (economic, technical, and nutritional) of these products.

**Framework of Program Activities:**

**WHAT?** What are the program activities to accomplish the objective?

Because the U.S. has the largest market share of imported soybeans for food in these two countries, an important step to reaching our objective will be to expand our understanding of Taiwanese and Indonesian food companies’ current perceptions of our products and the value they place on each intrinsic and extrinsic U.S. soy attribute in order to leverage the appropriate attributes effectively. Another aspect is to continue to work with the most important food company targets and influential partners in each country in order to build stronger relationships with their key management via trade servicing. Connecting with key business insertion points throughout food companies -- from their buyers to their R&D department heads to their product and marketing executives, will be vital. This will give USB access to the business decision makers who place the highest value on food security and food safety issues -- attributes comprised in the U.S. soy advantage i.e, high quality, reliable supply, and sustainably produced, etc.

Educational and communication work will be needed in order to spell out the economic, nutritional, and technical advantages of using US Soy in a variety of food applications. Specifically in Indonesia, USB’s efforts will need to illustrate the important partner role U.S. soy plays in helping grow a more viable Indonesian soy food industry by, for example, cooperating with other entities in educating the Indonesian tempeh sector on phytosanitary/sanitary techniques. In Taiwan, USB’s efforts will also need to help coach the soy food industry in accurately representing the nutritional and economic value of US soy as a food ingredient to their government to help nullify food safety concerns and expanding food labeling regulations.

**WHY?** Why does this target audience need us and how can we address that need through the objective?

The middle class expansion in both Taiwan and Indonesia poses a new, long term demand growth cycle for those food manufacturers poised to take advantage of it. By educating, communicating and demonstrating the reliable and useful role US soy can play in their companies' current and new, innovative product offerings USB can coach Taiwan and Indonesian soy food product manufacturers into growing their businesses.

In addition, the Indonesian soy food industry has potential soybean supply and ingredient cost threats. Indonesia’s new government administration came into office in late 2014 and along with it a declaration to grow Indonesia’s soybean self-sufficiency by increasing their domestic production. To date there is no evidence of an increase in domestic production, however the potential threat to imports continues to linger. Ironically, soybean imports are a critical link to Indonesia’s overall food security because they represent 75% of the soybeans they consume. Moreover, very recent policy changes by the government could potentially subject imported soybeans, now privately purchased, to having to be imported exclusively through a state-owned entity, the BULOG. Imported corn is already under BULOG authority. Again, though no formal announcement on soybeans has been made by the government to date, the threat looms and
could make exporting soybeans into Indonesia potentially less appealing to U.S. exporters, due to a much more time-consuming and complex BULOG importation process. Ultimately these threats could equate to less reliable US soybean supply and higher soy ingredient costs to Indonesian food companies.

In Taiwan, evolving food labeling laws are challenging their food industry. USB can help coach the industry through appropriately representing their US soy based foods in the new environment, as well as educate the companies on how to accurately represent the safety of using US soy ingredients in their products to their end consumers and their government officials.

**Rating:** Most Important

**Strategy:** In the food sector, USB will build a preference with Indonesian and Taiwanese food manufacturers for U.S. soybeans while improving technical knowledge of how to use U.S. soy to maximize quality and production efficiencies.

- **2017 Milestone:** Benchmark how this target audience views U.S. soy and their perceptions of the benefits of using U.S. soy.
- **2021 Milestone:** X percent increase over the baseline in perceptions of the benefits of using U.S. soy.

**Broad Activities to Influence the Objective:**

Identify Taiwanese and Indonesian food companies’ perceptions of our products and the value they place on each intrinsic and extrinsic attribute.

Promotion and education on U.S. beans, quality, availability, sustainability with food manufacturers in order to spell out the economic advantages of relying upon US Soy, as well as engaging the companies’ key food ingredient decision makers in events that showcase US soy’s attributes in a variety of food applications. Those educational events could be workshops, seminars in country or the U.S., trade missions, and/or on-line training which also demonstrate the nutritional advantages associated with the use of US soy in innovative food uses. USB will need to illustrate the important partner role U.S. soy plays in helping grow a more viable Indonesian soy food industry by, for example, cooperating with other entities in educating the Indonesian tempeh sector on phytosanitary/sanitary techniques. In both countries, coach the soy food industry and utilize partners as a vehicle to accurately represent the nutritional and economic value of US soy as a food ingredient to their respective end consumers and governments to help ensure food regulations and policies that are positive for US soy.

**Rationale:**
We need to better understand key food manufacturers’ perceptions and focus on moving up the continuum; building higher confidence and reasons for the Taiwanese and Indonesian food manufacturers to make more frequent purchases of U.S. soy and support the continued use of US soy to their end consumers and governments. As the countries’ soy food industry expands, so does their need for US soybeans.

**Potential Partners:** Associations, allied industries, health care professionals, hospitals, food service, non-governmental organizations, QSSBs

- **Rationale:** Work with these groups as they have influence and can play a role in moving the food manufacturers and impacting government regulations and policies.
**Activities to Start Now to Meet 2021 Milestones:** Identify the food manufacturers’ perceptions of and value of US soy attributes; promote and educate the food industry on U.S. soy advantage; spell out the economic advantages of relying upon US Soy, as well as engaging the companies’ key food ingredient decision makers in events that showcase US soy’s attributes in a variety of food applications. Those educational events could be workshops, seminars in country or the U.S., trade missions, and/or on-line training which also demonstrate the nutritional advantages associated with the use of US soy in innovative food uses. USB will need to illustrate the important partner role U.S. soy plays in helping grow a more viable Indonesian soy food industry by, for example, cooperating with other entities in educating the Indonesian tempeh sector on phytosanitary/sanitary techniques. In both countries, coach the soy food industry and utilize partners as a vehicle to accurately represent the nutritional and economic value of US soy as a food ingredient to their respective governments to help ensure food regulations and policies that are positive for US soy.

**Rationale:** US soy’s market share depends upon the Taiwanese and Indonesian food manufacturing industry accurately valuing US soy in their companies’ balance sheets and vouching for the importance US soy plays in their countries’ food security picture to their respective governments.

**Analyst comments:** None provided.

**Audience:** End Users

**Rating:** Medium

**Objective:** Food manufacturers in Taiwan and Indonesia will seek U.S. soy exclusively for their food manufacturing needs.

**Framework of Program Activities:**

**WHAT? What are the program activities to accomplish the objective?**
Because the U.S. has the largest market share of imported soybeans for food in these two countries, the first step to reaching our objective will be to expand our understanding of Taiwanese and Indonesian food companies’ current perceptions of our products and the value they place on each intrinsic and extrinsic attribute.

USB needs to challenge the food companies’ upper management and research and development teams to invest in expanding their companies’ soy based product offerings beyond just traditional soy foods such as tofu or tempeh. Or consider alternative or new targets/customers, i.e., resorts, convenience stores, e-commerce retail, for their products and then coach them through the expansion with technical support.

Other program activities will include monitoring the demand trends and U.S. market shares for both GMO and non-GMO soybeans in the Indonesian food sector.

**WHY? Why does this target audience need us and how can we address that need through the objective?** Nothing builds customer loyalty (which is proof of preference) for a US soy food ingredient faster than a food manufacturer’s bottom line being positively impacted by their US soy purchase. The middle class expansion in both Taiwan and Indonesia poses a new,
long term demand growth cycle for those food manufacturers poised to take advantage of it. By educating, communicating and demonstrating the reliable and useful role U.S. soy can play in their companies’ current and new product offerings, USB can coach key Taiwan and Indonesian soy food product manufacturers into growing their businesses and in turn, result in lifting U.S. market shares in these two countries.

Rating: Least Important

Strategy: In the food sector, USB will build a preference with Indonesian and Taiwanese food manufacturers for U.S. soybeans while improving technical knowledge of how to use U.S. soy to maximize quality and production efficiencies.

2017 Milestone: Increase U.S. market share in Taiwan (FY14 baseline: 76 percent).
2021 Milestone: Boost market share in Taiwan to XX percent from XX.
2017 Milestone: Determine the cost benefit of programs to maintain market share in Indonesia and Taiwan.
2017 Milestone: Maintain at least 96 percent market share in Indonesian food sector.
2021 Milestone: Maintain at least 96 percent market share in Indonesia’s food sector.

Broad Activities to Influence the Objective:
USB should encourage food manufacturers to focus their expansion and the use of US soy in the food categories experiencing significant consumption growth patterns in their countries and respective regions -- such as soy milk based beverages, baked goods, or snacks, i.e., flavored tempeh chips. Tie in the US soy advantage attributes of overall quality, sustainability/SSAP, and year around availability. Rely upon trade missions, seminar/workshops, and/or on-line events to educate and raise awareness of the functional and other technical, and packaging aspects of utilizing US soy in new and/or innovative food forms.

Rationale: Important to maintain market share

Potential Partners: Educational systems, government influencers, QSSBs, and equipment/packaging companies

Rationale: Work with these groups as they have influence and can help prevent issues from minimizing U.S. soy opportunities in these countries’ food manufacturing sectors.

Activities to Start Now to Meet 2021 Milestones: Expose and educate important decision makers within key Taiwanese and Indonesian food companies to expanded profit opportunities in growing food sectors (i.e., snack foods, stage of life food lines (18 – 39 year old health eaters, fortified senior food items), soy foods/packaging designed specifically for distribution through, convenience stores or other unique retail outlets) and then coach them through the research and development of new soy food products aimed at those sectors. Encourage the food companies’ upper management and research and development teams to consider growing their companies by either expanding their soy based product offerings beyond just traditional soy foods such as tofu or tempeh or by considering alternative or new targets/customers, i.e., resorts, convenience stores, e-commerce retail, a different distribution route or exporting their products. And then help coach them through their expansion with technical support. Identify and then partner with those local/regional entities which will be most effective at parallel promoting our US soy advantage in the food technology arena.
Rationale: In order to build deep loyalty/preference for US soy, USB must be viewed as a dedicated coach to the food manufacturers with a sincere desire to see their organizations flourish through their adoption of applied technologies.

Analyst Comments: None provided.
Goal: Edible Oil– Oil  $6,409,945

Audience: Crushers - Rating: low

Objective A: Will be influenced by their buyers to develop a preference for U.S. soy.

Framework of Program Activities:

WHAT? What are the program activities to accomplish the objective: Note that the objective for this audience is that crushers “will be influenced by their buyers to develop a preference for soy”. Again, this recognizes the crusher’s limited role beyond the buyer’s preference. However, if the crusher understands the soy advantages, they can help influence a buyer’s preference, so education, communication and outreach to this target audience is important to achieving the objective. Since buyers are seeking oil with specific functionality traits or nutritional profile, it is important that crushers have some knowledge of the range of functionality of soy oil and the nutritional profile in order to meet buyer’s needs. Some of the key education points are 1) Commodity soy oil and high oleic soy oil can provide options for the buyers needs ranging from a liquid base for salad dressings to a hard stock for baking or frying and 2) reliability of supply and competitive price are other key reasons for utilizing soy.

As the buyer’s customers seek a solid fat replacement for partially hydrogenated oils (PHO) and palm oil, education around new processing techniques for soy oil, such as, interesterification is also important for this group to understand. Interesterified commodity soy oil and high oleic soy oil can be used in a variety of applications requiring a solid fat and can replace palm oil in some formulations, thus meeting the needs of the buyer or the buyer’s customer.

Major crushers will be identified and benchmark research and follow-up research will be conducted to quantify changes in their preference and use of U.S. soy.

WHY? Why does this target audience need us and how can we address that need through the objective: Crushers need to understand the advantages of U.S. soy for their customers, so that they maintain and enhance their investment in soy crushing capability. Since their customers dictate to the crusher their oil preferences, the crusher is not a highly ranked target audience for USB; however the crusher remains an important link in the soy value chain and crushers must have the confidence in customer demand and the soy oil market to justify their continued investment in soy. Soy advantages to be communicated to crushers include quality, availability, functionality and price competitiveness. These are soy advantages that crushers can help communicate to their buyers. Reliability of supply is a key message to be communicated to the crusher target audience, as production efficiency is key and is based on a plant having the raw material for processing.

Rating: Least Important

Strategy: Promote U.S. soybean oil’s quality, functionality and nutritional attributes, as well as alternative processing methods to end users.
2017 Milestone: Specific target audience of crushers identified.

2021 Milestone: [Blank]

2017 Milestone: Benchmark the percent of crushers who indicate a preference for U.S. soybean oil over other competing oilseeds.

2021 Milestone: Benchmark +X percent of targeted crushers will indicate a preference for U.S. soybean oil over other competing oilseeds.

2017 Milestone: [Blank]

2021 Milestone: X percent of targeted crushers will say they are now crushing more U.S. soybeans because of greater demand from their buyers for U.S. soybean oil.

**FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams:**

**Broad Activities to Influence the Objective:**
- Communications and outreach regarding functionality, nutrition, quality, supply, processing options, etc.

  **Rationale:** Crushers, though not a highly ranked target audience, need to understand the advantages of soy so they maintain their investment in soy and encourage buyers to use soy oil.

**Potential Partners:** QSSBs, industry partners on QUALISOY (soy value chain board led by USB, but including members from across the Value Chain), NOPA

  **Rationale:** Industry organizations championing our messages can help add credibility to what we are trying to accomplish.

**Activities to Start Now to Meet 2021 Milestone:**
- Communications and outreach regarding functionality, nutrition, quality, supply, processing options, etc.

  **Rationale:** Differentiating US soybean oil from competitors is an ongoing conversation that needs to start now and continue to evolve. Changes don’t happen in a year, they take time and sharing information will help move preference to US soy.

**Analyst comments:**
- The crushing industry is cyclical, and we appear to be heading into a 3 – 5 year down trend on profitability.
- Oil value share will remain between 33 – 37 percent of the meal / oil relationship.
• Processors will scale back their crushing assets in order to keep meal margins around a $1.00 per bushel, slowing down the availability of oil.
• Develop a story line demonstrating the value proposition for U.S. soybean oil that can be adapted for each point on the value chain, both for domestic and export markets.
Audience: Buyers (Oil Refiners) - Rating: Medium

Objective B: Buyers will be aware of the latest developments and technology releases of new and improved soy products and will make purchase decisions based on the advantages of U.S. soybean oil.

Framework of Program Activities:

WHAT? What are the program activities to accomplish the objective: Three distinct efforts need to take place with this audience. 1) Education on the functionality benefits of high oleic soy oil, interesterified soy oils and fully hydrogenated soy oils continues to be necessary with this target audience, so they understand the benefits to their customers (end-users). Benchmark and follow-up research will be conducted to determine the refiners ability to accurately identify the advantages of U.S. soy including functionality ranges, reliability of supply and nutritional benefits.

2) The Checkoff can work with the refiners to gain approval and use of alternative labeling nomenclature for interesterified and fully hydrogenated soy oil. USB and/or QUALISOY can coordinate industry efforts to identify acceptable alternative names to “interesterified” and “fully hydrogenated”. (Unlike partial hydrogenation, fully hydrogenation of soy oil does not create trans fats) and QUALISOY can provide labeling guidance to the buyer’s customers, ie. end-users. Additional work my need to be conducted through QUALISOY to determine gaps in the functionality testing of High Oleic Soy Oil in coordination with industry partners in the processing/refining industry. Market research needs to be conducted that tests preferences for alternative names to interesterified and fully hydrogenated. If a suitable alternative name is identified, work must be done with industry partners and the FDA to gain approval for label use.

3) It is necessary to develop a storyline demonstrating the value proposition for U.S. soy oil, including sustainability, that can be adapted for each point on the value chain, both domestic and export markets. QUALISOY is uniquely suited to this storyline development with its representatives from the entire value-chain from farmers to end-users.

WHY? Why does this target audience need us and how can we address that need through the objective: Most Buyers (Oil Refiners) are aware of high oleic soybean oil and the functionality benefits of the interesterification and full hydrogenation processes. However, barriers exist to acceptance and adoption by their customers due to the chemical sounding names (interesterified soy oil and fully hydrogenated soy oil) required for labeling purposes. With the movement toward “clean” labels in the food marketplace, this labeling designation is even more critical than in the past.

Rating: None

Strategy: Promote U.S. soybean oil's quality, functionality and nutritional attributes, as well as alternative processing methods to end users.
2017 Milestone: Benchmark the percentage of key oil refiners that can accurately identify the advantages of U.S. soybean oil.

2021 Milestone: [Blank]

2017 Milestone: Benchmark the percentage of targeted refiners that will indicate a preference for U.S. soybean oil over other competing oils.

2021 Milestone: The majority of targeted refiners will indicate a preference for U.S. soybean oil.

2017 Milestone: Benchmark the percentage of domestic integrated crusher/refiners that have an active high oleic soybean oil program.

2021 Milestone: The majority of domestic integrated crusher/refiners will have an active high oleic soybean oil program.

2017 Milestone: Benchmark the capacity to interesterify soybean oil amongst the two entities that currently have the production ability.

2021 Milestone: The three major refiners will be using interesterification to process a combined two billion pounds of soybean oil.

FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams:

Broad Activities to Influence the Objective:

- Exploration of other names for interesterification, full-hydrogenation and potentially high oleic soybean oil;
- Potential for research on functionality of these oil offerings
- Outreach to buyers on quality, nutrition, functionality.

Rationale: The future of soybean oil demand hinges on broad acceptance of high oleic and interesterified soy.

Potential Partners: the industry members on QUALISOY, QSSBs

Rationale: The checkoff helps fund activities for QUALISOY – an industry-wide board. However, the individual industry members (especially Stratas, ADM, Bunge, Perdue) provide valuable insights to learn from.

Activities to Start Now to Meet 2021 Milestone:

- Exploration of other names for interesterification, full-hydrogenation and potentially high oleic soybean oil;
- Potential for research on functionality of these oil offerings
- Outreach to buyers on quality, nutrition, functionality.

**Rationale:** These efforts will take time. Decisions do not get made overnight and need a continued effort to establish and maintain a position in the marketplace.

**Analyst comments:**
- Develop a story line demonstrating the value proposition for U.S. soybean oil that can be adapted for each point on the value chain, both for domestic and export markets.
- Work with industry to identify new names for full hydrogenation and interesterification to be presented to FDA by years’ end.
- Identify key food service distribution companies who will support the rollout of HOS as a premium frying oil in 2017.
- Determine how the farmers want to demonstrate their traceability platforms and decide what organization is the best vehicle to drive that discussion throughout the chain with specific understanding of end use customer requirements.
**Audience:** End Users (High Oleic) - **Rating:** High

**Objective C:** The food industry will seek high oleic soybean oil because of its functionality, high stability and nutrient profile.

**Framework of Program Activities:**

**WHAT? What are the program activities to accomplish the objective:** Education on the functionality and nutritional benefits of high oleic soy oil will drive trial and demand among end users. As end-users demand high oleic soy oil from their suppliers, their suppliers (refiners) will be compelled to seek more high oleic oil, which will in turn require the crushers to crush more high oleic soybeans and farmers to grow more. The goal is 4.5 billion pounds of high oleic soy oil will be sold into the marketplace in 2021 with nearly 6 billion pounds in the edible oil marketplace by 2023.

In 2017, the focus will be gaining a major wholesale distributor to commit to high oleic soy oil, but a significant quantity of oil will be required to gain such a commitment. Several major wholesalers will be identified as possible targets.

Additional case studies will be developed to provide testimonial support for gaining trial of high oleic soy oil with food service and food manufacturing companies.

Communication on the health research and nutritional benefits of high oleic soy oil will help pave the way for adoption of high oleic soy and assure there are no barriers to limit adoption. USB, through work with QUALISOY, provides a third party, credible voice for the industry in communicating the benefits of high oleic soybean oil.

**WHY? Why does this target audience need us and how can we address that need through the objective:** Food manufacturers and Food Service operations are the primary end users of soy oil. With the discontinued use of Partially Hydrogenated Oils (PHO), these end users want a soy-based oil that meets their deep frying and baking functionality needs and provides a better nutritional profile than widely-used competitive oils. High oleic soy oil can meet these end-user needs but availability of the oil limits market adoption. All supplies of high oleic soy oil produced in 2016 have been sold. Demand drives supply as end-users communicate to refiners their desire to use high oleic soy oil. This forces refiners to contract for more acreage. USB has played a key role in creating demand among end-users through communication of the benefits of high oleic soy (functionaliy, reliability of supply and nutritional profile).

**Rating: Most Important**

**Strategy:** Promote U.S. soybean oil’s quality, functionality and nutritional attributes, as well as alternative processing methods to end users.

**2017 Milestone:** Secure food industry demand for the majority of the high oleic soybean oil produced.

**2021 Milestone:** Secure food industry demand for the majority of the high oleic soybean oil produced, resulting in sales of 4.5 billion lbs of HOSO.
2017 Milestone: Targeted food companies for high oleic have been identified.

2021 Milestone: [Blank]

2017 Milestone: Establish a baseline for the extent to which functional users prefer HOSO over other options.

2021 Milestone: The majority of targeted functional oil users will prefer HOSO as a significant percentage of the blended end product.

FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams:

**Broad Activities to Influence the Objective:**

- Food industry outreach, including wholesale distribution channels
- Case studies to provide testimonials
- Health outreach to share nutritional benefits

  **Rationale:** It is important to continue to showcase the functionality benefits of high oleic soy and find ways to demonstrate its benefits.

**Potential Partners:** Health professionals, retailers, restaurants, industry, processors, universities, QSSBs, industry partners who serve on QUALISOY.

  **Rationale:** End users can be influenced with information from trusted sources. There are opportunities to partner with many of those organizations.

**Activities to Start Now to Meet 2021 Milestone:**

- Food industry outreach, including wholesale distribution channels
- Case studies to provide testimonials
- Health outreach to share nutritional benefits

  **Rationale:** These efforts will be continuing, consistent messaging at an early stage in product introduction is crucial.

**Analyst comments:**

- Develop a story line demonstrating the value proposition for U.S. soybean oil that can be adapted for each point on the value chain, both for domestic and export markets.
- Work with industry to identify new names for full hydrogenation and interesterification to be presented to FDA by years’ end.
- Identify key food service distribution companies who will support the rollout of HOS as a premium frying oil in 2017.
**Audience:** End Users (Conventional)  - **Rating:** High

**Objective D:** The food industry will seek U.S. grown soybean oil.

**Framework of Program Activities:**

**WHAT? What are the program activities to accomplish the objective:** Create new opportunities to communicate the health benefits of commodity soy oil both domestically and internationally. Define the initial steps to be taken to establish a FDA heart health claim for soybean oil, while defining the role of USB to achieve the claim. Compile the body of evidence that would be instrumental in achieving a health claim and identify any gaps. Demonstrate the advantages of positioning soy oil, as U.S Grown to domestic and international end-users (food service, food manufacturers and retailers). Globally, defend the perception of soy oil as healthy from attacks by competitors and anti-soy groups. Communicate the quality reputation of U.S. soy oil versus South American soy oil in international markets. Work with the industry to identify new names for fully hydrogenated and interesterified soy oil. Benchmark and follow-up research will be conducted to determine targeted food companies and retailers perceptions of soy oil’s benefits versus other oils.

**WHY? Why does this target audience need us and how can we address that need through the objective:** Commodity soybean oil remains the most widely used oil in the U.S. and one of the most commonly used oils in the world. Commodity soybean oil will remain a viable option for many food industry customers that require a liquid vegetable oil (e.g. cooking oil and salad dressings). Opportunities exist to increase demand for US commodity soy oil driven by its perceived healthfulness, abundant supply, price, functionality and consistent quality. With the locally grown movement in the food industry, an opportunity exists in the U.S. to position soy oil as U.S. grown and supplant use of imported oils. Meanwhile, internationally, a U.S grown campaign can take advantage of the superior quality of U.S. produced soy oil.

**Rating:** None

**Strategy:** Promote U.S. soybean oil’s quality, functionality and nutritional attributes, as well as alternative processing methods to end users.

2017 Milestone: Benchmark targeted food companies that would believe that soybean oil has improved qualities compared to the majority of other edible oils.

2021 Milestone: Benchmark +X percent of targeted food companies will agree that soybean oil has improved qualities compared to most edible oils.

2017 Milestone: Benchmark the percentage of retailers that would change labels from “vegetable oil” to “soybean oil.”

2021 Milestone: Benchmark +X percent of retail oil that have changed label from “vegetable oil” to “soybean oil.”
2017 Milestone: Define the list of targeted food companies for conventional oil.

2021 Milestone: [Blank]

2017 Milestone: Establish a benchmark for the preference of U.S.-grown conventional soybean oil over competing oils among targeted food companies for applicable edible oil applications.

2021 Milestone: Benchmark +X percent targeted food companies will seek U.S. grown conventional soybean oil for most edible oil applications.

2017 Milestone: [blank]

2021 Milestone: Increase consumption of U.S. edible soybean oil domestically from 12.5 billion to 13.75.

2021 Milestone: Increase consumption of U.S. edible soybean oil internationally from XX to XX.

2017 Milestone: Benchmark the percentage of exporters that would label domestically produced soybean oil “U.S.-grown.”

2021 Milestone: Benchmark +X percent the amount of exported U.S. soybean oil that is labeled U.S.-grown.

FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams:

Broad Activities to Influence the Objective:

- Global food industry outreach;
- Promote labeling distinctions (soy oil, US-Grown);
- Education on superior quality, functionality
- Research and introduction of new names for interesterification.

Rationale: Calling out soybean oil versus vegetable oil is a way to capitalize on the perceived and known benefits of US soybean oil. Global end users share many of the same reasons that domestic end users are interested in commodity soybean oil.

Potential Partners: Retailers; processors; food companies; government; universities; QSSBs, industry partners of QUALISOY.
**Rationale:** Many of these groups are already talking to end-users and their involvement can help extend USB’s reach.

**Activities to Start Now to Meet 2021 Milestone:**

- Global food industry outreach;
- Promote labeling distinctions (soy oil, US-Grown);
- Education on superior quality, functionality
- Define current body of knowledge and steps to implement a health claim for commodity soybean oil

**Rationale:** Proactively addressing issues now will help reach milestones in 2021. Changes within an organization can take time and have many different levels of approval.

**Analyst comments:**

- Construct and begin implementation for a Qualified Health Claim for commodity soybean oil. The process will take approximately 9 months from beginning to presentation to FDA. Estimated total cost $150K
- Develop a story line demonstrating the value proposition for U.S. soybean oil that can be adapted for each point on the value chain, both for domestic and export markets.
- Work with industry to identify new names for full hydrogenation and interesterification to be presented to FDA by years’ end.
Goal: Industrial Uses– Oil - $6,242,521

**Audience:** Other Industrial End Users – **Rating:** High

**Objective A:** Manufacturers requiring highly stable oil under high heat conditions will consider and use high oleic oil.

**Framework of Program Activities:**

**What? What are the program activities to accomplish the objective?**

In order to address the needs of manufacturers of industrial products, USB will jointly conduct research to develop technology to define the use of high oleic soybean oil and its derivatives in their specific industrial applications leading to trial and adoption and ultimately commercialization. Reinforcing participation in events such as industry trade shows and technical conferences, hosting technical meetings to facilitate exchange of information and networking, and communications through one-on-one meetings, newsletters, and a website to explain the economic and environmental sustainability, availability and benefits broadly to industry is critical to program success.

**Why? Why does this target audience need us and how can we address that need through the objective?**

Manufacturers of high volume industrial products such as lubricants, plasticizers and nylon desire feedstocks that are more affordable and sustainable than petroleum but are unfamiliar with the potential high oleic soybean oil has as a raw material for making products. Petroleum prices are cyclical and it is important to conduct research now to address manufacturer/end user needs. Without awareness of high oleic soybean oil’s benefits, manufacturers are unlikely to initiate research. Once technology is developed they must be made aware of that new technology and its benefits. Within manufacturers there will be honest resistance to a change to using high oleic soybean oil unless management is convinced that high oleic soybean oil is available in sufficient quantities and at a reasonable price to meet the business goals of the company. The additional volume generated by industrial uses due to high oleic soybean oil functionality benefits farmers directly in that it reduces oil inventories below levels that otherwise would occur resulting in higher prices/value for soybean oil. This translates to increasing the base price of U.S. soy which every farmer benefits from regardless of whether he or she grows high oleic soybeans.

**Rating:** None

**Strategy:** Promote the U.S. as a consistent and abundant supplier of high oleic soybean oil.

2017 Milestone: Opportunities are identified, segmented and prioritized.

2021 Milestone: Of that 2.2 billion pounds an estimated one billion pounds of U.S. HOSO will be used for industrial applications.
Broad Activities to Influence the Objective:
- Research
- Education, Communication (Industry Trade Shows)
- Leveraging Checkoff Dollars with Industry

Rationale:
- Research is needed to develop new products and processes to make them. Must investigate where new products can drive sufficient demand and where value to the end user will justify a conversion to soy.
- Research projects should be fewer in number and larger in scope to maximize impact.
- Educating and transferring technology to industry leads to trial and adoption at both the products producer and user level.
- Experience has shown that companies will invest along with USB in new product development and when they do they are more likely to adopt a new product.

Potential Partners:
- Universities
- Industry
- Equipment Manufacturers
- Government Agencies
- Regulatory bodies
- Seed Companies
- QSSBs

Rationale:
- Universities, industry and equipment manufacturers all participate and cooperate in research and commercialization activities.
- New partners must be recruited and convinced that soy products will work, are affordable and more sustainable than their petroleum competitors.
- Regulatory bodies and government agencies are often required to certify and approve use of new products and may also help to promote or purchase new products with environmental advantages.
- QSSB’s often share the cost of industrial research and are very active in promoting new industrial products in their states.

Activities to Start Now to Meet 2021 Milestone: All of the above listed activities.

Rationale:
- Demand Action Team - Priority now is commodity soybean oil. Eventually will switch to high oleic.
- Oil Target Area - Higher investment emphasis should be put on high oleic than commodity because high value oil is showing superior functionality.
• Refer to meta-analysis of best opportunities (High Oleic Soybean Oil Demand and Barrier Awareness by Context) for additional direction.

• Technical servicing and trade servicing in this area to identify targets, solve problems for industries and align sellers with buyers.

• In order to gain acceptance for soy by manufacturers of high volume and high value products, they must be convinced that new soy products:
  o bring functional and environmental advantages,
  o that soy is readily available and supported by a successful and diverse industry,
  o and that soy is both economical and environmentally sustainable.

Analyst Comments:

• Cheap petroleum prices will constrict opportunities in the nonfood area.

• Assess and qualify opportunities in the nonfood sector specific to high oleic soybean oil. We need to understand what segments will benefit from the extended stability and which are large enough to invest in going forward. Ideally, that segmentation is completed in 2016 and potential partners are identified.

• It’s key for the industry to manage and protect the core commodity inputs, and biofuels will continue to play a key role in soybean oil use. That foundation helps us establish a baseline demand from which we can identify and grow more profitable subsegments of non-food alternative markets for both high oleic and commodity soybean oil.

Audience: Other Industrial End Users – Rating: High

Objective B: Manufacturers of plastics, paints/coatings, lubricants, rubber, etc. will view soybean oil as a viable alternative to traditional petrochemicals because of soy’s performance, cost and sustainability story.

Framework of Program Activities:

What? What are the program activities to accomplish the objective?
In order to address the needs of manufacturers of industrial products, USB will jointly conduct research to develop technology to define the use of commodity soybean oil and its derivatives in their specific industrial applications leading to trial and adoption and ultimately commercialization. Research which expands or grows soy use in established markets or builds on established concepts and technologies should be a primary focus. Reinforcing participation in events such as industry trade shows and technical conferences, hosting technical meetings to facilitate exchange of information and networking, and communications through one-on-one meetings, newsletters, and a website to explain the economic and environmental sustainability, availability and benefits broadly to industry is critical to program success.
Why? Why does this target audience need us and how can we address that need through the objective?
Manufacturers of high volume industrial products are such as plastics, coatings/inks and rubber desire feedstocks that are more affordable and sustainable than petroleum but are unfamiliar with the potential commodity soybean oil has as a raw material for making products. Petroleum prices are cyclical and it is important to conduct research now to address manufacturer/end user needs. Without awareness of commodity soybean oil’s benefits, manufacturers are unlikely to initiate research. Once technology is developed they must be made aware of that new technology and its benefits. Within manufacturers there will be honest resistance to a change to using soybean oil unless management is convinced that soybean oil is available in sufficient quantities and at a reasonable price to meet the business goals of the company.

Rating: None

Strategy: Research and promote new industrial uses in specific market areas where demand potential has been quantified, such as plastics, paints/coatings, lubricants and rubber.

2017 Milestone: Industrial application utilization of U.S. soybean oil reaches 1.8 billion pounds.

2021 Milestone: Increase industrial utilization of U.S. soybean oil for non-biodiesel applications from almost 1.5 billion pounds in FY14 to 2.2 billion pounds in FY21.

Broad Activities to Influence the Objective:
- Research
- Education, Communication (Industry Trade Shows)
- Leveraging Checkoff Dollars with Industry

Rationale:
- Research is needed to develop new products and processes to make them. Must investigate where new products can drive sufficient demand and where value to the end user will justify a conversion to soy.

- Research projects should transition to be fewer in number and larger in scope to maximize impact.

- Educating and transferring technology to industry leads to trial and adoption at both the products producer and user level.

- Experience has shown that companies will invest along with USB in new product development and when they do they are more likely to adopt a new product.
Potential Partners:
- Universities
- Industry
- Equipment Manufacturers
- Government Agencies
- Regulatory bodies
- Seed Companies
- QSSBs

Rationale:
- Universities, industry and equipment manufacturers all participate and cooperate in research and commercialization activities.
- New partners must be recruited and convinced that soy products will work, are affordable and more sustainable than their petroleum competitors.
- Regulatory bodies and government agencies are often required to certify and approve use of new products and may also help to promote or purchase new products with environmental advantages.
- QSSB's often share the cost of industrial research and are very active in promoting new industrial products in their states.

Activities to Start Now to Meet 2021 Milestone: All of the above listed activities.

Rationale:
- Oil Target Area - Higher investment emphasis should be put on high oleic than commodity.
- Demand Action Team - Priority now is commodity soybean oil. Eventually will switch to high oleic.
- Concentrate on opportunities rated as B’s (projects which expand or grow soy use in established markets or build on established concepts and technologies) for development
- In order to gain acceptance for soy by manufacturers of high volume and high value products, they must be convinced that new soy products:
  o bring functional and environmental advantages,
  o that soy is readily available and supported by a successful and diverse industry,
  o and that soy is both economical and environmentally sustainable.
Analyst Comments:

- Cheap petroleum prices will constrict opportunities in the nonfood area.
- It’s key for the industry to manage and protect the core commodity inputs and biofuels will continue to play a key role in soybean oil use. That foundation helps us establish a baseline demand from which we can identify and grow more profitable subsegments of non-food alternative markets for both high oleic and commodity soybean oil.

Audience: Biodiesel/Bioheat End Users – Rating: High

Objective C: The U.S. soy industry will maintain the current market share of the biofuels sector.

What: What are the program activities to accomplish the objective?
USB will support research necessary for such issues as maintaining and developing new ASTM industry standards as needed for biodiesel and engine testing to meet OEM requirements and will support industry efforts to communicate results to end users such as petroleum companies, fleet managers, engine and vehicle manufacturers, government agencies, and soybean checkoff organizations.

Why: Why does this target audience need us and how can we address that need through the objective?
To ensure the U.S. soy industry maintains the current market share of the biofuels sector utilizing 4.3 billion pounds of soy oil in MY 13/14 end users such as petroleum companies, fleet managers, engine and vehicle manufacturers, government agencies, and soybean checkoff organizations need to be aware of the latest technical, economic and environmental information related to biodiesel in order to counter myths being communicated by the petroleum industry and create a more positive business climate which will lead to increased production and utilization of biodiesel. Coordinated and uniform messaging is important especially in cities such as New York which has high potential for biodiesel utilization.

Rating: Most Important

Strategy: Promote biodiesel as a transportation fuel and heating oil option.

2017 Milestone: Biodiesel (not including Bioheat) utilization reaches 4.9 billion pounds of soybean oil.

2021 Milestone: Increase biodiesel utilization of U.S. soybean oil for engines from 4.9 billion pounds in FY14 to 5.5 billion pounds in FY21.
**Broad Activities to Influence the Objective:**

- Work with major cities
- Mechanic training
- Research
- Communication efforts, Education

**Rationale:**

- Cities like New York City have potential for highest use of biodiesel /bioheat.
- Mechanics training helps to build front line support for biodiesel/bioheat with the general public.
- Research helps ensure a thriving industry through the removal of barriers, overcoming obstacles and answering questions.
- Communication, education and coordination among very diverse stakeholders helps build a strong industry.

**Potential Partners:**

- Major cities
- Government agencies
- Industry
- OEMs
- Stakeholders
- QSSBs

**Rationale:**

- Cities like New York City have potential for highest use of biodiesel /bioheat and are looking for ways to lower their carbon footprint.
- The Federal Government purchases over $500 billion in goods and services each year and may also act as a “third party” validator of industrial products like biodiesel and bioheat.
- Partnering with key stakeholders like the biodiesel industry, OEMs, and QSSBs keeps the industry moving in a common direction while maintaining or increasing the utilization of biodiesel.

**Activities to Start Now to Meet 2021 Milestone:**

**Rationale:** A coordinated and uniform source of biodiesel information for biodiesel producers, feedstock providers, petroleum companies, fleet managers, pipeline companies, engine and vehicle manufacturers, government agencies, soybean checkoff organizations are critical to creating a better understanding of biodiesel and build its positive image as America’s only advanced biofuel.

**Audience:** Biodiesel/Bioheat End Users – **Rating: High**
Objective D: OEM’s will be aware of the low carbon footprint of biodiesel made with U.S. soybean oil, and will both understand and be confident in biodiesel’s quality and performance as a fuel for combustion engines

What: What are the program activities to accomplish the objective?
USB will provide resources to work cooperatively with the OEM dealer training centers and directly with the downstream dealers, and indirectly with their customers and fleets, to ensure they are properly informed about ASTM standards, the BQ-9000 quality program, their OEM’s position on biodiesel blends, and the facts regarding biodiesel blend usage in their engines and vehicles. Dealer education is a key component of biodiesel commercialization activities that will assist in realizing increased biodiesel volumes.

Why: Why does this target audience need us and how can we address that need through the objective?
These downstream dealers represent the front line in the biodiesel education battle, as they communicate directly to customers, fleets and other dealers much more than representatives from the OEM headquarters do. This provides us with the opportunity to leverage the dealers’ access to the end-users to communicate positive biodiesel messages. If a customer or fleet asks their dealer, ‘Can I run B20 in my vehicle’, and their dealer tells them ‘no’ or says disparaging things about biodiesel, all the years of effort and funding to work with OEM Headquarters to secure B20 approvals go for nothing.

Rating: Least Important

Strategy: Promote biodiesel as a transportation fuel and heating oil option.

2017 Milestone: Biodiesel (not including Bioheat) utilization reaches 4.9 billion pounds of soybean oil.

2021 Milestone: Increase biodiesel utilization of U.S. soybean oil for engines from 4.9 billion pounds in FY14 to 5.5 billion pounds in FY21.

Broad Activities to Influence the Objective:

- Outreach as it relates to Advanced Biofuel
- Communication, Education to OEM’s on the environmental benefits of biodiesel
- Research such as engine testing and economic modeling

Rationale:
- Outreach is essential in order to educate decisions makers that the EPA recognizes biodiesel as an advanced biofuel which opens an additional 4 billion gallon market.
- Research, education and communication are essential in making the OEM’s aware of the low carbon footprint of biodiesel made with U.S. soybean oil. This work helps ensure a thriving industry through the removal of barriers, and by fostering research, education, communication and coordination among a group of very diverse stakeholders.

Potential Partners:
- OEMs
- Clean cities
- Government agencies
- Industry
- OEMs
- Supply chain
- QSSBs

Rationale:
- Partnering with these key stakeholders keeps the industry moving in a common direction while maintaining or increasing the utilization of biodiesel.

Activities to Start Now to Meet 2021 Milestone:

Rationale:
- Need to work cooperatively with the OEM dealer training centers and directly with the downstream dealers, and indirectly with their customers and fleets, to ensure they are properly informed about ASTM standards, the BQ-9000 quality program, their OEM’s position on biodiesel blends, and the facts regarding biodiesel blend usage in their engines and vehicles.

Audience: Biodiesel/Bioheat End Users – Rating: High

Objective E: The Bioheat industry will consider soybean oil as the top choice for heating oil.

What: What are the program activities to accomplish the objective?
USB will support efforts to provide cooperative technical research and field documentation on higher blends in heating oil needed for the ASTM approval of higher blends of biodiesel in heating oil in cooperation with the National Oilheat Research Alliance (NORA). While the Bioheat market developed slower than use of biodiesel in on/off road fuels (the B6-B20 ASTM specifications for on/off road fuels were approved in 2008), the market and driving force for Bioheat has changed more dramatically—for the positive—than that for on/off road fuels. Results will be communicated to distributors of bioheat and other Bioheat stakeholders.

Why: Why does this target audience need us and how can we address that need through the objective?
In order to ensure that soybean oil is considered the top choice for the heating oil the Biodiesel Industry must be confident that it meets the technical, economic and environmental requirements. Several factors contribute to the drive for higher blends in heating oil, including policy initiatives in the Northeast encouraging an 80% carbon reduction in heating buildings by 2050, the advent of indoor heating oil tanks that can easily fit down a stairwell, and the lower overall technology
level of open air burners used in heating oil. New York City and the state of New York are very supportive of moving towards higher blends and could set the trend for other Northeastern cities.

**Rating:** None

**Strategy:** Promote biodiesel as a transportation fuel and heating oil option.

2017 Milestone: Bioheat utilization reaches 1.05 billion pounds of soybean oil.  

**Broad Activities to Influence the Objective:**
- Advertising and Communications
- Economic Research
- Promote green benefits

**Rationale:**
- Advertising and Communications activities are essential in maintaining, growing and building confidence that soybean oil is the best feedstock choice in the production of bioheat.  
- Economic Research will be used to show the benefits of supporting, producing and using bioheat.  
- Promoting green benefits such as the great soybean life cycle will help solidify soybean oil as the top choice for heating oil.

**Potential Partners:**
- Government agencies  
- Supply chain  
- OEMs  
- Public agencies  
- QSSBs

**Rationale:**
- Government and public agencies provide research partnerships opportunities as well as represent potential large users of bioheat.  
- OEM’s must be confident in the quality and availability of biodiesel/bioheat.  
- The supply chain must understand all of the technical aspects of biodiesel/bioheat storage, handling and shipping in order to maintain and deliver the highest quality product.  
- Partnering with these key stakeholders keeps the industry moving in a common direction while maintaining or increasing the utilization of biodiesel.

**Activities to Start Now to Meet 2021 Milestone:**

**Rationale:**
Need to engage heating oil industry leaders that represent fuel dealers that ultimately benefit by being provide information about the benefits of bioheat.
Goal: Infrastructure – Sustainability $3,055,207

Audience: Regulators and Influencers – Rating: High

Objective A: Will understand the competitive advantage that the transportation infrastructure provides the United States and will understand the investments being made by both competitors and end users of U.S. ag and what that means to the U.S.

Framework of Program Activities:

1. **WHAT?** What are the program activities to accomplish the objective? For regulators and influencers to understand the competitive advantage our transportation infrastructure system offers, the checkoff needs to be a leader in creating consistent and cohesive messaging about the U.S. Soy Advantage that will evolve with the LRSP. Right now we attribute that advantage to superior composition, a reliable supply, value and sustainability. Regulators and influencers understand decaying infrastructure systems cost the U.S. economy $129 billion annually and realize the significant investments needed to improve those systems. What they may not realize is what that costs the ag sector – about $145.9 million annually in lost efficiencies and delays. If this audience could partner with the soybean checkoff to better understand the U.S. Soy Advantage and how we are able to reliably move soybeans from the field to domestic end users or to the coasts for export markets because of our transportation infrastructure system, the entire value chain would benefit. Obviously soybeans are not the only commodity moved on our systems, but the checkoff is uniquely positioned to be a leader and partner in communicating the U.S. Soy Advantage to this audience and in turn, they will then be willing to support future investments in our transportation infrastructure.

2. **WHY?** Why does this target audience need us and how can we address that need through the objective? The U.S. soy industry continues to expand based on global demand from end users who recognize the value of the U.S. transportation system, however our competitors are catching up with us. We must communicate the competitive advantage of our transportation infrastructure system and make certain regulators and influencers understand the investments needed to improve it to maintain that advantage. But, they lack a coordinated message around how our infrastructure system attributes to the U.S. Soy Advantage. The checkoff can take a lead in developing that message and bring all parties together – including other commodity groups – to build momentum on the urgency of the issue as it relates to agriculture. Currently, this audience lacks an understanding of how delayed infrastructure improvements impact the soybean industry, therefore the checkoff has a communications opportunity with this objective.

Rating: Most Important

Strategy: Communicate the competitive advantage that the transportation infrastructure provides the U.S. and document the investments being made by
both competitors and end users of U.S. ag and what that means to the U.S. soy industry.

2017 Milestone: Increase number of influencers who understand the importance of transportation infrastructure to the U.S. soy competitive advantage.

2017 Milestone: Establish a coordinated message around the importance of infrastructure improvements as it relates to improving our global competitiveness.

2021 Milestone: Key influencers actively support funding of the U.S. transportation infrastructure.

FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams: None

Broad Activities to Influence the Objective:

- Engagement activities, such as outreach meetings
- Define our “competitive advantage” with updated information/market intelligence
- Educate influencers on the soybean industry’s perspective, the farmer perspective in particular

Rationale: The Action Team discussed how in order to get regulators and influencers to recognize the importance of transportation infrastructure, particularly to the ag industry, we need to develop messages about the U.S. Soy Advantage and then deploy an education effort. Having a dialogue with regulators and influencers will help us develop messaging that will be impactful for them.

Potential Partners: Soy Transportation Coalition (STC), IL QSSB (and other QSSBs where appropriate), Port Authorities, other Commodity Groups

Rationale: Action team members discussed repeatedly throughout the vetting of the infrastructure goal how important the STC and state QSSBs would be in developing and deploying messages.

Activities to Start Now to Meet 2021 Milestone: Strengthen relationships with Soybean Transportation Coalition

Rationale: Action team members discussed how it would be beneficial for the United Soybean Board to have a more elevated relationship with the STC to understand the factors that impact regulator decisions regarding transportation infrastructure funding.

Analyst comments: None given re: infrastructure

Audience: Regulators and Influencers Rating: High
Objective B: Key influencers/partners will understand the benefit of forming an alternative funding mechanism (AFM) to create a pilot for a new funding source for infrastructure improvements.

Framework of Program Activities:

1. WHAT? What are the program activities to accomplish the objective? The Action Team understands the need for regulators and influencers to be our partners in creating momentum for an alternative funding mechanism (AFM) for a pilot infrastructure improvement project on the Illinois River. Specifically, USB has identified the lock at LaGrange, IL, as the focus of this pilot program approach, which the Army Corps of Engineers estimates as a $92 million maintenance investment. Others within the industry have indicated the focus may need to be on a system to address three or four sites on the IL River. This audience needs to understand the economic benefits (or disastrous results if unfunded) of the pilot funding model because the project will benefit all entities involved, not favoring one over the other. Influencers will be an essential part of the program because of the regulatory hurdles and logistics involved with transportation infrastructure improvements. The checkoff will work with the STC and IL QSSB to develop a framework for the AFM, including identifying key players, so that the Illinois River program can be a model for future investments.

2. WHY? Why does this target audience need us and how can we address that need through the objective? Regulators and influencers are an essential partner for the checkoff to successfully help create an AFM for the Illinois River lock improvement project because of the regulatory hurdles and logistics involved with transportation infrastructure improvements. Additionally, the Soy Transportation Coalition and IL QSSB will be great partners in working with this audience because of their expertise in the waterways infrastructure area and funding streams. It should be noted in April 2016, 66 organizations, including those within ag such as the National Corn Growers Association, the National Grain and Feed Association, Cargill, and other companies and transportation users, co-signed a letter to Congressional oversight committees expressing strong opposition to the imposition of tolls or lockage fees on the inland waterways transportation system. USB needs to consider this opposition, particularly within the ag industry, when evaluating solutions for an alternative funding mechanism strategy.

Rating: None

Strategy: Collaborate with others to create a pilot funding mechanism to improve locks and dams.

2017 Milestone: The framework of the pilot alternative funding mechanism program is established, including identified key partners.

2021 Milestone: Improved or plans for improved infrastructure as it relates to the Illinois River locks and dams that can serve as a pilot program for other locks and dams.

FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams: None
Broad Activities to Influence the Objective:

- Per Action Team feedback during the July 2016 board meeting, staff will draft and issue an AFM RFP to help identify various experts, including potential investor groups, service providers, risk managers, and others to scope the transaction structure and define the return on investment (ROI).

Rationale: The Action Team discussed the need to find others to partner with to “influence the influencers.” The executive committee in February 2016 voted to solicit responses to an RFP regarding the scope and outputs of forming an alternative funding mechanism (AFM).

Potential Partners: Soy Transportation Coalition (STC), IL QSSB, Other Commodity Groups

Rationale: Action team members recognized that the same partners would be appropriate for Objective A and the related objectives targeting regulators and influencers.

Activities to Start Now to Meet 2021 Milestone: Information sharing with Illinois QSSB and the work they have already conducted on related projects.

Rationale: Per Action Team feedback during the July 2016 board meeting, staff will draft and issue an RFP to address the AFM project for the IL River and identify various experts, including potential investor groups, service providers, risk managers, and others to scope the transaction structure and define the return on investment if explored further.

Analyst comments: None provided re: infrastructure

Audience: Regulators and Influencers – Rating: High

Objective C: Key influencers/partners within the ag industry will be aligned with a non-federal funding solution for infrastructure improvements as it relates to locks and dams.

Framework of Program Activities:

1. **WHAT? What are the program activities to accomplish the objective?** As previously stated, the state of our domestic transportation infrastructure is in dire need of improvements that cost our economy about $130 billion annually. The federal and state government resources are unable to keep up with the demands to make the needed system improvements, so the soybean checkoff will explore spearheading an AFM approach to address the improvements needed at the LaGrange lock, and perhaps others along the Illinois River. The checkoff is uniquely positioned to bring together partners and influencers within the ag industry to explore making these improvements with non-federal dollars. One example of this kind of collaboration effort involving the checkoff is the creation of the Pacific Northwest export terminal as it exists today. The checkoff was instrumental in making that vision a reality.

2. **WHY? Why does this target audience need us and how can we address that need through the objective?** Again, regulators and influencers are an essential partner for the checkoff to successfully apply an AFM approach to the Illinois River lock.
improvement because of the regulatory hurdles and logistics involved with transportation infrastructure improvements. Federal funding for improvements like this are limited, if not scarce, so the checkoff will work with the Soy Transportation Coalition and IL QSSB to explore funding options for a pilot program for the IL River. The IL QSSB has been working on this issue for some time and have laid much of the groundwork needed to understand the feasibility of improvements. Additionally, the STC will be a great partner in working with this audience because of their expertise in the waterways infrastructure area, knowledge of concerns among others in the ag industry and funding streams. In April, 2016, 66 organizations, including those within ag such as the National Corn Growers Association, the National Grain and Feed Association, Cargill, and others, co-signed a letter to Congressional oversight committees expressing strong opposition to the imposition of tolls or lockage fees on the inland waterways transportation system. USB needs to consider this opposition, particularly within the ag industry, when evaluating solutions for a similar strategy.

Rating: None

Strategy: Collaborate with an alternative financing mechanism (AFM) to create a pilot funding mechanism to improve locks and dams.

2017 Milestone: AFM members will understand the ROI requirements of potential funders.

2021 Milestone: The AFM approach will be used to fund at least one improvement on the locks and dam system.

FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams: None

Broad Activities to Influence the Objective:

- Identify various experts, including potential investor groups, service providers, risk managers, and others to scope the transaction structure and define the return on investment (ROI)
- Hold meetings with targeted parties to identify opportunities and challenges
- Gather information needed to make an assessment of the scope of maintenance
- Clearly identify ag partners and others who will benefit from the checkoff-led effort
- Marketplace action team members, particularly sustainability target area work group members will be holding learning sessions in the summer of 2016 to discuss the issue and determine checkoff investments to address this objective.

Rationale: The Action Team discussed the need to define what the return on investment would look like to the checkoff and others should they partner with the United Soybean Board.

Potential Partners: (Same as Objective A &B) Soy Transportation Coalition (STC), IL QSSB, other commodity groups, Army Corps of Engineers
**Rationale:** Action team members recognized the list of partners is very broad, but will revisit and narrow the list once we have momentum in this area.

**Activities to Start Now to Meet 2021 Milestone:** Identify partners who will benefit and define ROI – per pending RFP (to be released/issued early fall 2016).

**Rationale:** Action team members discussed the activities to start now as the same to fund in FY17.

**Analyst comments:** None given re: infrastructure

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**Audience: Transportation Users – Rating: High**

Objective D: Transportation users will help carry the message to regulators and influencers about the competitive advantage of the U.S. transportation infrastructure, and the need for infrastructure improvements to maintain that competitiveness.

**Framework of Program Activities:**

1. **WHAT? What are the program activities to accomplish the objective?**
   Because soybeans are not the only commodity moved on our transportation infrastructure systems, we need other users that will benefit from improvements to understand that these investments are critical for everyone’s profitability. The checkoff needs transportation users, including farmers, elevators, other industry groups and modes of transportation, to understand how critical our transportation infrastructure is to our competitiveness, our profitability and our overall economy. If we can activate this constituency to influence the influencers, we will have more support getting infrastructure improvements funded.

2. **WHY? Why does this target audience need us and how can we address that need through the objective?**
   In some cases transportation users take our transportation infrastructure for granted, but experts indicate that improvements must be made now to maintain system reliability. Each year the ag industry loses $145.9 million due to stalls and maintenance issues. In other words, the ag economy will continue to suffer if nothing is done to make improvements. Transportation users have the opportunity to carry the message to regulators and influencers about the competitive advantage of the U.S. transportation infrastructure, and the need for infrastructure improvements to maintain that competitiveness.

**Rating: None**

**Strategy:** Communicate the competitive advantage that the transportation infrastructure provides the U.S. and document the investments being made by both competitors and end users of U.S. ag and what that means to the U.S. soy industry.
2017 Milestone: Establish a coordinated message around the importance of infrastructure improvements as it relates to improving our global competitiveness. 2021 Milestone: Transportation users will vocalize support and the need for funding of the U.S. transportation infrastructure.

FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams: None

Broad Activities to Influence the Objective:
- Determine and coordinate messaging
- Target communications strategies to particular user groups.
- Define and communicate the ROI for such improvements

Rationale: The action team discussed the need to define what the return on investment would look like to the checkoff and others should they partner with the United Soybean Board. The also discussed how communications should be targeted and strategic.

Potential Partners: Soy Transportation Coalition, IL QSSB, Other Commodity Groups, Army Corps of Engineers, Transportation Unions

Rationale: Action team members recognized the list of partners is very broad, but will revisit and narrow the list once we have momentum in this area.

Activities to Start Now to Meet 2021 Milestone:
- Determine the messaging
- Define target audience ROI

Rationale: Action team members discussed the activities to start now as the same to fund in FY17.

Analyst comments: An efficient transportation infrastructure is essential from a trade and economic standpoint; a case can be made to show a distinct advantage in energy efficiency and greenhouse-gas-emission reductions due to an improved transportation infrastructure. The sustainability advantages of improved locks, dams and railroad systems also make sense from an environmental and economic standpoint.

Audience: Transportation Users - Rating: High

Objective E: Transportation users will participate in an AFM pilot program.

Framework of Program Activities:

1. WHAT? What are the program activities to accomplish the objective? Transportation users will participate in the IL River alternative funding mechanism (AFM) program because if improvements are not made, a system shutdown would be economically devastating, particularly to the ag economy which utilizes the inland waterways as an efficient mode of transporting commodities. However, several inland waterways groups and companies co-signed a letter to Congressional oversight
committees regarding opposition to lockage fees as a potential funding mechanism for improvements. The checkoff will work to discover options for a pathways forward and communicate the importance our transportation infrastructure plays in giving us a competitive advantage globally.

2. **WHY? Why does this target audience need us and how can we address that need through the objective?** As previously stated, the ag sector recognizes the need for maintenance improvements requiring significant resources. One method of funding system needs like the lock in LaGrange is to form an AFM structure. Transportation users may not support certain kinds of funding mechanisms, but the checkoff will work to discover other sources and consider this opposing when evaluating solutions for the AFM strategy.

**Rating: None**

Strategy: Collaborate with an alternative funding mechanism to create a pilot program to improve locks and dams.

2017 Milestone: Establish a coordinated message around the importance of infrastructure improvements as it relates to improving our global competitiveness. 2021 Milestone: Transportation users are coordinating with the alternative funding mechanism program and support funding.

2021 Milestone: Transportation users will vocalize support and the need for funding of the U.S. transportation infrastructure.

2021 Milestone: The alternative funding mechanism will fund at least one improvement on the locks and dam system.

**FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams:** None

**Broad Activities to Influence the Objective:**

- Establish a coalition of non-federal partners (state agencies, industries that primarily use the inland waterways, local port districts, etc.) to scope out the needs
- Host a forum for a dialogue with partners regarding feasibility and ROI
- Marketplace action team members, particularly sustainability target area work group members will be holding leaning sessions in the summer of 2016 to discuss the issue and determine checkoff investments to address this objective.

**Rationale:** The action team discussed how a benchmark is needed through a study or survey and how a forum or event of some kind to foster a dialogue around the AFM would be beneficial.

**Potential Partners:** Soy Transportation Coalition, IL QSSB, Ports, States, other Commodity Groups, Army Corps of Engineers, Transportation Unions
Rationale: Action team members recognized the list of partners is very broad, but will revisit and narrow the list once we have momentum in this area.

Activities to Start Now to Meet 2021 Milestone:

- Create a forum for a dialogue with potential partners
- Marketplace action team members, particularly sustainability target area work group members will be holding leaning sessions in the summer of 2016 to discuss the issue and determine checkoff investments to address this objective. Therefore, no proposals are being brought forth at this time to address this objective.

Rationale: Action team members discussed the activities to start now as the same to fund in FY17.

Analyst comments: An efficient transportation infrastructure is essential from a trade and economic standpoint; a case can be made to show a distinct advantage in energy efficiency and greenhouse-gas-emission reductions due to an improved transportation infrastructure. The sustainability advantages of improved locks, dams and railroad systems also make sense from an environmental and economic standpoint.

Audience: Transportation Companies – Rating: High

Objective F: Transportation companies will recognize agriculture’s importance to the U.S. economy and the role that reliable, affordable transportation plays.

Framework of Program Activities:

1. WHAT? What are the program activities to accomplish the objective? Similar to transportation users, this audience needs to understand the economic impact the ag sector makes on the economy and the role our transportation infrastructure plays to keep us competitive. Ultimately the checkoff wants transportation companies to support and participate in the LaGrange pilot project. Once this audience understands the critical nature of the improvements needed, they will support an alternative funding mechanism. As stated earlier, a system shutdown would be economically devastating, particularly to the ag economy which utilizes the inland waterways as an efficient mode of transporting commodities. The alternative funding model has worked in the past to fund infrastructure projects where federal funding is insufficient or nonexistent, but this audience may have opposition to certain types of funding mechanisms. The checkoff will communicate the importance our transportation infrastructure plays in giving us a competitive advantage globally.

2. WHY? Why does this target audience need us and how can we address that need through the objective? Transportation companies lack an understanding of how great of an economic impact the ag sector makes on the economy and the role our transportation infrastructure plays to keep us competitive. The checkoff has studied this
area for years and has identified the LaGrange lock as a pilot project to make other/similar infrastructure improvements. But before transportation companies can support an AFM structure, they must understand the messaging regarding our competitive advantage. The checkoff will lead that effort through this objective by developing and deploying consistent messaging about the U.S. Soy Advantage and the role our transportation infrastructure plays in keeping us competitive.

**Rating: None**

Strategy: Communicate the competitive advantage that the transportation infrastructure provides the U.S. and document the investments being made by both competitors and end users of U.S. ag and what that means to the U.S. soy industry.

2017 Milestone: Increase target audience understanding of agriculture’s importance to the U.S. economy and the role that reliable, affordable transportation plays.

2021 Milestone: Agriculture movements hold more importance in planning, pricing and availability of shipping.

2021 Milestone: Coordination and consistency in messaging and information across all audiences.

2021 Milestone: Majority of targeted transportation companies will be investing in the alternative funding pilot project.

**FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams:** None

**Broad Activities to Influence the Objective:**

- Communicate the economic benefits of infrastructure improvements
- Marketplace action team members, particularly sustainability target area work group members will be holding leaning sessions in the summer of 2016 to discuss the issue and determine checkoff investments to address this objective.

**Rationale:** The Action Team discussed the need for education through outreach to this audience to tell the side of ag. They also mentioned that some of the messaging could be about telling the story from the farmers’ perspective.

**Potential Partners:** Soy Transportation Coalition (STC), IL QSSB, other Commodity Groups

**Rationale:** Action team members recognized the list of partners is very broad, but will revisit and narrow the list once we have momentum in this area.

**Activities to Start Now to Meet 2021 Milestone:** None given

**Rationale:** Action team members seemed to think they’ve covered this area in other objectives within infrastructure and when it comes to education and outreach activities.
**Analyst comments:** We want transportation companies to recognize the importance of reliable, affordable transportation to the U.S. economy. To that end, we may consider replicating an effort conducted in the late 1970s, when there was a similar situation of deteriorating rural roads and bridges, railroad inefficiencies and deteriorating locks and dams. Congress established a Rural Transportation Advisory Task Force made up of a cross section of transportation stakeholders, including agricultural commodity organizations and transportation providers. Significant regulatory and structural changes were made subsequent to the task force report, which may have been directly or indirectly a result of the report. Nevertheless, awareness was heightened. Consider if it is time for establishment of a similar rural transportation study group.

**Audience:** Elevators - **Rating:** Medium

Objective G: Elevators will recognize agriculture’s importance to the U.S. economy and the role that reliable, affordable transportation plays.

**Framework of Program Activities:**

1. **WHAT? What are the program activities to accomplish the objective?** Elevators are a key part of the soybean value chain as the first point of delivery for soybeans, so they obviously know transportation infrastructure is a key element to their business model and how farmers are paid for their soybeans through basis. However, there is an opportunity for elevator operators to carry the checkoff message that infrastructure improvements are needed to not only stay competitive, but ensure the economic security.

2. **WHY? Why does this target audience need us and how can we address that need through the objective?** Elevator managers should be aware of the economic impact transportation infrastructure improvements make to their business. If a farmer cannot deliver a load of soybeans do to an infrastructure disruption, then that impacts that entire value chain on down the line. In order to meet the needs of our end users, we must make the necessary improvements to our transportation infrastructure. Elevators will support the checkoff led effort if the economic benefits to this audience are made clear.

**Rating:** Least Important

**Strategies:**

Communicate the competitive advantage that the transportation infrastructure provides the U.S. and document the investments being made by both competitors and end users of U.S. ag and what that means to the U.S. soy industry.

Collaborate on an alternative financing mechanism to create a pilot funding program to improve locks and dams.
2017 Milestone: Increase target audience understanding of agriculture’s importance to the U.S. economy and the role that reliable, affordable transportation plays.

2021 Milestone: Partner with and amplify soy checkoff messaging to achieve consistency in messaging and information across all audiences.

FY17-FY21 milestones and program brief suggestions from Target Areas and additional milestone recommendations from Action Teams: None

Broad Activities to Influence the Objective:

- Educate elevator managers about the economic impact of doing nothing
- Develop and deploy messaging about the U.S. Soy Advantage
- Marketplace action team members, particularly sustainability target area work group members will be holding leaning sessions in the summer of 2016 to discuss the issue and determine checkoff investments to address this objective.

Rationale: In addition to education efforts with this audience, the action team discussed how forming a coalition of other ag groups or commodity group would help demonstrate the importance of the infrastructure system to the ag industry.

Potential Partners: Soy Transportation Coalition (STC), IL QSSB, Ports, States, other Commodity Groups

Rationale: Action team members recognized the list of partners is very broad, but will revisit and narrow the list once we have momentum in this area.

Activities to Start Now to Meet 2021 Milestone: None offered

Rationale: General discussion regarding this audience for the infrastructure goal seemed out of place, which is likely why the action team rated this the lowest priority objective.

Analyst comments: None given re: infrastructure.
Goal: Sustainability– Sustainability $3,050,837

Audience: Crushers – Rating: Medium

Objective A: Crushers will understand the metrics that show the sustainability of U.S. soy.

Framework of Program Activities:

WHAT? What are the program activities to accomplish the objective – The checkoff has an opportunity to learn from crushers what their customers are demanding. We’ll need to facilitate this learning with them, while educating crushers on the resources available, like SSAP. There is an opportunity to leverage resources with crushers in communicating to their customers/our end users. It’ll be important to partner with leading crushers who are taking sustainability seriously and have end users demanding ways to demonstrate corporate social responsibility. Education on the metrics will be pivotal in achieving this objective. Sharing information, such as the SSAP and Field to Market, will help raise demand for US sustainable soy.

WHY? Why does this target audience need us and how can we address that need through the objective – Crushers are concerned about keeping their client accounts. To do so, they need to meet buyer and end user demands for sustainability in a way that doesn’t jeopardize their bottom line. It’s important to make business case for them. Crushers need to understand that sustainability does not equate to increased costs, but could mean increased marketability of their product.

Rating: Least Important

Strategy: Anticipate and address buyers and end users needs so they will prefer U.S. soy as a sustainable and responsible choice for food, feed and industrial applications.

2017: Exceed the benchmark in total demand for SSAP certified whole beans (International milestone).

2021: One-third of exported soybeans certified sustainable.

2017: 5 MMT certified sustainable soy exported.

2021: 90 percent of crushers believe that U.S. soy is sustainable.

2017 Milestone: Benchmark percentage of crushers that are aware of at least one metric (SSAP, Life Cycle, Field to Market, etc.) that shows the superior sustainability performance of U.S. soy.

2021 Milestone: A majority of crushers are aware of at least one metric (SSAP, Life Cycle, Field to Market, etc.) that shows the sustainability of U.S. soy.

Broad Activities to Influence the Objective:
- Education
- Communication
- Surveys to understand knowledge of crushing industry
- Direct contact

**Rationale:**
The farmer leaders see value in deepening education and communication about the SSAP and other key components of what makes U.S. soy sustainable to protect existing markets and expand market share in markets that place a high value on sustainability. We cannot rely on others to carry our message; we must take advantage of our opportunity to shape the message. There are opportunities to help both international and domestic crushers understand the metrics that show the sustainability of U.S. soy.

**Potential Partners:**
- NOPA
- QSSB
- Industry experts

**Rationale:**
A united industry will be more effective than its individual stakeholders. Groups like NOPA can help move the needle on the sustainability conversation. Having them sharing the same messages as the checkoff will only make the conversation stronger.

**Activities to Start Now to Meet 2021 Milestones:**

- All audiences need to know about biotechnology and its connection with sustainability
- SSAP needs to continue to evolve with the metrics and demands of sustainability

**Rationale:**
Sustainability is about continuous improvement and so is the SSAP. Biotechnology is an important tool for sustainability. Measurements, transparency, and a growing track record of continuous improvement are essential to maintain the supply chain’s trust in the US soybean farmers.

**Analyst comments:**

- As the marketplace gains maturity and understanding on how to market protein and oil differentials, it could be an opportunity for U.S. soy to report the aggregate environmental metrics for soybeans in a mill shed. NOPA and other national and state organizations could be potential partners in developing mechanisms for aggregating metrics for U.S. soy.
- Keep the end-goal in mind: U.S. Soy will be the preferred raw material choice for buyers and end users to meet THEIR sustainability and responsibility goals.
• Each action plan proposal should be challenged with whether or not it helps meet the goal of our supply chain: Does this action plan promote or hinder our ability to meet our customers’ sustainability and responsibility goals.

• As we continue to promote our sustainability message, there will be increasing scrutiny and challenges by competitors and others to our claims. Measurements, transparency and a growing track record of continuous improvement are essential to maintaining the supply chain’s trust in the U.S. soybean producers’ metrics.
Audience: Crushers – Rating: Medium

Objective B: Crushers will be aware of the sustainability demands of buyers.

Framework of Program Activities:

WHAT? What are the program activities to accomplish the objective -- The checkoff has an opportunity to learn from crushers what their customers are demanding. We'll need to facilitate this learning with them, while educating crushers on the resources available, like SSAP. There is an opportunity to leverage resources with crushers in communicating to their customers/end users. It'll be important to partner with leading crushers who are taking sustainability seriously and have end users demanding ways to demonstrate corporate social responsibility. By collecting stories from buyers themselves and sharing those back to crushers, we'll help to achieve the objective and raise awareness. Because of USB’s leadership in this area domestically, it has been able to leverage resources, partnerships and programs with the domestic crusher target audience. These leveraged opportunities have enabled USB to achieve progress in the U.S. with minimal to no funding; but more direct and intentional program funding will be used to accelerate progress against LRSP goals.

WHY? Why does this target audience need us and how can we address that need through the objective – Crushers are concerned about keeping their client accounts. To do so, they need to meet buyer and end user demands for sustainability in a way that doesn’t jeopardize their bottom line. It’s important to make business case for them. Crushers need to understand that sustainability does not equate to increased costs, but could mean increased marketability of their product.

Strategy: Anticipate and address buyers and end users needs so they will prefer U.S. soy as a sustainable and responsible choice for food, feed and industrial applications.

Rating: None

2017: Define the crusher target audience.

2017: Establish benchmarks on crusher awareness of buyers needs as it relates to sustainability of U.S. soy.

2021 Milestone: X percent of crushers are aware of buyers needs as it relates to the sustainability of U.S. soy.

Broad Activities to Influence the Objective:

- Direct visits to top crushers
- Education/Communication
- Awareness database of crusher purchasing preferences

Rationale:
We cannot rely on others to carry our message; we must take advantage of our opportunity to shape the message. There are opportunities to help both international and domestic
crushers understand the metrics that show the sustainability of U.S. soy. The market analyst even commented to focus on the USB sustainability strategy: U.S. Soy will be the preferred raw material choice for buyers and end users to meet THEIR sustainability and responsibility goals. This means helping crushers to understand what THEIR customers are demanding for sustainability and various company sustainability movements and corporate social responsibility efforts. The checkoff also needs to better understand the global crusher demographic, and if this objective should focus on all crushers or only larger crushers. Hence the awareness database activity.

Potential Partners:
- NOPA
- QSSB
- Industry experts
- Direct contact with crushers
- End users

Rationale:
There is a need to better understand the global crusher demographic. It will be important to partner with organizations like NOPA, experts, and others who understand the crusher demographic and can make our efforts stronger.

Activities to Start Now to Meet 2021 Milestones:
- Direct visits to top crushers
- Education/Communication on key messages

Rationale: Starting the work now will help us accomplish our 2021 milestones. We have to capitalize on our opportunity to work with crushers on the sustainability demands of their buyers and make US soy top of mind when it comes to meeting those needs.

Analyst comments:
- Keep the end-goal in mind: U.S. Soy will be the preferred raw material choice for buyers and end users to meet THEIR sustainability and responsibility goals.
- Each action plan proposal should be challenged with whether or not it helps meet the goal of our supply chain: Does this action plan promote or hinder our ability to meet our customers’ sustainability and responsibility goals.
- As we continue to promote our sustainability message, there will be increasing scrutiny and challenges by competitors and others to our claims. Measurements, transparency and a growing track record of continuous improvement are essential to maintaining the supply chain’s trust in the U.S. soybean producers’ metrics.

Audience: Buyers (Feed Mills + Oil Refiners) – Rating: Medium
Objective C: Buyers will be more aware of the metrics that demonstrate sustainability performance of U.S. soy, compared to South American competitors.

Framework for Program Activities

WHAT? What are the program activities to accomplish the objective – Similar to what we do with crushers, we’ll need to educate them on the sustainability profile of US soy. However, we’ll need an even bigger push on validating our approach. We provide third party verification but may need to strengthen with further validation of the process and transparency. It’s important to design transparency into the program and advocate in overseas markets. We’ll need to identify the tactical audiences that are best to validate our cause. These could include NGOs, health professionals, certification bodies, etc.

WHY? Why does this target audience need us and how can we address that need through the objective – Buyers have other options in soybeans, as well as meal (canola, synthetics) and oil (palm, canola). They are looking to grow their business. South American producers are building their own programs with NGOs and we need buyers to understand that U.S. soy is the superior option for meeting end user sustainability requirements.

Rating: None

Strategy: Anticipate and address buyers and end users needs so they will prefer U.S. soy as a sustainable and responsible choice for food, feed and industrial applications.

2017 Milestone: Benchmark the percentage of buyers that are aware of at least one metric (SSAP, Life Cycle, Field to Market, etc.) that shows the superior sustainability performance of U.S. soy.

2021 Milestone: A majority of buyers are aware of at least one metric (SSAP, Life Cycle, Field to Market, etc.) that shows the sustainability of U.S. soy.

2017 Milestone: Benchmark the percentage of buyers that accept the SSAP.

2021 Milestone: Increase the percentage of buyers that accept the SSAP.

Broad Activities to Influence the Objective:

- Visit feed manufacturers
- Industry meetings/outreach
- Education on SSAP
- Communicate with end users
- Identify opportunities to have SSAP recognized as meeting certification or sourcing guidelines

Rationale:
It’s important to recognize that the SSAP is not static and the farmer metrics will continue to evolve to meet industry needs. We can use updated information to provide more transparency and build additional confidence.

Potential Partners:
- Industry organizations
- QSSB
- Feed associations

**Rationale:**
Direct contact with feed manufacturers and other buyers is critical. USB should work with partners that can assist in direct contact with buyers and helping to build the transparency in marketing.

**Activities to Start Now to Meet 2021 Milestones:**
- Education on the SSAP
- Industry meetings and outreach
- Obtaining recognition of SSAP by certifying bodies and sustainable sourcing schemes

**Rationale:**
As the SSAP evolves, so will the need for outreach and awareness. To differentiate our product in 2021, the work needs to begin now. We’re going to see increased scrutiny of our claims by our competitors. Getting out in front of the criticism and establishing a track record of being transparent will lead to increased preference for U.S. soybeans.

**Analyst comments:**
- The reality is, that in the near-term, buyers will not likely pay a premium for sustainably-grown or responsibly-grown soybeans; however, oil buyers are more likely to be interested in the sustainability metrics than meal buyers because oil is one step closer to the end use consumer. The sustainability message should be a component of the value of U.S. soybeans along with nutritional and functional properties.
- Animal nutritionists are at arm’s length from the supply chain pull for sustainably- or responsibly-sourced product. Nutrition per se is not influenced whether a component is responsibly grown or not. I don’t see spending a great deal of effort in educating nutritionists in the sustainability message.
- Keep the end-goal in mind: U.S. Soy will be the preferred raw material choice for buyers and end users to meet THEIR sustainability and responsibility goals.
- Each action plan proposal should be challenged with whether or not it helps meet the goal of our supply chain: Does this action plan promote or hinder our ability to meet our customers’ sustainability and responsibility goals.
- As we continue to promote our sustainability message, there will be increasing scrutiny and challenges by competitors and others to our claims. Measurements, transparency and a growing track record of continuous improvement are essential to maintaining the supply chain’s trust in the U.S. soybean producers’ metrics.
Audience: Buyers (Feed Mills + Oil Refiners) – Rating: Medium

Objective D: Buyers are aware of end user demands for sustainability.

Framework for Program Activities

WHAT? What are the program activities to accomplish the objective – Similar to what we do with crushers, we’ll need to educate them on the sustainability profile of US soy. However, we’ll need an even bigger push on validating our approach. We provide third party verification but may need to strengthen with further validation of the process and transparency. It’s important to design transparency into the program and advocate in overseas markets. We’ll need to identify the tactical audiences that are best to validate our cause. These could include NGOs, health professionals, certification bodies, etc. Because of USB’s leadership in this area domestically, it has been able to leverage resources, partnerships and programs with the domestic buyer target audience. These leveraged opportunities have enabled USB to achieve progress in the U.S. with minimal to no funding; but more direct and intentional program funding will be used to accelerate progress against LRSP goals.

WHY? Why does this target audience need us and how can we address that need through the objective – Buyers have other options in soybeans, as well as meal (canola, synthetics) and oil (palm, canola). They are looking to grow their business. South American producers are building their own programs with NGOs and we need buyers to understand that U.S. soy is the superior option for meeting end user sustainability requirements.

Rating: None

Strategy: Anticipate and address buyers and end users needs so they will prefer U.S. soy as a sustainable and responsible choice for food, feed and industrial applications.

2017: Benchmark percent of buyers aware of end users’ needs as it relates to the sustainability of U.S. soy.

2021: X percent of buyers are aware of end users’ needs as it relates to the sustainability of U.S. soy.

Broad Activities to Influence the Objective:

- Awareness/visiting feed manufacturers
- Education on SSAP and sustainability
- Help communicate with end Users

Rationale:
We have to look at where we are going. If we want U.S. Soy to be the preferred raw material choice for buyers and end users, we’re going to need them help THEIR sustainability and responsibility goals. This means helping buyers understand what THEIR customers are demanding for sustainability.
Potential Partners:
- Industry organizations
- QSSB

Rationale:
We need to create additional confidence in the SSAP and direct contact with feed manufacturers and other buyers is critical. USB should work with partners that can assist in direct contact with buyers.

Activities to Start Now to Meet 2021 Milestones:
- Awareness/visiting feed manufacturers
- Education on SSAP and sustainability
- Help communicate with end Users

Rationale:
Many soybean processors and food buyers are setting goals to source more or all of their product ingredients from sustainable sources. Transparency of measurements will help set US soy apart from competitors, whether they are South American or other feedstocks.

Analyst comments:
- The reality is, that in the near-term, buyers will not likely pay a premium for sustainably-grown or responsibly-grown soybeans; however, oil buyers are more likely to be interested in the sustainability metrics than meal buyers because oil is one step closer to the end use consumer. The sustainability message should be a component of the value of U.S. soybeans along with nutritional and functional properties.
- Animal nutritionists are at arm’s length from the supply chain pull for sustainably- or responsibly-sourced product. Nutrition per se is not influenced whether a component is responsibly grown or not. I don’t see spending a great deal of effort in educating nutritionists in the sustainability message.
- Keep the end-goal in mind: U.S. Soy will be the preferred raw material choice for buyers and end users to meet THEIR sustainability and responsibility goals.
- Each action plan proposal should be challenged with whether or not it helps meet the goal of our supply chain: Does this action plan promote or hinder our ability to meet our customers’ sustainability and responsibility goals.
- As we continue to promote our sustainability message, there will be increasing scrutiny and challenges by competitors and others to our claims. Measurements, transparency and a growing track record of continuous improvement are essential to maintaining the supply chain’s trust in the U.S. soybean producers’ metrics.

Audience: End Users – Rating: High
Objective E: In targeted markets the majority of end users request certified sustainable U.S. soy and overall market share for U.S. soy is increased.

Framework of Program Activities:

WHAT? What are the program activities to accomplish the objective – We'll need to establish that business case for potential end users. One way we'll do that is by performing a competitive analysis looking at other markets and products. We'll need to partner with influencer groups to leverage not only dollars but also clout. There is a huge opportunity in the international markets to build on success already in place domestically. We can leverage tactical influencer audiences. We will also discover and build model sourcing programs with leading end users. Those cases will become the template for others. We can also co-market and co-brand with our partners. We'll need to use these connections to help bridge sustainability and biotechnology. Because of USB's leadership in this area domestically, it has been able to leverage resources, partnerships and programs with the domestic end user target audience. These leveraged opportunities have enabled USB to achieve progress in the U.S. with minimal to no funding; but more direct and intentional program funding will be used to accelerate progress against LRSP goals.

WHY? Why does this target audience need us and how can we address that need through the objective – U.S. soy is the best business case for end users to achieve their own sustainability and responsibility goals. It’s a better option than South American soy, canola, palm and other key competitors.

Rating: Most Important

Strategies: Anticipate and address buyers and end users needs so they will prefer U.S. soy as a sustainable and responsible choice for food, feed and industrial applications.

Gain acceptance of the U.S. Soybean Sustainability Assurance Protocol with end users.

2017 Milestone: Benchmark the percentage of end users that are aware of at least one metric (SSAP, Life Cycle, Field to Market, etc.) that shows the superior sustainability performance of U.S. soy.

2021 Milestone: A majority of end users are aware of at least one metric (SSAP, Life Cycle, Field to Market, etc.) that shows the sustainability of U.S. soy.

Broad Activities to Influence the Objective:

- Leveraging social responsibility groups/corporate departments
- Education on sustainability and SSAP
- Obtaining recognition of SSAP by certifying bodies and sustainable sourcing schemes

Rationale:
Leveraging social responsibility groups will be a critical element of building confidence in the SSAP. We'll need to continue to evolve the SSAP with new metrics and connect those to the end users’ needs.

**Potential Partners:**

- Social responsibility groups
- Feed associations
- Nutritionists
- QSSB

**Rationale:** Leveraging helps extend our messages but also helps build clout with other audiences. Having relationships with influential groups will help us establish credibility and gain insights into what they are already doing.

**Activities to Start Now to Meet 2021 Milestones:**

- Leveraging social responsibility groups/corporate departments
- Education on sustainability and SSAP
- Obtaining recognition of SSAP by certifying bodies and sustainable sourcing schemes

**Rationale:** This is a long-term conversation that will not end after one year. Helping connect biotechnology and sustainability will be a long-term process, but an important one. Collaborating with other organizations that share our interests will help drive acceptance forward.

**Analyst Comments:**

- I recommend the current U.S. soy certification program be enhanced with additional metrics that will add credibility, transparency and make it even more robust.
- Animal nutritionists are at arm’s length from the supply chain pull for sustainably- or responsibly-sourced product. Nutrition per se is not influenced whether a component is responsibly grown or not. I don’t see spending a great deal of effort in educating nutritionists in the sustainability message.
- Keep the end-goal in mind: U.S. Soy will be the preferred raw material choice for buyers and end users to meet THEIR sustainability and responsibility goals.
- Each action plan proposal should be challenged with whether or not it helps meet the goal of our supply chain: Does this action plan promote or hinder our ability to meet our customers’ sustainability and responsibility goals.
- As we continue to promote our sustainability message, there will be increasing scrutiny and challenges by competitors and others to our claims. Measurements, transparency and a growing track record of continuous improvement are essential to maintaining the supply chain’s trust in the U.S. soybean producers metrics.
**Objective F:** Domestic and international companies will accept the sustainability of U.S. soy and will seek U.S. soybean oil and soy protein as a sustainable ingredient.

**Framework of Program Activities:**

**WHAT?** What are the program activities to accomplish the objective – By using our existing metrics and understanding what these end users are looking for in sourcing sustainable products, we'll be able to accomplish the objective. We'll partner with influencer groups to leverage not only dollars but also clout. There is a huge opportunity in the international markets to build on success already in place domestically. We can leverage tactical influencer audiences. We will also discover and build model sourcing programs with leading end users. Those cases will become the template for others. We can also co-market and co-brand with our partners. We'll need to use these connections to help bridge sustainability and biotechnology. Sharing the story through various outreach channels will help to elevate the acceptance of U.S soy's sustainability for both domestic and international companies. Because of USB's leadership in this area domestically, it has been able to leverage resources, partnerships and programs with the domestic end user target audience. These leveraged opportunities have enabled USB to achieve progress in the U.S. with minimal to no funding; but more direct and intentional program funding will be used to accelerate progress against LRSP goals.

**WHY?** Why does this target audience need us and how can we address that need through the objective – U.S. soy is the best business case for end users to achieve their own sustainability and responsibility goals. It’s a better option than South American soy, canola, palm and other key competitors. We can back that up with information and metrics from the SSAP, Field to Market, life cycle analysis and others.

**Rating:** None

**Strategies:**

Anticipate and address buyers and end users needs so they will prefer U.S. soy as a sustainable and responsible choice for food, feed and industrial applications.

Gain acceptance of the U.S. Soybean Sustainability Assurance Protocol with end users.

2017 Milestone: Benchmark the percent of domestic and international companies that accept the sustainability of U.S. soy.

2021 Milestone: Increase in acceptance of the sustainability of U.S. soy by domestic and international companies.

**Broad Activities to Influence the Objective:**

- Leveraging other groups
- Education on sustainability and SSAP
- Food industry shows
- Visits with food industry/meetings (SNAXPO, AND)
- Research as it relates to the Life Cycle Analysis and other sustainability measurements.

**Rationale:**
As we continue to promote our sustainability message, there will be increased scrutiny and challenges by competitors and others to our claims. Measurements, transparency and a growing track record of continuous improvement are essential to maintaining the supply chain’s trust in the U.S. soybean producer’s metrics. Connecting with end users in forums where USB can embrace scrutiny and challenges by competitors will be key to increasing end user acceptance of U.S. soy sustainability. As things evolve, we’ll need to maintain our competitive advantage through life cycle related research.

**Potential Partners:**
- Food Industry Groups
- Restaurant Industry Groups
- Corporate Social Responsibility Groups
- Industrial Uses Groups (manufacturers, marketers)

**Rationale:** USB needs to strengthen relationships with downstream organizations that have significant influence on end users; USB will not be effective changing perspectives of major end users on its own

**Activities to Start Now to Meet 2021 Milestones:**
- Leveraging other groups
- Education on sustainability and SSAP
- Food industry shows
- Visits with food industry/meetings (SNAXPO, AND)
- Sustainability related research, such as continued life cycle analysis.

**Rationale:**
End users are moving in a different direction than production agriculture on biotechnology and GMO labeling. We’ll need to continue to connect biotechnology and sustainability. We’ll need to anticipate those needs and continue to move toward building preference for US Soy.

**Analyst Comments:**
- I recommend the current U.S. soy certification program be enhanced with additional metrics that will add credibility, transparency and make it even more robust.
- Animal nutritionists are at arm’s length from the supply chain pull for sustainably- or responsibly-sourced product. Nutrition per se is not influenced whether a component is responsibly grown or not. I don’t see spending a great deal of effort in educating nutritionists in the sustainability message.
- Keep the end-goal in mind: U.S. Soy will be the preferred raw material choice for buyers and end users to meet THEIR sustainability and responsibility goals.
• Each action plan proposal should be challenged with whether or not it helps meet the goal of our supply chain: Does this action plan promote or hinder our ability to meet our customers’ sustainability and responsibility goals.

• As we continue to promote our sustainability message, there will be increasing scrutiny and challenges by competitors and others to our claims. Measurements, transparency and a growing track record of continuous improvement are essential to maintaining the supply chain’s trust in the U.S. soybean producers’ metrics.