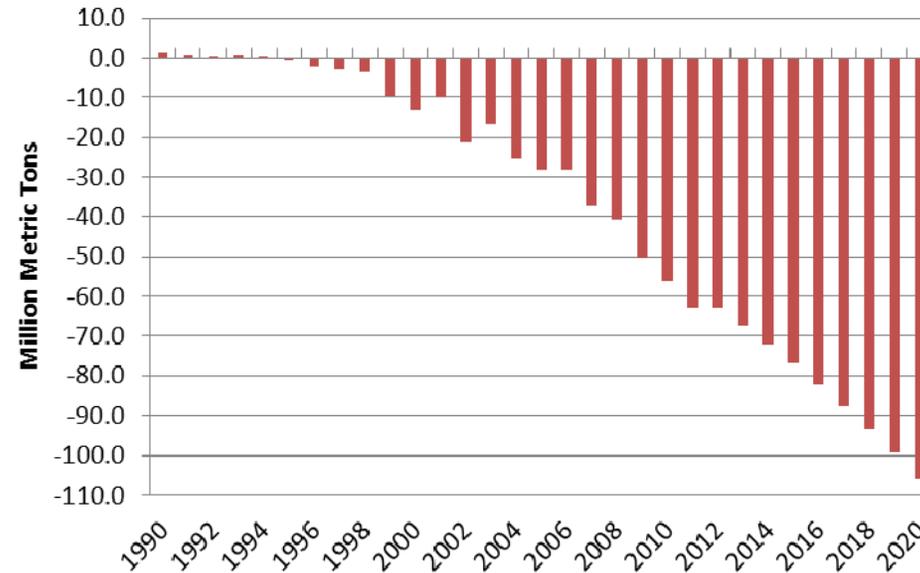


I. EXECUTIVE SUMMARY

World Soybean Supply and Demand

The supply and demand of soybeans in Louisiana and in the world have changed significantly in recent years. Soybean production in Louisiana is up significantly, growing at about 5% per year for each of the last five years. Soybean demand by China has made an impact on the availability of soybeans in the world. Chinese soybean trade is shown in Exhibit 1. When the world is short on soybeans, China will begin imports by importing from the US. The first soybeans to be shipped from the US are those harvested the earliest, which are in the Southern US and include Louisiana.

Exhibit 1: Chinese Soybean Trade



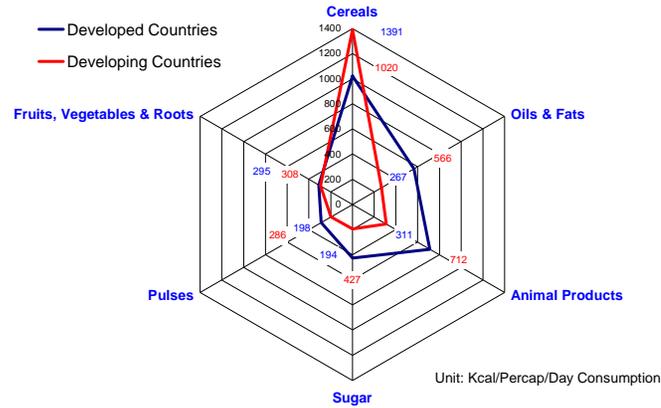
Source: USDA & Informa

Soybean Products

Soybean demand is driven by soybean meal demand as soybeans contain only about 18% oil. Soybean meal demand is directly related to livestock feed demand, which is expected to increase 21.7% in the US by 2022. Countries tend to demand more protein in the form of meat as their incomes rise. This is illustrated in Exhibit 2, which shows that developed countries consume more animal proteins than developing countries. World meat consumption is up approximately 150% from 1975 as shown in Exhibit 3, which supports underlying soybean meal demand.

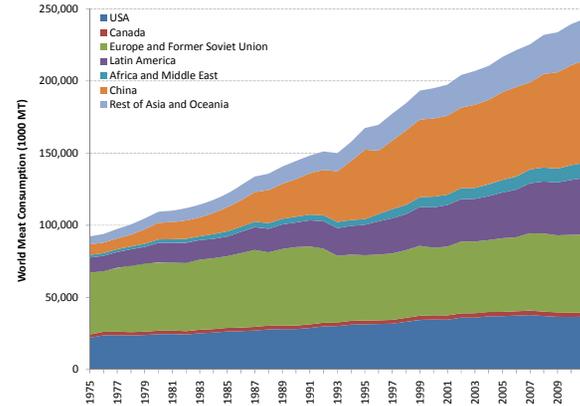
Although soybean production is driven by meal demand, the oil value represents a significant portion of the overall value. Demand for oil continues to rise, but is increasingly driven by US and EU renewable fuel policy. The US crushing capacity is projected to increase to 2 billion bushels and exportable supplies are projected to grow as production expansion exceeds crushing activity. Exports are expected to reach 2.4 billion bushels by 2022/23.

Exhibit 2: Sources of Dietary Food Consumption



Source: FAO

Exhibit 3: World Meat Consumption



Note: Meat includes beef, veal, swine, broiler and turkey. Mexico is included in Latin America
 Source: USDA, FAS

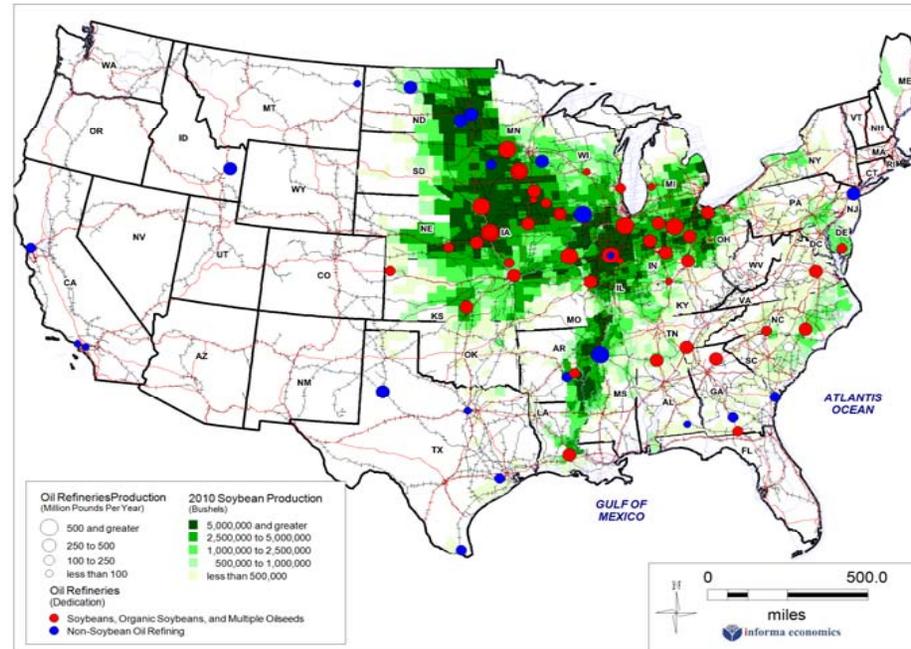
Crude soybean oil is further processed at a refinery. Access and transportation costs to a suitable refinery are extremely important when considering the feasibility of a soybean crush facility. The US soybean oil refining industry is located near the Midwest crushing plants to lower transportation costs. For a soybean crusher in Louisiana, being able to sell the crude soybean oil to Ventura Foods, LLC (Ventura) in Opelousas, Louisiana is extremely important because all the other soybean oil refiners are in locations where crude soybean oil prices are cheaper than Louisiana. A Louisiana soybean crush plant, without an attached refinery, would be hindered if it was not able to deliver at market rates to the Ventura plant or an alternative export market. The map in Exhibit 4 shows the soybean refining capacity and its vicinity to Louisiana.

Site Selection

Interviews and desk research produced three alternative sites that are summarized in Exhibit 5 and represent alternative Louisiana locations which are described as northeastern, Avoyelles Parish, and the port at Lake Charles. The alternative sites were chosen based on their vicinity to Louisiana soybeans, their potential to ship in soybeans, their vicinity to demand, and transportation rates to the Ventura oil refinery in Opelousas, Louisiana. Avoyelles Parish can easily access Louisiana soybeans and soybeans can be sourced from the Midwest whenever local/regional supplies are unavailable. Avoyelles Parish

has very low transportation costs for oil to the Ventura plant, and soybean meal is a truck move away from the broiler industry. Northeastern Louisiana was chosen based on its accessibility to soybeans, both locally produced and via the Mississippi River, and vicinity to the broiler industry. The example location for Northeastern, Louisiana is Tallulah, which is also conveniently near I-20. Lake Charles has a port facility and existing storage capacity. Interviews yielded the viewpoint that the grain handling capabilities of Lake Charles will grow, which is an excellent synergy for a crushing plant. Lake Charles also has the best export access, compared to the other two example sites and can receive Corn Belt soybeans via rail. Lake Charles is also relatively close to the vegetable refinery in Opelousas, Louisiana.

Exhibit 4: Vegetable Oil Refiners



Source: Informa Economics & USDA

Exhibit 5: Examples of Candidate Locations for the Site Selection

Potential Siting Areas	Advantages	Disadvantages
North East Louisiana (e.g. Tallulah)	<ul style="list-style-type: none"> • Access to storage • Vicinity to soybean production in Louisiana, MS, and AR (supply) • Near the Mississippi River • Access I-20 	<ul style="list-style-type: none"> • Local soybeans are shipped out quickly • High transportation cost to move crude oil • Compete with export prices
Avoyelles Parish (e.g. Bunkie, Louisiana)	<ul style="list-style-type: none"> • Vicinity to soybean production • Low transportation cost to the oil refiner in Opelousas (Ventura) • Relatively close to export channels • Vicinity to soybean meal demand 	<ul style="list-style-type: none"> • Local soybeans are shipped out quickly • Higher cost to ship in soybeans
Gulf Port Facility (Lake Charles, Louisiana)	<ul style="list-style-type: none"> • Access to export markets via the port • Port storage (proposed) • Access to industrial utilities and transportation facilities • Soybean meal and oil markets are in their vicinity 	<ul style="list-style-type: none"> • Fewer local soybeans • Compete with export prices

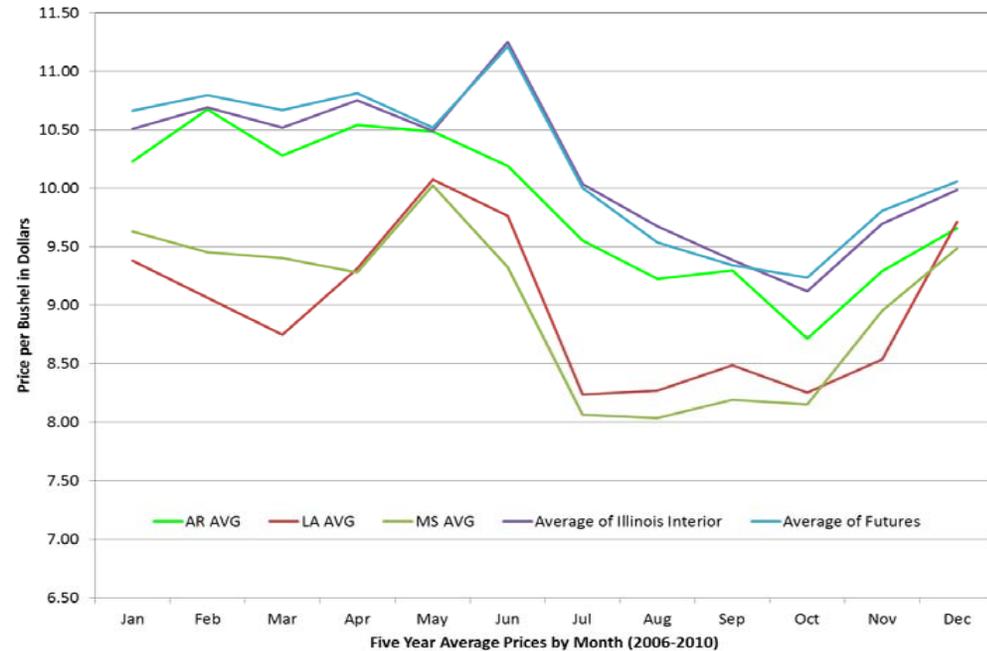
Plant Size

Plant size is important, because the plant should be sized to soybean availability, but large enough to obtain certain economies of scale. A crush capacity of 800 tons per day was chosen for the North East and Avoyelles Parish examples. Better access to the export market resulted in a larger 2,500 tons per day plant size for the Lake Charles example in the feasibility study. The two sizes each allow for partial supply to originate in Louisiana. Five months of production capacity will utilize local soybeans for Avoyelles Parish and the North East Louisiana example. Three months of production capacity utilizes Louisiana soybeans for the Lake Charles example. The remaining months of production, as the plant is assumed to operate 330-350 days per year, depending on location, will rely on soybeans sourced up river or up rail. This is primarily because Louisiana soybeans will have already been marketed prior to the end of the calendar year. An 800 ton/day facility, using five months of local soybeans, would use the equivalent of 10% of the total Louisiana soybean crop. It would also be able to meet about 27% of soybean meal demand within a 150 mile radius. The Bunkie and Tallulah plants are also built with enough on site storage to buy all of the soybeans to be crushed in December, in November. This is because December leads up to the beginning of the Brazilian soybean harvest. The graph in Exhibit 6 shows the five year average monthly price relationship for Louisiana soybeans. The 2,500 ton per day plant in Lake Charles, using three months of local supply, would use the equivalent of 18% of the current Louisiana crop.

Crush Returns

The difference between the value of the products after crushing and the cost of the soybeans represents the crush margin. The crush margin is what the plant uses to cover its non-soybean costs, debt service, and profits. An analysis of the crush margin is presented in the section titled, Louisiana Crushing Margin Outlook. All example sites demonstrate the ability to maintain a positive crushing margin. The crushing margin is also sufficient to provide positive net income and positive cash flow. The Lake Charles example was calculated twice with one reflecting the return if the plant is able to use existing storage and the other example if new storage must be built. The returns by scenario are in the 8% to 25% range. Except for Lake Charles, these returns are relatively low when compared to the returns an investor would normally expect to receive.

Exhibit 6: Seasonality of Soybean Prices



Source: NASS

Although, soybean production increased in Louisiana by 170,000 acres from 2005 to 2010, a crush plant would still operate with a relatively low local soybean supply. The plant is assumed to use local soybeans for three to five months of its supply, depending on the size and location of the plant. If there is a shortage of Louisiana soybeans and higher prices are paid for Midwest soybeans, profitability will be negatively impacted for the North East Louisiana and Avoyelles Parish examples, by as much as \$1.5 million for each month that local soybeans were budgeted for use but simply are not available. However, if additional soybeans can be sourced from Louisiana to supplement plant supply, higher returns can be achieved. The Tallulah rate of return improves by approximately two percentage point for every additional month of local soybean supply (the current assumption is that three months are available). Another risk is the oil arrangement with the oil refinery in Opelousas. Essentially one customer will represent the crush plant's primary oil market. Outside the export market, sending oil to other refineries is simply not feasible for the overall plant economics. The value received for soybean oil sent to Ventura is on average 3.4 cents per pound higher than the average price expected at other regional

Feasibility of Building a Soybean Crush Facility in Louisiana

soybean oil facilities. Losing the ability to send oil to Ventura would mean the loss of \$3 million to \$11 million in crush value, depending on location and plant size. This is an impact, which if not recouped in an export market, would have a significant negative impact on the rate of return. Therefore, an opportunity to strengthen a new crush plant is dependent on a formal agreement in place for the sale of crude soybean oil with an agreed upon pricing arrangement.

Summary Conclusions

Opportunity exists for profitable soybean crush facilities to be added to Louisiana's crush capacity. The perpetual returns, or expected returns over the life of the plant are 8% to 25%. Although this may be appealing to farmers who are interested in additional local markets for their soybeans, typical investors want higher returns to offset the risks common to agricultural based businesses. Typical target returns are in the 15% to 25% range, because of the risks involved with the crushing industry.

Favorable conditions for a plant in Louisiana include:

- Soybeans in Louisiana have increased by 170,000 acres from 2005 to 2010. Expected production is forecast to increase by 4.4% over the course of the next ten years.
- There is ample demand for soybean meal within 150 miles of the alternative plant sites.
- Transportation flexibility via rail, truck, the Mississippi River, and export ports
- Low transportation costs to soybean meal and crude soybean oil markets.

Risks for a plant in Louisiana include:

Exhibit 7: Pro Forma Financial Summary for Avoyelles Parish, Louisiana Crush Plant (Bunkie)

		2012	2013	2014	2015	2016	2021
Crush Margin	\$/bu	0.90	0.89	0.92	0.88	0.87	0.82
Net Crush Margin	usd/bu	0.60	0.58	0.60	0.57	0.55	0.47
Depreciation	usd/bu	0.25	0.25	0.25	0.25	0.25	0.25
Term Interest	usd/bu	0.11	0.10	0.10	0.09	0.09	0.05
Provision for Taxes	usd/bu	0.10	0.09	0.10	0.09	0.09	0.07
Net Income After Taxes		0.15	0.14	0.16	0.14	0.13	0.10
Amount Available for Term Principal	usd/bu	0.39	0.39	0.40	0.38	0.38	0.35
Debt Service-Principal	usd/bu	0.10	0.10	0.11	0.12	0.12	0.15
Cash Generated	usd/bu	0.29	0.28	0.29	0.27	0.26	0.20
Net Income After Taxes	\$000	\$ 1,278	\$ 1,211	\$ 1,366	\$ 1,191	\$ 1,140	\$ 915
Ten Year IRR		1%					
Perpetual IRR		8%					

Exhibit 8: Pro Forma Financial Summary for Northeast Louisiana Crush Plant (Tallulah)

		2012	2013	2014	2015	2016	2021
Crush Margin	\$/bu	1.09	1.09	1.12	1.08	1.07	1.06
Net Crush Margin	usd/bu	0.79	0.78	0.81	0.77	0.75	0.72
Depreciation	usd/bu	0.25	0.25	0.25	0.25	0.25	0.25
Term Interest	usd/bu	0.11	0.10	0.10	0.09	0.09	0.05
Provision for Taxes	usd/bu	0.17	0.17	0.18	0.17	0.17	0.17
Net Income After Taxes		0.26	0.26	0.28	0.26	0.25	0.25
Amount Available for Term Principal	usd/bu	0.51	0.51	0.52	0.50	0.50	0.50
Debt Service-Principal	usd/bu	0.10	0.10	0.11	0.12	0.12	0.15
Cash Generated	usd/bu	0.41	0.40	0.41	0.39	0.38	0.34
Net Income After Taxes	\$000	\$ 2,288	\$ 2,287	\$ 2,436	\$ 2,253	\$ 2,220	\$ 2,196
Ten Year IRR		6%					
Perpetual IRR		12%					

Feasibility of Building a Soybean Crush Facility in Louisiana

- Loss of Ventura as a market for crude soybean oil.
- Reduction in Louisiana soybean production

Opportunities to increase returns and lower risks include:

- The ability to source more soybeans locally during the period from January until the Louisiana harvest from Louisiana. This will be achievable by increased production and/or increased on farm storage of soybeans. This has an opportunity to pay higher prices, relative to the marketing month, to local farmers yet pay lower prices than those necessary to buy soybeans from the Midwest.
- A formal agreement between Ventura and the proposed plant regarding the sale of crude soybean oil to Ventura will reduce risk and assist in preserving maximum crush value.
- If favorable export opportunities are developed in the secondary, export market for crude soybean oil or for soybean meal.

The benefits and returns are also highly dependent on the following assumptions:

- The Ventura oil refinery in Opelousas will buy the crude soybean oil from the crush plant at market rates.
- The railroad will work with the plant in terms of transportation services.
- Normal weather is assumed.
- Louisiana soybeans are vulnerable in term of exports that are driven by world market conditions.
- Soybean production increases at the projected rate over the next ten years and is not stalled or reversed by the economics of competing crops.

Exhibit 9: Pro Forma Financial Summary for Lake Charles, Louisiana (with access to local storage)

		2012	2013	2014	2015	2016	2021
Crush Margin	\$/bu	\$ 1.05	\$ 1.04	\$ 1.06	\$ 1.03	\$ 1.02	\$ 1.03
Net Crush Margin	usd/bu	0.87	0.86	0.89	0.85	0.84	0.83
Depreciation	\$/bu	0.16	0.16	0.16	0.16	0.16	0.16
Term Interest	\$/bu	0.06	0.06	0.06	0.05	0.05	0.03
Provision for Taxes	\$/bu	0.26	0.26	0.27	0.25	0.25	0.26
Net Income After Taxes		0.39	0.39	0.40	0.38	0.38	0.39
Amount Available for Term Principal	\$/bu	0.55	0.54	0.56	0.54	0.53	0.54
Debt Service-Principal	\$/bu	0.06	0.06	0.07	0.07	0.07	0.09
Cash Generated	\$/bu	0.49	0.48	0.49	0.47	0.46	0.45
Net Income After Taxes	\$000	\$ 11,362	\$ 11,241	\$ 11,715	\$ 11,123	\$ 10,973	\$ 11,250
Ten Year IRR		19%					
Perpetual IRR		24%					

Exhibit 10: Pro Forma Financial Summary for Lake Charles, Louisiana (without access to local storage)

		2012	2013	2014	2015	2016	2021
Crush Margin	\$/bu	\$ 1.05	\$ 1.04	\$ 1.06	\$ 1.03	\$ 1.02	\$ 1.03
Net Crush Margin	usd/bu	0.87	0.86	0.89	0.85	0.84	0.83
Depreciation	\$/bu	0.17	0.17	0.17	0.17	0.17	0.17
Term Interest	\$/bu	0.07	0.07	0.06	0.06	0.06	0.03
Provision for Taxes	\$/bu	0.25	0.25	0.26	0.25	0.24	0.25
Net Income After Taxes		0.38	0.37	0.39	0.37	0.37	0.38
Amount Available for Term Principal	\$/bu	0.55	0.55	0.56	0.54	0.54	0.55
Debt Service-Principal	\$/bu	0.06	0.07	0.07	0.07	0.08	0.10
Cash Generated	\$/bu	0.49	0.48	0.49	0.47	0.46	0.45
Net Income After Taxes	\$000	\$ 11,020	\$ 10,904	\$ 11,382	\$ 10,795	\$ 10,650	\$ 10,956
Ten Year IRR		17%					
Perpetual IRR		22%					

Feasibility of Building a Soybean Crush Facility in Louisiana

The impact on soybean prices should also be mentioned as it has a negative impact for a new crushing facility in Louisiana. A new crush plant is expected to increase area prices by approximately four percent. This is a positive impact for farmers and land owners, but is a negative impact to a potential crusher and also for area blenders. Blenders are elevators who buy local soybeans, often at a discount, and are able to blend those soybeans with other loads to create an on spec load with a margin for the blender.

The crush plant scenarios are expected to clear a profit and have positive cash flow, but reducing the risk will be important to attract investment. Capitalizing on the opportunities to increase returns and reduce risk has the potential to enhance the return to risk that a crush plant in Louisiana can expect, which will positively affect its feasibility.

For a complete copy of “Feasibility of Building a Soybean Crush Facility in Louisiana” published in October 2011, contact:

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