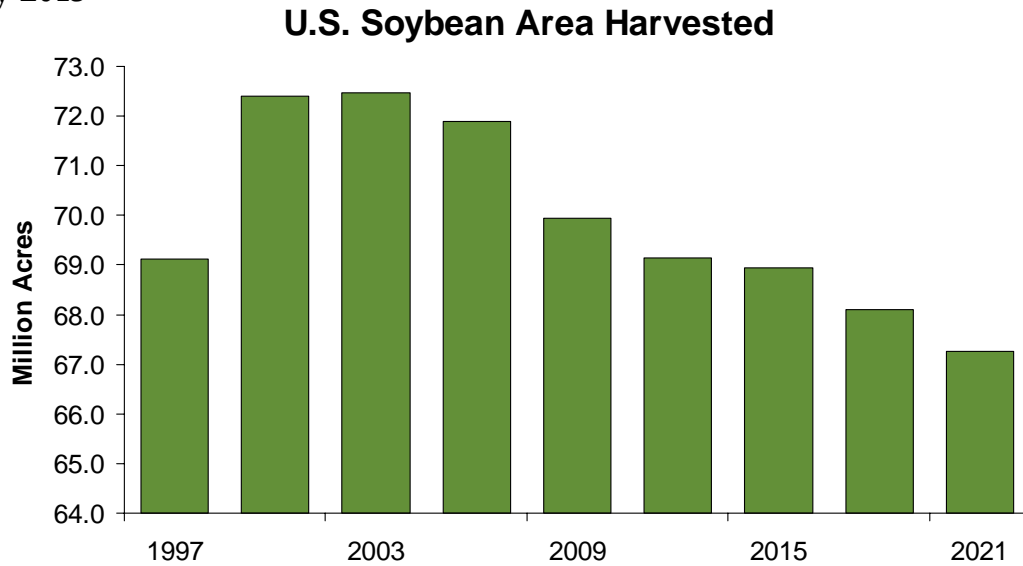


Environmental Scan

By evaluating marketplace trends in areas such as the U.S. Farm Bill, harvested acres, the biofuels market, global competition and technology, the Soy 2020 team was able to make logical assumptions, identify key drivers, and identify the critical uncertainties that would influence the soybean industry in the year 2020. The following pages summarize the data analyzed through this effort.

Competition for Acres

U.S. soybean acreage is projected to decline as it becomes less competitive to corn by 2015



	1997 – 2006	2006 – 2021
CAGR	0.40%	-0.42%

Note

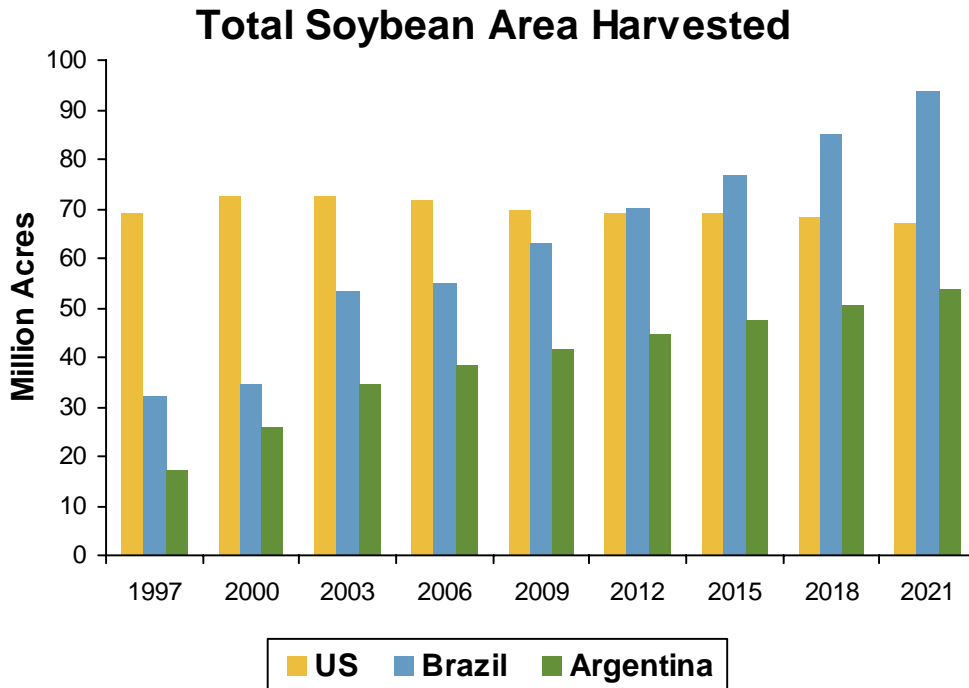
1 Area harvested 2000 – 2015 are USDA figures

2 2018 – 2021 projections based on CAGR from USDA figures

- U.S. soybean area planted has reached its highest peak within the last 10 years
- Soybean acreage increased throughout the 1990s
- Result of increased farm programs giving incentive to farm soybeans
- Possible reduction in government programs result in the need to find other incentives to grow soybeans
- Corn has out-produced soybeans in recent years
- Producers have begun to favor corn over soybeans
- Higher soybean prices will help incentive to grow soybeans
- Improved soybean yields in the Northern Plains have recently increased the attractiveness of producers to grow soybeans over other crops in this area

Source: Source: USDA Market Outlook <http://www.ers.usda.gov/Briefing/SoybeansOilcrops/2005baseline.htm>; USDA Agricultural Baseline; Projections to 2014, Feb. 2005

Brazil is projected to surpass the U.S. as the world's largest soybean producer by 2012



CAGR	U.S.	Brazil	Argentina
1997 – 2006	0.40%	5.52%	8.41%
2006 – 2021	-0.42%	3.40%	2.12%

Note

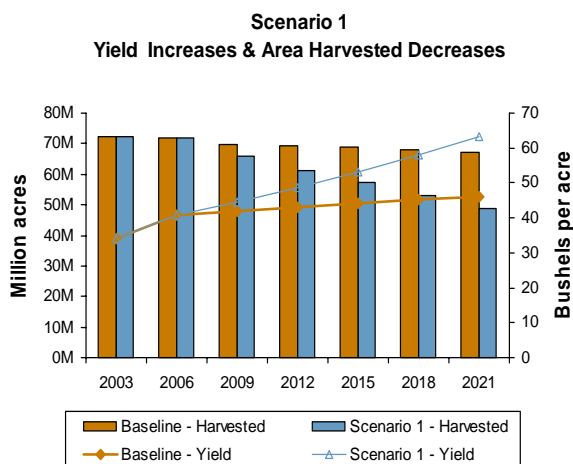
1 Area harvested 1997 – 2015 are FAPRI figures

2 2018 – 2021 projections based on CAGR from FAPRI figures 2006 to 2015

- U.S. soybean area planted has reached its highest peak within the last 10 years
- By 2012, Brazil is projected to surpass the U.S. as the largest soybean producer in the world
 - By 2015, Brazil will hold a 34% share of the total soybean market; U.S. share will decrease to 30%
 - The U.S., Brazil, and Argentina are projected to hold 85% of the total global soybean market
- Higher production costs for soybeans and increased ethanol demand result in a slight decrease in soybean acres harvested in the U.S.
- Argentinean soybean area harvested expands as cost/benefit ratios improve and farmers switch to other crops to farming soybeans due to the increase in soybean value relative to the peso
- Brazilian area harvested increases resulting from improved soybean production costs (infrastructure improvements) and growing soy demand in India and China

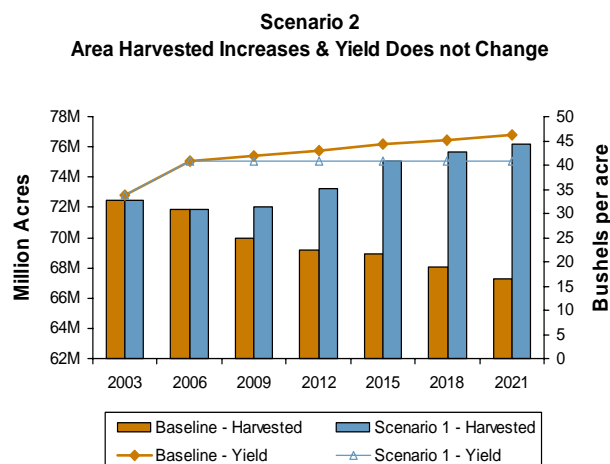
Source: FAPRI, USDA

How would harvested acres and yields have to change to maintain current productivity?



CAGR (2006 –	A.	Yield
Baseline	-0.42%	0.78%
Scenario 1	-2.0%	3.0%

- Acres decrease 2% per year (32% from 2006 – 2021)
- Yield must increase 3% per year (55.8% from 2006 – 2021) in order to match bushels produced each year in baseline projections



CAGR (2006 –	A.	Yield
Baseline	-0.42%	0.78%
Scenario 1	-2.0%	3.0%

- Acres must increase 0.36% per year (6% 2006 – 2021) in order to match bushels produced each year in the baseline projection
- No technological improvements cause yield to stay constant through 2021

Source: USDA Market Outlook <http://www.ers.usda.gov/Briefing/SoybeansOilcrops/2005baseline.htm>; USDA Agricultural Baseline; Projections to 2014, Feb. 2005

Farm Bill

What can we expect from the 2007 Farm Bill?

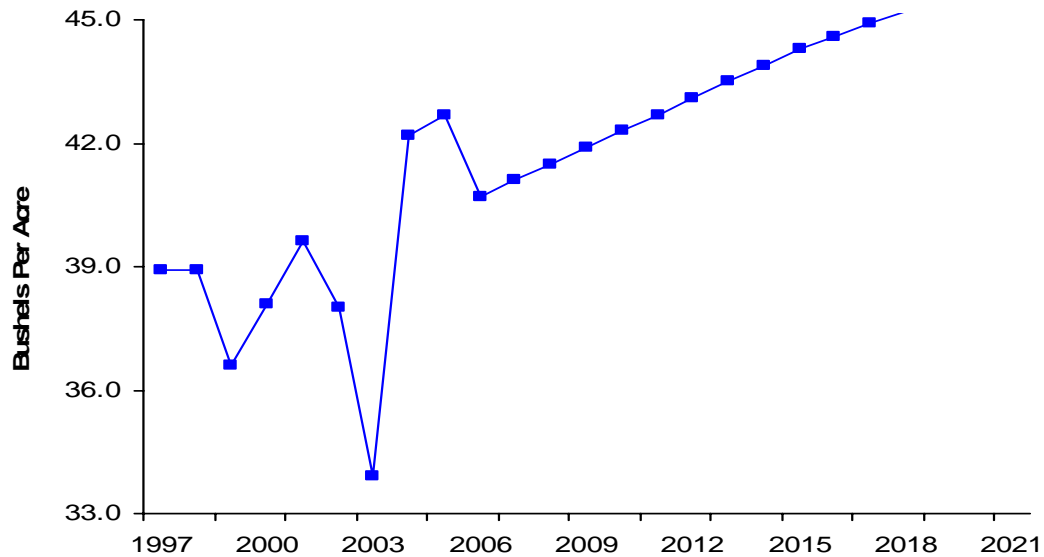
- Restrictions elimination
 - It seems likely that the fruit, nut, vegetable, and vine (FNVV) restrictions will be eliminated in the 2007 Farm Bill because they are in violation of WTO rules, but this will likely mean that FNVV producers will need to receive compensation in other forms from the new Farm Bill
- Payment limitation rules
 - These may change to make them stricter, forcing producers to restructure their operations to meet the new limitations
- Payments distribution
 - The bulk of subsidy payments are going to a relative few producers that are, on average, fairly wealthy relative to the general population. This issue will provide momentum for looking at alternatives to “spread the wealth” and increase payment limitations
- Safety net programs included on the 2002 Farm Bill
 - The forecasted increases in corn and soybean prices associated with increases in biofuel demand is causing some to ask whether there is a need for the safety net programs of the 2002 Farm Bill. This may provide ammunition for groups such as the environmental lobby and other non-traditional farm subsidy groups to argue for more of the money for agriculture to be earmarked for their favored programs
- Land values
 - Most economists agree that much of farm program payments are eventually filtered into higher land values. Thus, changes in Farm Bill payments could have significant impacts on land values that will have bankers, retired producers, and other agricultural land holding groups worried

Source: <http://www.agecon.purdue.edu/extension/pubs/paer/2006/october/gray2.asp>

Soybean Market Overview

U.S. soybean yield is projected to increase significantly by 2021

U.S. Soybean Yield



CAGR	
1997-2006	0.69%
2006-2021	0.78%

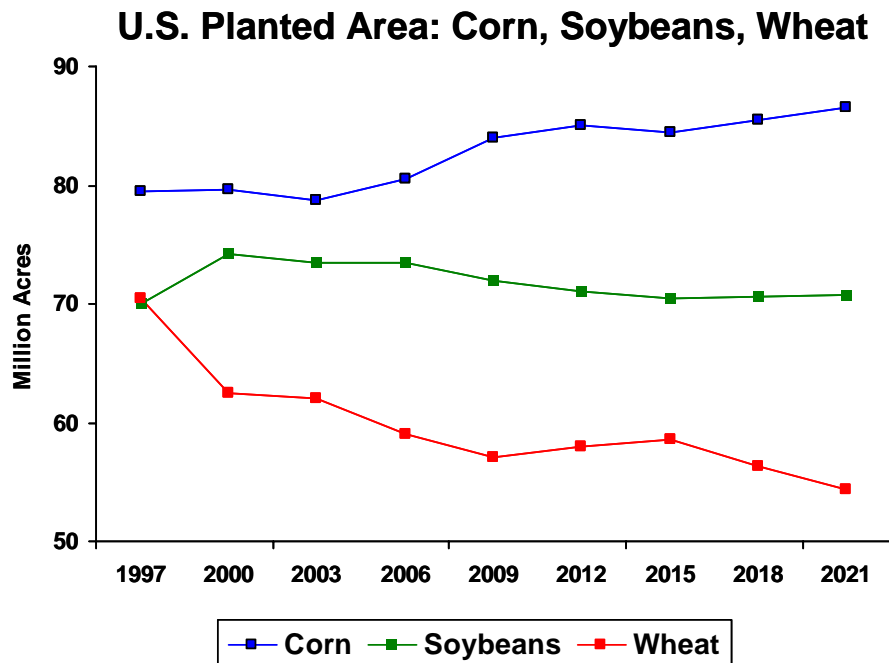
Note

2016-2021 soybean yield data projected using 1997-2015 CAGR

- Factors reducing U.S. soybean yields in recent years
 - Poor weather conditions such as the 2003 drought
 - Soybean aphids damaging plants via leaf distortion, stunting, and desiccation
- Soybean planting has expanded into the Northern Plains and other portions of the U.S.
 - Due to the fact that soybeans have been producing excellent yields in these regions
 - Helps to improve national soybean yields as a whole
- Soybean producers have moved away from narrow planting in recent years
 - Has improved air circulation to increase yield
 - Has decreased vulnerability to diseases
- New soybean technology will allow for a move back to narrow planting due to increased resistance to diseases, allowing for increased yield
- Increasing soybean yields is vital to the soybean industry to compete with corn and other crops for acreage to increase incentive for farmers to grow soybeans

Source: USDA Market Outlook <http://www.ers.usda.gov/Briefing/SoybeansOilcrops/2005baseline.htm>; USDA Agricultural Baseline; Projections to 2015, Feb. 2005; http://www.soystats.com/2005/page_08.htm

Due to the market's bio-fuels increasing consumption, soybeans will experience significant acreage competition from corn



CAGR	Corn	Soybeans	Wheat
1997 – 2006	0.12%	0.49%	-1.75%
2006 – 2021	0.49%	-0.31%	-0.26%

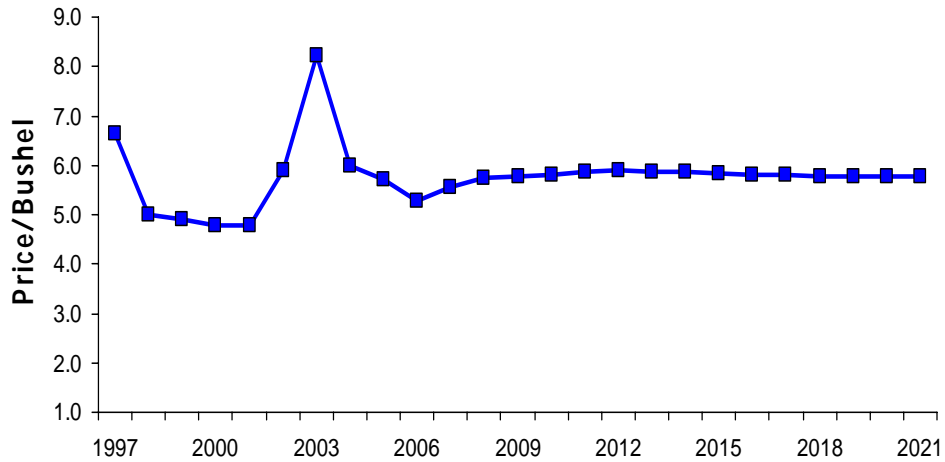
- Sum of soybean, corn, and wheat acreage remained within 5% of 212 million acres throughout projection
- Decrease in soybean acreage
 - Acreage in recent years increased due to expansion of soybeans into land previously dominated by wheat
 - Midwest growers may shift corn-soybean rotations to growing soybeans every three years, instead of every two in order to meet demand for ethanol

- Increase in corn acreage
 - Increase in corn demand for ethanol production projected to decrease soybean and wheat acreage
 - Corn may replace soybeans in higher yielding areas as corn prices increase due to higher ethanol demand, and producers have more incentive to grow corn
- Increased use of farmland under the Conservation Reserve Program may reduce acreage constraints
 - This may or may not be beneficial to soybeans, depending on demand for other crops

Source: FAPRI; USDA Soybean Market Outlook 2006, USDA Soybean Backgrounder 2006; USDA Agricultural Baseline; Projections to 2014, Feb. 2005

Soybean prices increased by 7 percent last year and are expected to experience a moderate growth by 2020

U.S. Soybean Price per Bushel



CAGR	U.S.
1995 - 2001	-6.01
2001 - 2004	18.03%
2005 - 2019	-0.21%

1995-2001

- Farmers confronted record soybean yields mounting up supply, dropping prices down to an average of \$4.90 per bushel
- 1998/1999 experienced lower export demand and even weaker prices due to major worldwide economic crisis (Asia)
- U.S. soybean exports fall from 870 million bushels to 790 million in 1999

2002-2003

- Extremely strong demand for soybeans, both domestically and in the export market, and lower planted acres in 2002
- Soybean use between January and March for 2002 was 12.4% higher than for 2001
- Soybean exports sales running 18% higher than on previous years
- Domestic crush outpaced last year levels

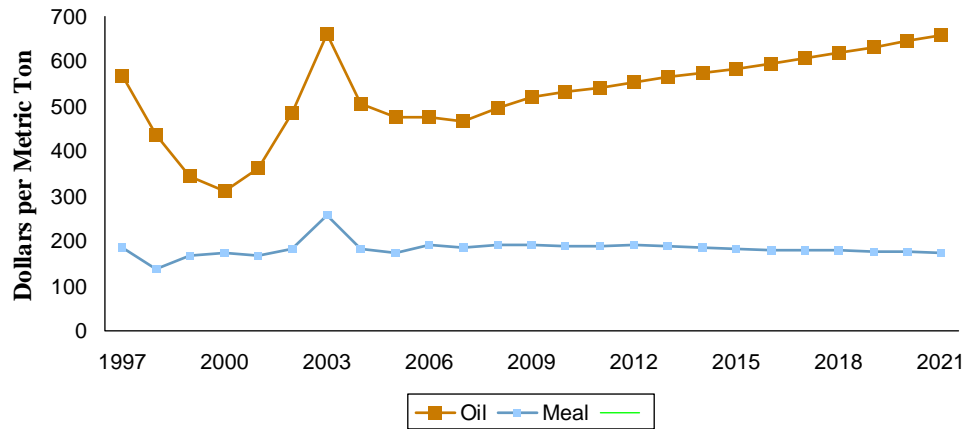
2004-2020

- Soybean prices are expected to start off from a four-year bottom in 2005/06
- By 2008/09, the U.S. average farm price would again rise above the \$5.00 loan rate, and edge up toward \$5.70 per bushel by 2014/15
- Given rising production costs and slow yield growth, such a price level may be insufficient to encourage additional acreage
- The emergence of South America as a major U.S competitor has put downward pressure on U.S prices

Source: FAPRI, ABG internal analysis..

Speculation about future biodiesel growth opportunities is raising soybean oil prices, while meal is going down due to excess demand

Soybean Oil & Meal Price Trend



CAGR	Oil	Meal
1995 - 2005	-1.22%	-2.76%
2006 - 2011	2.05%	-0.54%

Soybean Oil

- Continuous use of soybean oil as feedstock is providing higher meal availability, dragging prices down, however allowing the U.S. to be more competitive in international markets (price-wise)
- Soybean oil prices have been supported by speculative demand in prospect for increased bio fuels demand, even though domestic soybean oil stocks have grown to the highest level in four years
- Soybean oil remains the most widely used edible oil the United States, with consumption exceeding that of all other fats

Soybean Meal

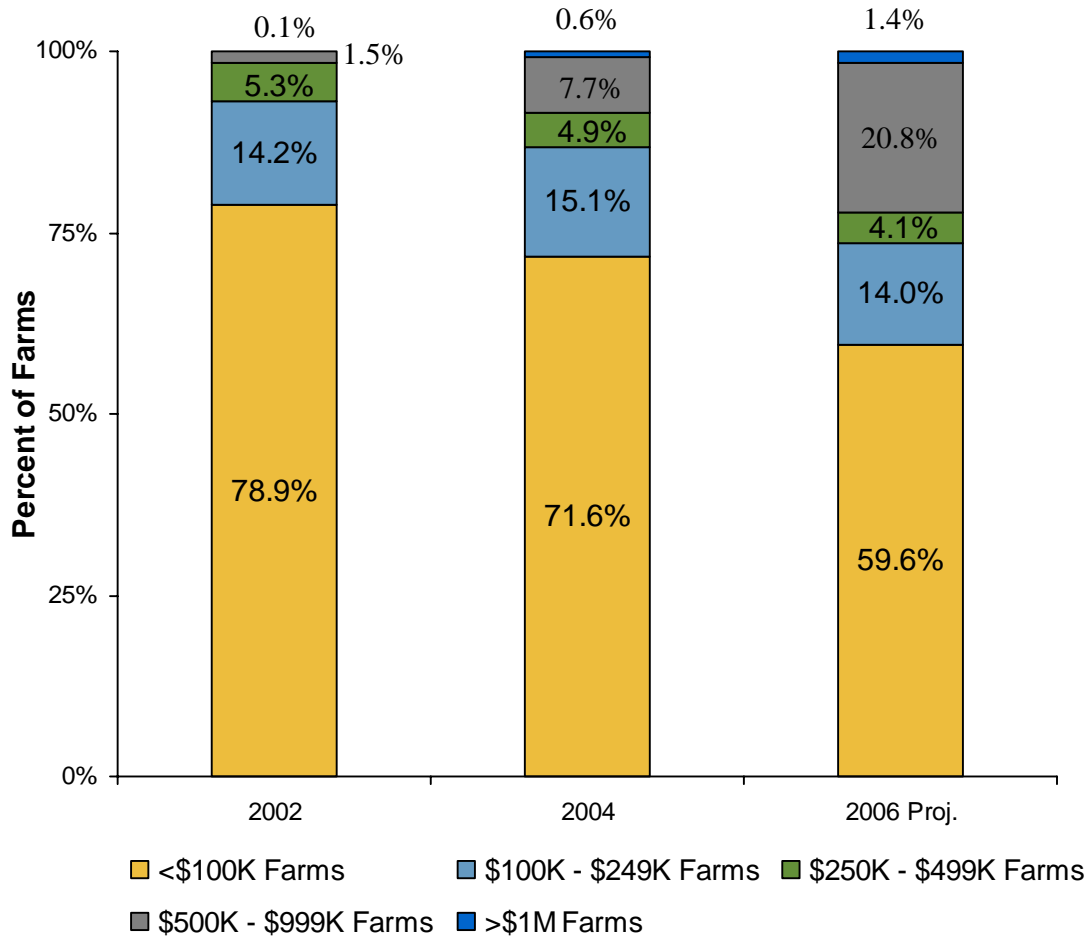
- Considerable drop in price in soybean meal resulting from the heavy supplies of protein feed ingredients due to increased oil seed crush and the growing production of mid and high protein by products of fuel ethanol production
- At reduced prices, more U.S. soybean meal will be available for export

- As a result of rising biodiesel and industrial use, meal becomes the drag of the market instead of oil
- Increasing meal exports will be challenging due to aggressive South American pricing
- Protein meals compete with meat and bone meal, fish meal, corn gluten feed and meal, distillers dried grain and synthetic amino acids

Source: <http://www.farmdoc.uiuc.edu/marketing/grainoutlook/html/072506/072506.html>, USB report

Soybean farms have been experiencing an increase in consolidation

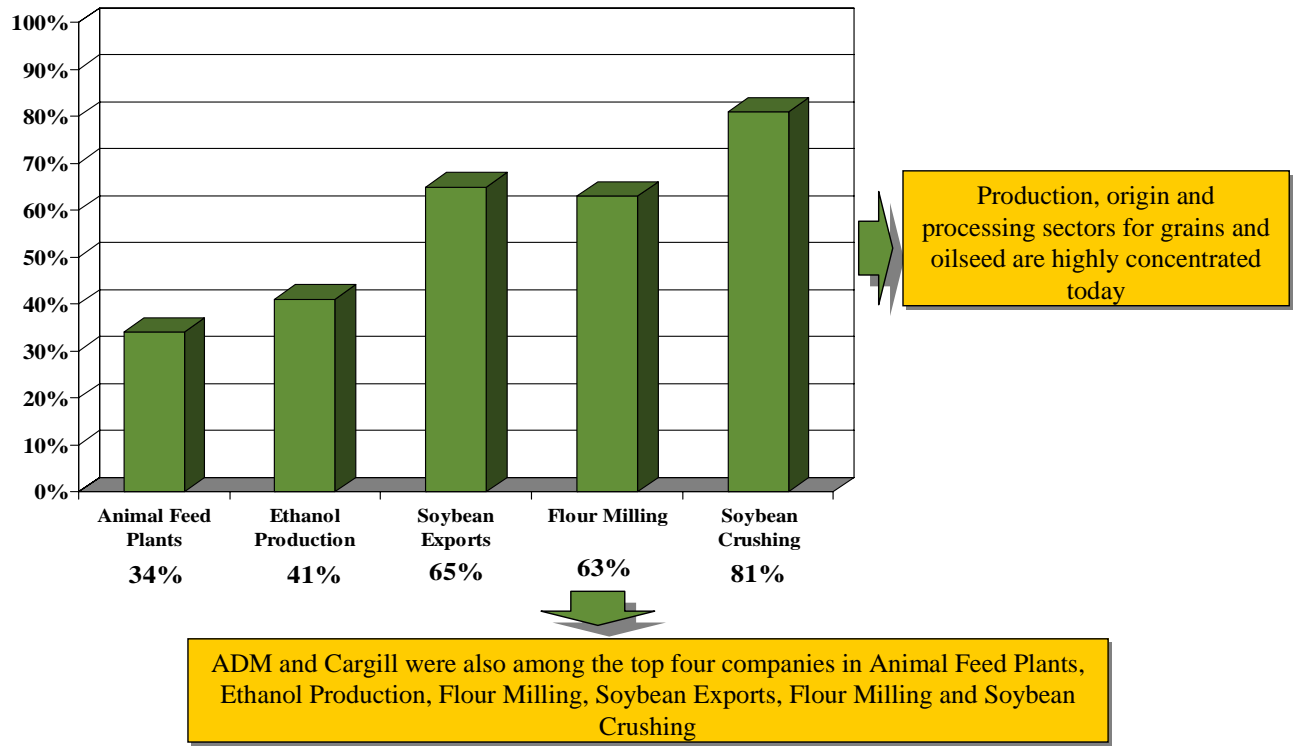
U.S. Soybean Farms by Sales Classification



- Consolidation likely due to increasing production costs and other macro factors
- In 2004, 31% of farms growing soybeans specialized particularly in soybean production
- In 2004, 33% of farms growing soybeans specialized in corn production
- Location of soybean farms in 2004:
 - 68% of soybean farms were in the U.S. Heartland
 - 13% of soybean farms were in the Northern Crescent
 - Others were distributed equally throughout other regions

Source: USDA ARMS; USDA Soybean Background

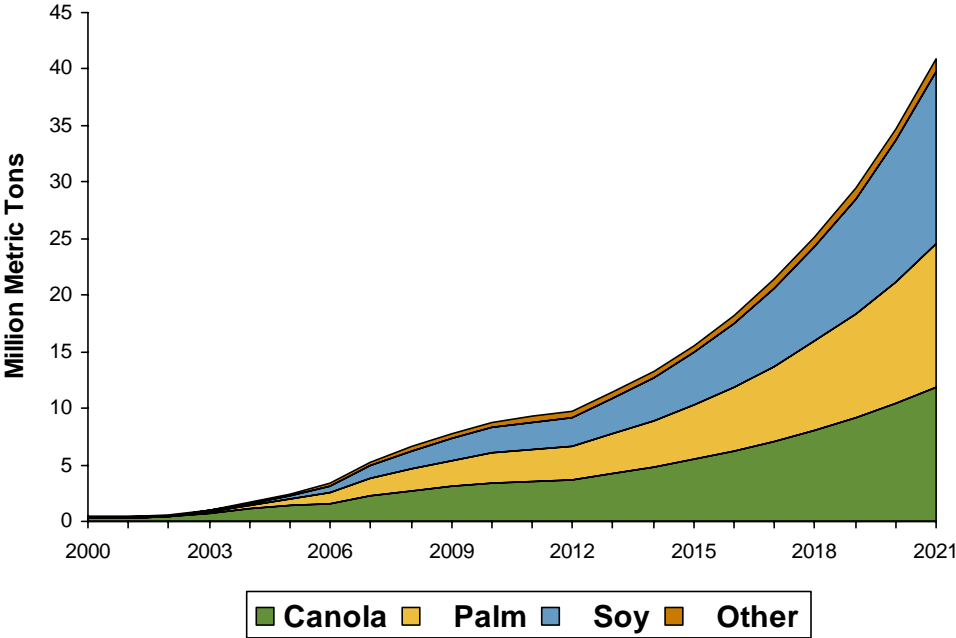
Concentration ratio in U.S. grain industry is significant: Major players cut across several industry segments



Source: National Farmers Union study by Drs. Mary Hendrickson and William Heffernan from the University of Missouri; Wisconsin Soybean Org.

Biofuel Market Trends

Constant biodiesel industry development will contribute to increase global feedstock demand by 2020



CAGR	Canola	Palm	Soy	Other
2000 – 2010	22.9%	55.8%	73.8%	28.7%
2011 – 2020	11.3%	14.3%	18.0%	8.2%

Canola

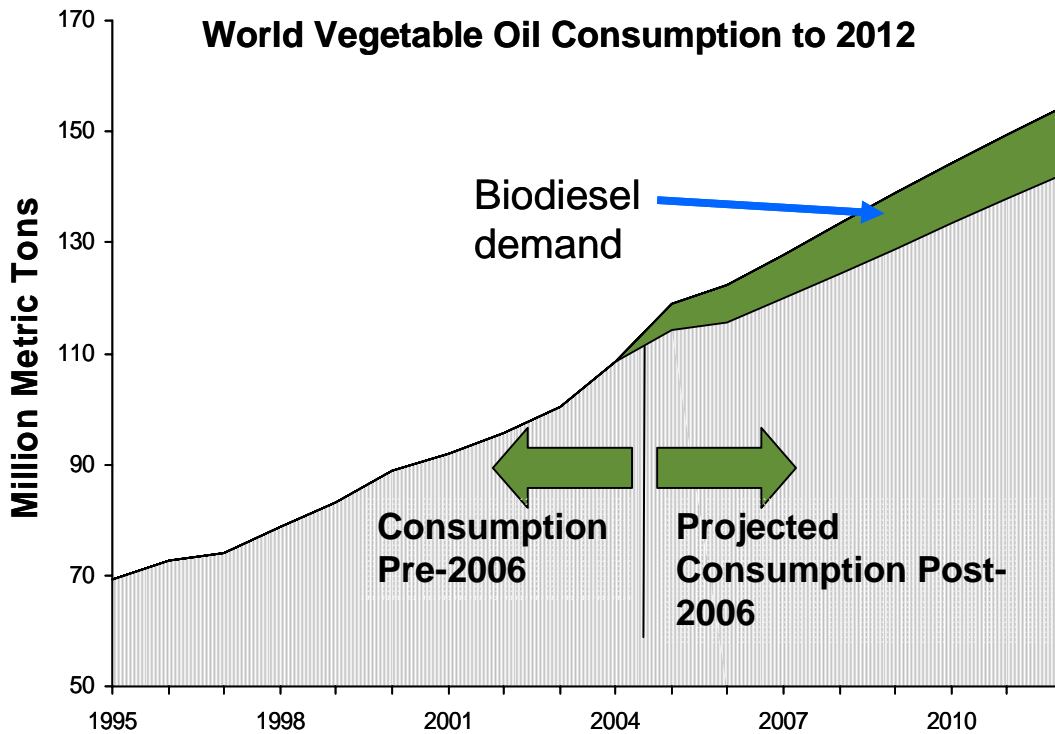
- Demand for use in biodiesel has increased by 64% since 2005 and is growing at a 13% annual rate
- Frequently combined with standard diesel in ratios varying from 2% to 20% biodiesel
- Formerly, due to the costs of growing, crushing, and refining rapeseed biodiesel, cost was higher to produce than standard diesel fuel
- Prices of rapeseed oil are at very high levels presently (start November 05) due to increased demand on rapeseed oil for this purpose
- Rapeseed oil is the preferred oil stock for biodiesel production in most of Europe, partly because rapeseed produces more oil per unit of land area as compared to other oil sources, such as soybeans

Palm

- The Malaysian government is refocusing the use of palm oil to the production of biodiesel to cater to the huge demand from European countries encouraging the building of biodiesel plants
- Strong demand for biodiesel from Europe, as well as Colombia, India, South Korea and Turkey, has fueled the industry's growth as more countries seek to reduce their reliance on fossil fuels
- From 2007, all diesel sold in Malaysia must contain 5% palm oil. Being the world's largest producer of crude palm oil, Malaysia intends to take advantage of the rush to find cleaner fuels
- Increasing palm oil demand is creating environmental problems by overusing the rainforest for this specific oil crop

Source: 2006 Promar; USB; Article through email "High CPO prices may stall national Biodiesel plan"

Rapid growth in the biodiesel market will substantially increase vegetable oil¹ consumption through 2012²



Note

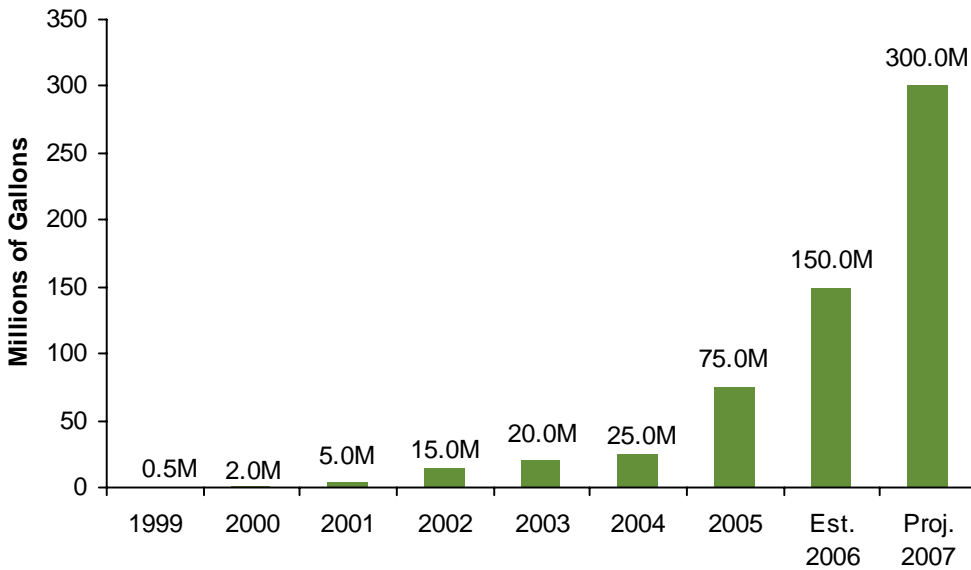
- 1 Vegetable oils include soy, canola, palm, corn, cotton, sun, animal fats, and yellow grease
- 2 Biodiesel demand based on assumptions from previous slide

- Biodiesel will substantially increase an already rapidly growing vegetable oil market
- Biodiesel demand will add 2-3 billion pounds per year
- Increasing demand for vegetable oils is partly from the following factors
 - Yields are expected to increase
 - Shifts in demand for other types of crops
 - New land brought into production
- Increased Biodiesel demand leads to increased oil prices relative to meal
 - Soybean meal prices will decrease as supply increases and demand stays constant
 - Soybean producers need to find other uses for soybean meal
 - Soybean crushers will need to reevaluate their business models

Source: 2006 Promar; USB; Rabobank "Biodiesel Changing Dynamics of Global Vegetable Oil Industry"; PressZoom.com "E.U. – The World Biggies in Biodiesel Production"

Significant growth in U.S. biodiesel production will provide growth opportunities for the soybean industry

U.S. Biodiesel Production

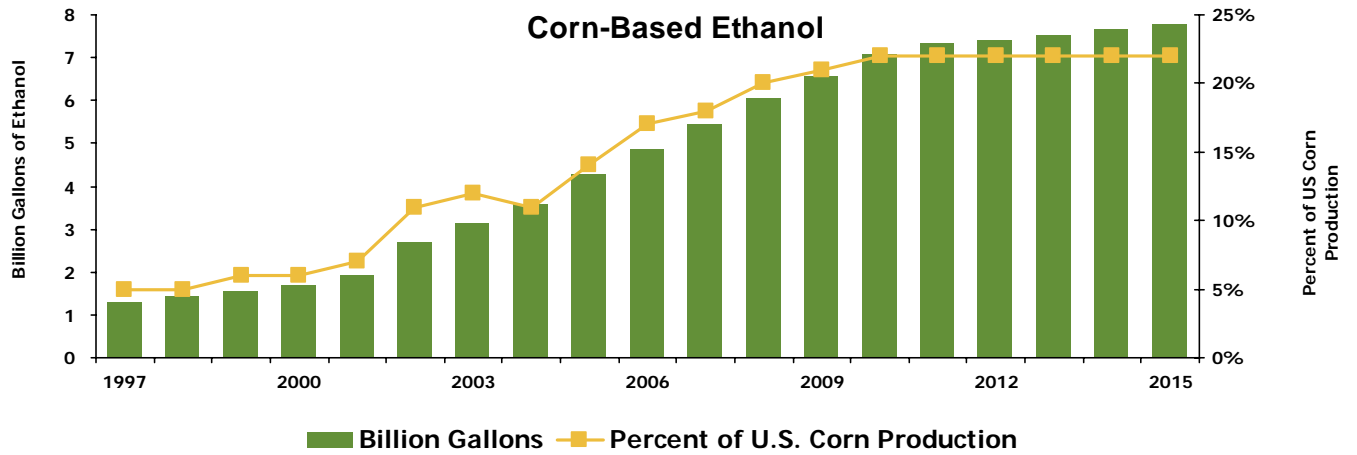


	CAGR
1999 – 2004	92%
2005 – 2007	59%

- Currently, more than 90% of U.S. Biodiesel is produced using soybeans
- Production was fairly small until the USDA created the Commodity Credit Corporation Bioenergy Program in 2000
 - Program encourages Biodiesel production through cash payments to producers
 - Program ends in 2006 but will not slow production due to high diesel prices and new government tax incentives
- 65 Biodiesel plants currently in the U.S. with a total capacity of about 400 million gallons
 - 50 new plants currently under construction expected to add another 700 gallons of capacity
 - More than 100 plants expected to be in use by the end of 2007
- Production cost and efficiency
 - \$0.55 per liter to produce (20% higher than ethanol)
 - 60 gallons of biodiesel produced from one acre of soybeans

Source: National Biodiesel Board; Keith Collins USDA; News Observer; <http://www.newsobserver.com/102/v-print/story/490962.html>; University of Minnesota "Corn vs. Soybeans"; ABG analysis

As bio-fuels consumption increases, ethanol production is expected to consume 22% of the U.S. corn market by 2015



- Energy Act of 2005 encourages ethanol production by mandating that 7.5 million gallons of renewable fuels be used by 2012
- 30% of gasoline in the U.S. blended with ethanol
- Corn-based ethanol production expected to increase from ~4.3B gallons in 2005, to ~7.8B gallons in 2015
- Bushels of corn used in ethanol expected to increase from ~1.6B bushels in 2005, to ~2.9B bushels in 2015
- Ethanol constituted ~14% of the market in 2005 and is expected to constitute up to ~22% of U.S. corn market in 2015

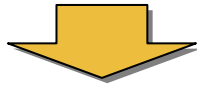
Source: FAPRI; National Corn Growers Association, USDA, ABG Analysis

Transportation Infrastructure

Current U.S. infrastructure improvement efforts may not be enough to keep the U.S. competitive globally

Current U.S. Improvement Efforts

- Recent Senate passage of S. 728, the Water Resources Development Act of 2005 (WRDA)
 - Intended to provide funds for seven new locks and other improvements on Upper Mississippi and Illinois rivers
 - Intended to enable U.S. farmers and producers to be more efficient and cost-competitive
- 2005 surface transportation bill
 - \$295 billion for spending on road, transit, and rail improvements
 - Helps facilitate movement of goods throughout the U.S.
 - Additional Loan authorization and tax credits to assist railroads in investing in improvements



Results and Implications

- Recent great start to improving U.S. transportation infrastructure to help keep the U.S. competitive
 - Intended to provide funds for seven new
 - Helps improve efficiency of railroad
 - Helps decrease congestion caused by outdated lock and dam system
 - Helps alleviate congestion for truck transportation
- It is uncertain that improvement efforts will be enough to keep the U.S. competitive with other exporters
 - \$295 billion for spending on road, transit; improvement efforts have been made for years, but not much has come out of them
 - Improvement efforts are very lengthy and it is unsure when they may begin
 - Soybean experts say that these improvements are only the tip of the iceberg
 - Improvements may not keep up with future increase in exports

Source: http://www.soygrowers.com/newsroom/releases/2006_releases/r072006.htm;

http://grassley.senate.gov/index.cfm?FuseAction=PressReleases.View&PressRelease_id=5136; ABG interviews

Current South American infrastructure improvements will decrease U.S. global competitiveness

Situation

- The increased costs of trucking and lack of railroad infrastructure has continued to keep the transportation costs high in South America
- Brazil's only navigable river, the Rio Madeira, will require extensive government investment to make noticeable improvements
- Brazil's government recently announced an emergency aid package in the form of price supports to assist farmers' indebtedness and assist with strong currency and high production and transportation costs
- Investments in more railroads in Brazil are planned, but current debt loads have restricted expansion
- Argentina has undertaken several infrastructure improvements in the past decade, including dredging rivers, and improving road and rail systems
- Argentina has invested over \$650 million in their transportation systems



Implications

- A three-year, \$415M project to pave a main highway (1,570 km) through the Amazon and Mato Grosso, Brazil is currently under way
- The pavement of the highway expected to reduce transportation costs up to \$1 per bushel of soybeans, and reduce transportation time from Santarem to Cargill's export terminal from 9 hours to 3 ½ hours
- Brazil is currently improving transportation along the Amazon to allow barges to travel 400-600 miles inland; reduces soybean shipping cost by >75%
- Agricultural processors have been investing in facilities near the areas with infrastructure improvements (ADM – 10,000 ton per day oilseed crushing plant)
- Beef, pork, and poultry production in Brazil have grown rapidly in the past decade
- Privatization of railroads and ports have cut rates by 40%-50% for some users in Argentina.

Source: Feedstuffs, ERS/USDA; http://grassley.senate.gov/index.cfm?FuseAction=PressReleases.View&PressRelease_id=5136

Modernizing the lock & dam system along the Mississippi and Illinois rivers is critical to the soybean industry

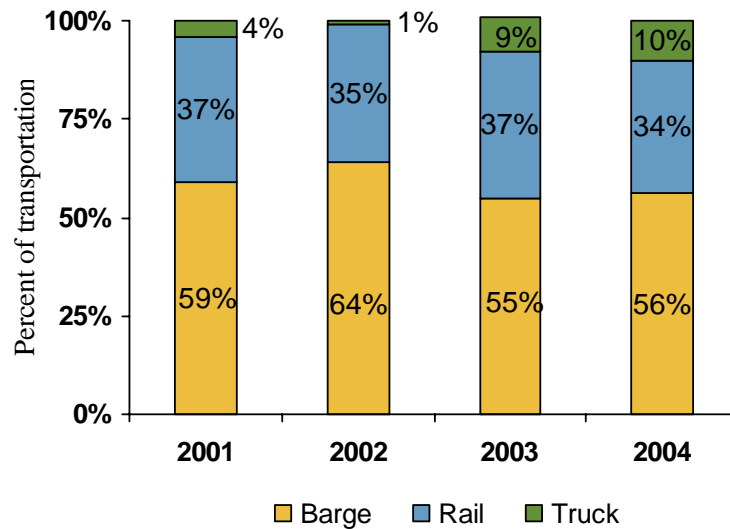
Situation

- More than 75 percent of U.S. Grain exports reach the world markets via upper Mississippi & Illinois Rivers
- Soybean exports (including oil and meal) contributed \$8.8B to U.S. Trade in 2005
- River Transportation saves \$670 million per year in transportation costs to farmers
- Soybeans accounted for 18% of all grain movements in 2004
- 56% of soybean export movements to export locations were by barge in 2004 (34% rail and 10% truck)
- A towboat gallon of fuel carries one ton of freight more than twice as far as rail, and 9 times as far as trucks
- American farmers' competitive advantage in exporting grain has always hinged on efficient transportation – not being the low-cost producer. Argentina, Brazil, and China have made investments in their transportation systems
- 85% of the existing locking structures are over 50 years old and cannot accommodate modern tows without substantial costs



Implications

Soybean Export Transportation



- Moderate traffic projections in one bottleneck section of the river system alone, estimate a four-fold increase in delay costs, costing farmers \$0.08/bu. of grain (\$209 M annually)
- As infrastructure deteriorates relative to other competing countries, soybeans will continue to lose market share due to decreased competitiveness

Source: USDA/AMS; MARC 2000; http://www.soygrowers.com/newsroom/releases/2006_releases/r072006.htm;
http://grassley.senate.gov/index.cfm?FuseAction=PressReleases.View&PressRelease_id=51366

Due to infrastructure improvement efforts, Argentina is increasingly becoming cost competitive with the U.S.

Transportation costs have historically been high for soybean exports

- Previously inefficient barge system despite close proximity to major seaports and access to rivers
- Single greatest bottleneck logistically was limited storage at elevators and river terminals
- Heavily reliant on truck transportation
 - Only 30% of roads were paved, making transportation slow and costly
- Rail transportation was underdeveloped and expensive
 - Multiple stops required due to multiple gauges across different tracks
 - Lower load density compared to the U.S. due to smaller railcars and locomotives



Past and current efforts have greatly improved the infrastructure

- Privatization of all five government railroads has reduced costs and improved services
 - Rail rates have fallen 40-50%
- By 1998, port costs (excluding export taxes) declined from \$8-10 per ton to about \$3-5
 - In line with average U.S. port costs
- Since 1997, the Parana River has begun dredging in increments to increase water depth (along with other dredging projects)
 - Dredging is currently nearing 34 feet with a target of 36 feet
 - 35,000 ton cargo ships are able to reach Rosario (400 km. inland)
 - Estimated \$5 per ton in transportation savings
- Improvements expected to increase producer prices by about \$4 per ton

Source: USDA/FAS 2006 International Trade Report; 2001 Agriculture in Brazil and Argentina

Brazil infrastructure improvements will decrease U.S. competitiveness by lowering transportation costs

Condition of Major Brazilian Highways



- Brazil's current infrastructure is very deficient
 - The majority of highways are in very bad to passable condition
 - Old roads with poor maintenance, old ports operated by obsolete management techniques, few and uncompetitive railroads
 - Large truck transportation delays due to congested roads
 - Estimated that 67% of soy transported by trucks, 28% by train, 5% by ships
 - Average transportation cost \$28 per ton (\$15 in the U.S. and \$14 in Argentina)

- Current infrastructure improvement efforts
 - Three year, \$415M project to pave a main highway (1,570 km) through the Amazon and Mato Grosso, Brazil
 - Highway expected to reduce transportation costs up to \$1 per bushel of soybeans
 - Expected to reduce travel time from Santarem to Cargill's export terminal from 9 hours to 3 ½ hours
 - Improving transportation along the Amazon to allow barges to travel 400-600 miles inland; reduces shipping cost >75%
 - \$173 million invested in rail in 2004 to help purchase 40 locomotives and 1,000 freight cars over a five-year period

Source: Brazil Travel <http://www.v-brazil.com/business/transportation.html>; USDA Brazil Soybean Transportation Guide 2006; http://findarticles.com/p/articles/mi_m0BEK/is_12_12/ai_n8686503

Brazilian soybean transportation costs are beginning to become more competitive to the U.S.

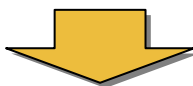
Soybean Transportation Rates to Hamburg, Germany

Comparative Transport Costs \$ per MT of soybeans	Minneapolis, MN United States	Davenport, IA United States	Rio Grande, Brazil	Paranagua, Brazil
Truck	\$8.59	\$8.59	\$12.84	\$77.64
Barge	\$25.74	\$21.84	----	----
Ocean	\$28.61	\$28.61	\$46.72	\$47.19
¹ Total transportation	\$62.93	\$59.04	\$59.55	\$124.84
Farm value	\$217.28	\$215.65	\$208.35	\$163.97
² Landed cost	\$280.51	\$274.69	\$267.90	\$288.81
Transportation % of landed cost	22.47%	21.54%	22.21%	43.25%

Note

- 1 Rail transportation and handling costs not included
- 2 Landed cost = Farm value + Total transportation cost

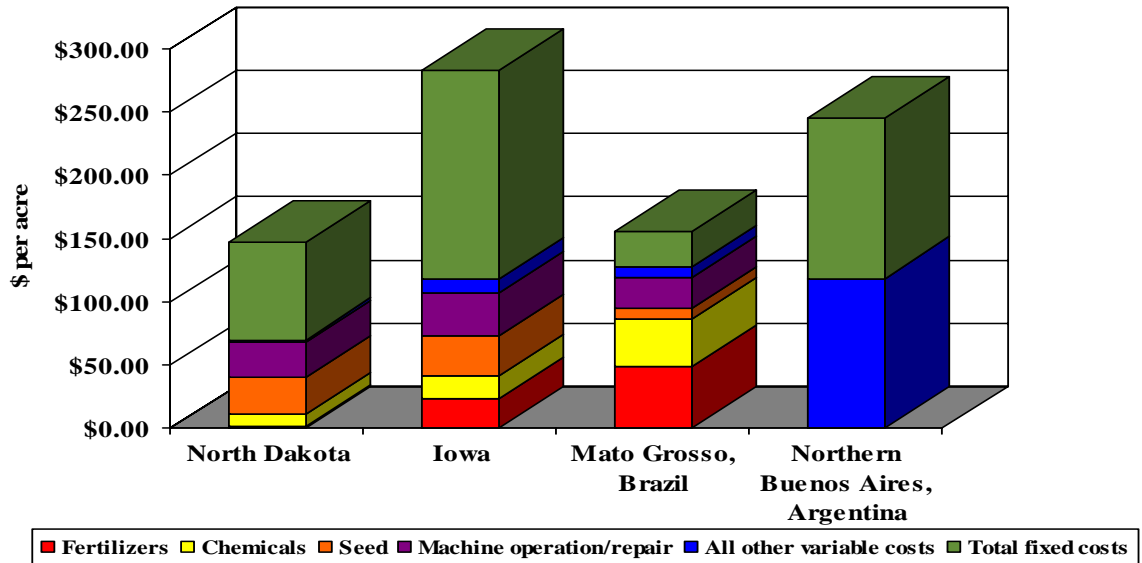
- Brazil's average total transportation cost is 51% greater than the U.S.
- Brazil's average truck transportation cost is 427% greater than the U.S.
- Some areas such as the Rio Grande already have lower costs than the U.S



- The U.S. must work hard to improve its infrastructure to keep this advantage over Brazil

Source: AMS/USDA 2006 Brazil Soybean Transportation Guide

South America charges \$3.06 less per bushel than the United States, enabling a more sustainable growth based on its production costs



	North D.	Iowa	Brazil	Argentina
¹Total production costs-2003	\$ 146.91	\$ 282.57	\$ 155.89	\$ 244.63
Yield (bushels/acre)	\$ 32.00	\$ 45.00	\$ 48.00	\$ 39.55
² Variable costs per bushel	\$ 2.19	\$ 2.63	\$ 2.66	\$ 3.00
² Fixed costs per bushel	\$ 2.40	\$ 3.65	\$ 0.59	\$ 3.19
Total Prod costs per bushel	\$ 4.59	\$ 6.28	\$ 3.25	\$ 6.19

Note

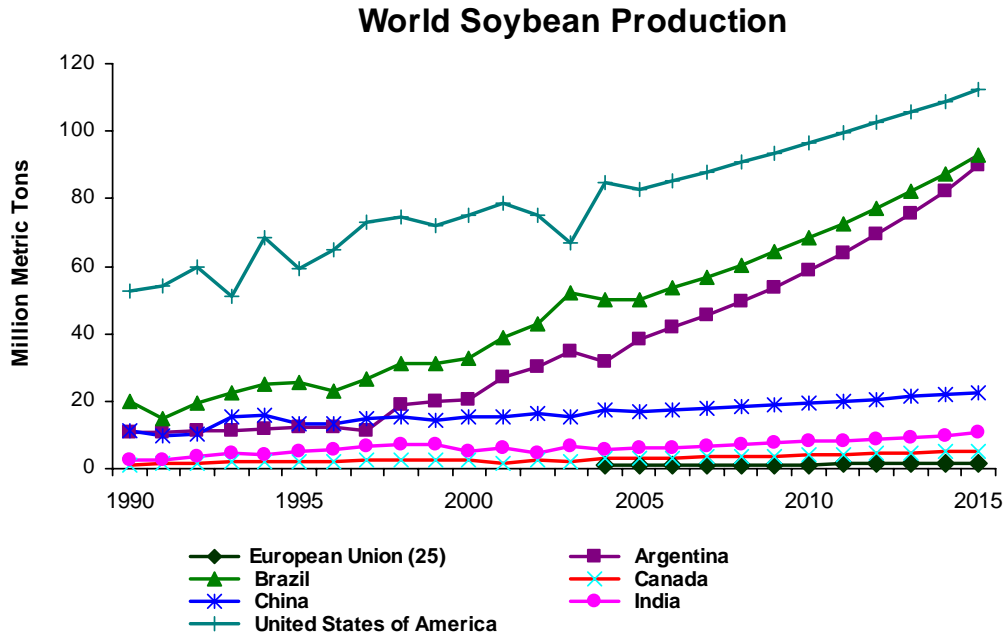
1 Argentina total production cost and yield based on 2005

2 Argentina variable to fixed cost ratio based on 1999 due to limited available information

Source: 2005 FAS/USDA; 2003 North Dakota State University

Global Market Trends

U.S. soybean production market share fell from 90% in 1980 to 50% in 2005



	EU (25)	Brazil	China	US	Argentina	Canada	India
CAGR	3.10%	8.87%	5.95%	6.57%	6.36%	5.73%	2.90%

Brazil & Argentina

- All South American production surpassed the United States during 2002-2003
- Brazilian soybean yields have grown 153% from 2001 to 2003, positioning the U.S. in second place with a 124%
- The Argentinean senate has recently passed an energy bill with tax exemptions for biodiesel producers

China

- China's reliance on importing soybean is expected to decline in the future, as it takes advantage of the genetically modified (GM)-free crop
- Efforts to expand production, plus government policy and financial support, will enable China to produce at least 36 million tons by the end of 2006

Source: FAS/ USDA/FAOSTAT

However, Brazil's and Argentina's recent growth will slow down:

Brazil

- The restrictive monetary policy to keep inflation under control has resulted in rising interest rates
- The “real” appreciation (32%) has affected Brazil's competitive pricing and profitability of its agricultural exports, making them one-third more expensive in other countries
- Access to agricultural credit for production and marketing crops will be limited in the coming years, and will be impacted by higher interest rates from private institutions (15%), affecting Brazil's investment boom
- Land expansion is expected to keep on a slow pace
- Poor infrastructure such as port facilities, roads, or railways will represent a constraint in Brazil's future agricultural expansion

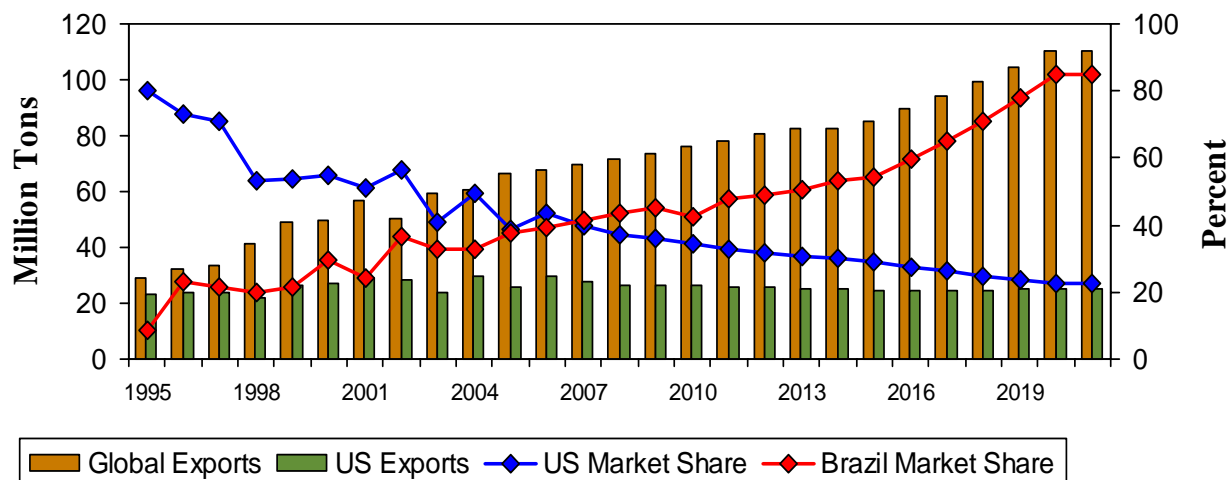
Argentina

- The economy is still burdened by excessive regulation and labor market rigidities: less flexibility on firing employees, lowering wages, etc.
- High pay roll costs hinder international competitiveness for many sectors
- The government tax increase (to reduce deficit) has raised business costs
- The amount of public debt (\$130 billion) has undermined investors' confidence in the country's ability to manage its economy
- Argentina is expected to go through another inflation round of about 6-10% overvaluing the peso even more

Source: USDA, Amber Waves article, FAS

Brazil has undertaken the soybean global trade from a small 8% in 1995 to a considerable 35% in 2005

Worldwide Soybean Trade



U.S. global dominance has eroded

- Soybean exports from South America exceeded U.S. shipments in 2003
- China emerged the same year as the dominant force in global imports
- Decline in U.S. share of global exports has been hastened by the phenomenal growth coming from Brazil and Argentina

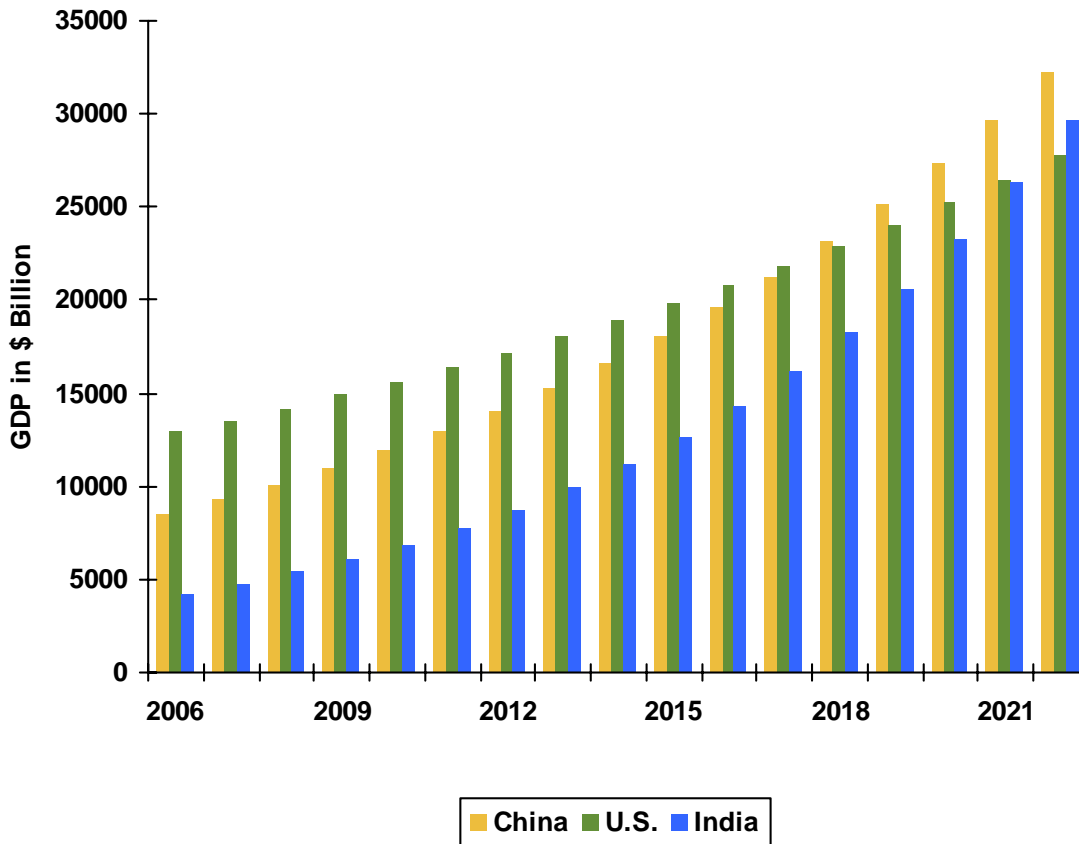
But the U.S. can benefit from next exports increase

- South American growth has proved to be limited by crop yields, costs of production, transportation and exchange rates
- China and South East Asia will continue to be strong soybean importers over the next decade, with almost 60% imports
- Indian lowest crop yields is contributing to increase the country's overall oilseed imports
- A constant deficit between its oilseed output and consumption is leading the EU to become the second largest importer
- The NAFTA agreement has contributed to increase Mexico's and Canada's oilseed imports

Source: FAPRI/USDA

China and India are Experiencing Significant Economic Growth

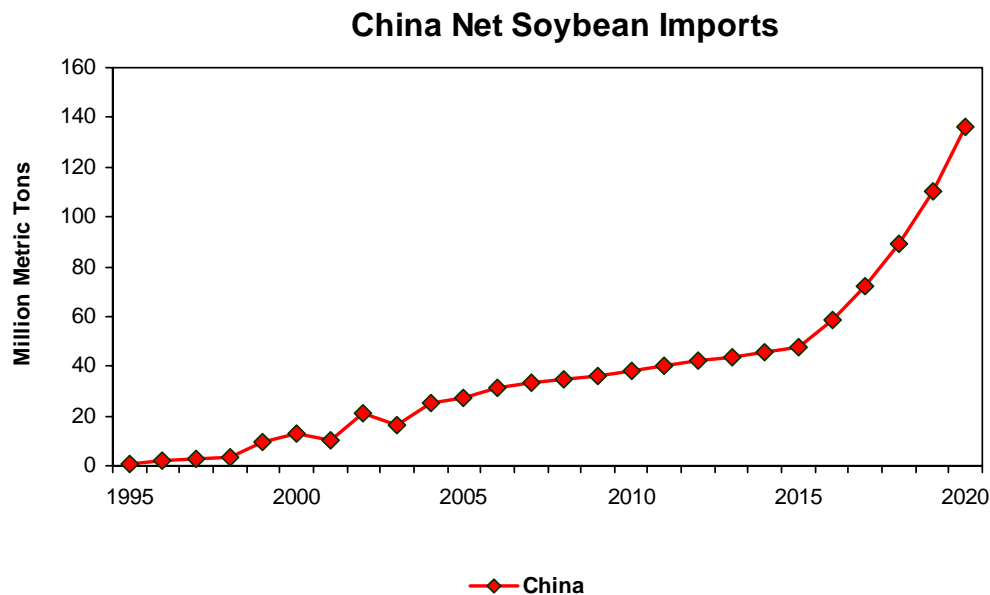
GLOBAL GDP



- China's growth reflects a combination of increased capital investment in machinery, equipment, roads, buildings, and other infrastructure, and increased productivity from more efficient uses of labor and capital
- Beginning in 2000, investment surged through a combination of massive government infrastructure spending and investment in manufacturing facilities both by foreign and domestic investors
- Exports have grown from less than 10 percent of GDP in 1982 to over 30 percent in 2003

Source: USDA

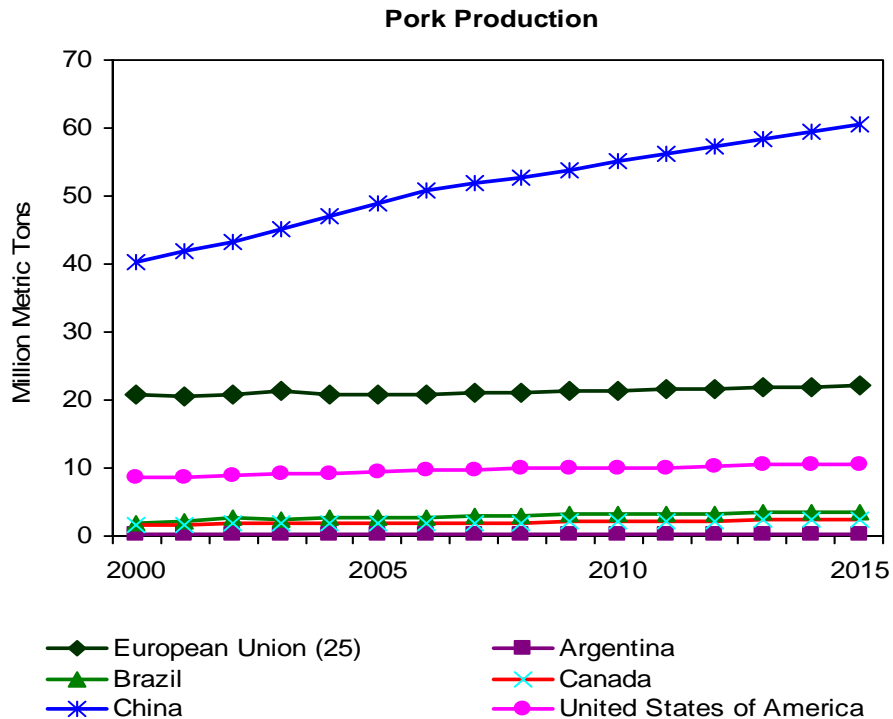
More than 40% of current world trade in soybeans goes directly to China and is expected to increase even more by 2020



- Liberalization of production and trade policies in China has facilitated the country's boom in soybean imports
- China's soybean consumption outpaced increases in domestic production during the last 25 years based on increased income and population growth
- China currently imports more than 50% of its current soybean consumption (34.4 million metric tons)
- Soybean meal consumption has also increased to feed livestock based on a higher meat demand
- China has limited arable land and slow growth of soybean yields (35% lower than the U.S.)
- China recently liberalized soybean and soybean product trade, contributing to a long-term soybean imports growth
- After joining the WTO, China reduced soybean tariffs to 3%

Source: FAPRI/USDA

China's pork production increased by 21% by 2005 and is expected to grow an additional 19% by 2015



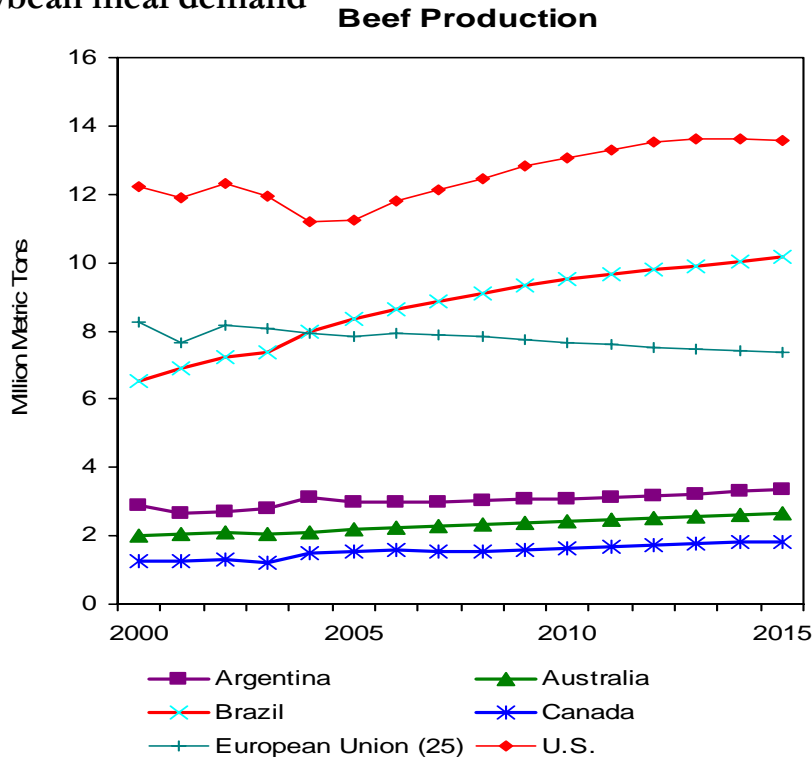
CAGR	EU	Brazil	China	Argentina	Canada	U.S.
2000-2015	0.41%	3.69%	2.57%	-1.31%	2.77%	1.24%

Market Trends

- Pork production continues to benefit due to ability to act as a substitute for animal protein when trade in the beef and poultry markets declines because of disease-related bans
- Pork production expected to increase by approximately 4% in 2007
- Brazilian pork production to increase by approximately 4% in 2007 due to increased domestic demand and recovery of export markets affected by foot and mouth disease (FMD)
- Chinese pork production benefiting from increased efficiency from improved breeds and feed, as well as increased foreign investment through joint ventures
- U.S. market currently showing signs of expanding production, with exports as the primary driver

Source: FAPRI, USDA

U.S. beef production is expected to grow an additional 15% by 2015, increasing internal soybean meal demand



CAGR	Argentina	Brazil	EU	Australia	Canada	U.S.
2000-2015	1.01%	2.99%	-0.74%	1.98%	2.61%	0.72%

Market Trends

- Beef production expected to increase in 2007 by approximately 2%
- Brazilian beef production expected to increase by approximately 3% in 2007, driven by strong domestic demand and full and partial lifting of trade bans
- Brazil to continue to dominate beef market based on high levels of investment in the industry, and an export-oriented focus
- Beef production in the European Union to continue to decrease, despite increases in the beef herds in New Member States (NMS) that have not offset decreases in EU dairy herds
- Decoupling of payments under the reform to the EU Common Agricultural Policy have also reduced beef production

Source: FAPRI, USDA

Technology

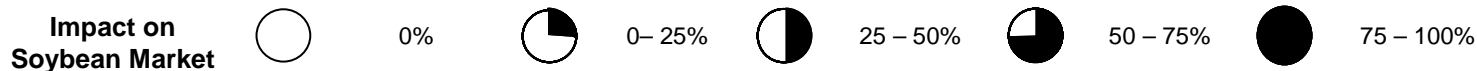
U.S. soybean meal differentiation will create value added opportunities

- **Enhancing soybean animal feed use and value**
 - Identify new soybean animal feed uses
 - Use of fiber-rich soybean hulls as animal feed source
- *Genetically modify soybeans for increased nutritional value*
 - Alter amino acid profiles to complement the amino acid profile of corn for improved digestibility and reduced nitrogen excretion
 - Change fatty acid composition to help reduce body fat, improve reproduction, and enhance immune system functionality, etc.
 - Remove oligosaccharides in order to increase the energy obtained by eating the meal by improving metabolization
 - Reduce phytic acid levels to reduce phosphorus retention by 50% and excretion by 42%
- **U.S. soybean meal edge over its competitors**
 - Higher availability and digestibility of key amino acids in U.S. soybean meal
 - Can make U.S. soybean meal worth more than \$30 more than South American meal
 - 10-20% animal performance improvement at less cost
 - Amino acid content dictates animal performance
 - U.S. soybean meal has the highest quality of amino acids in the world
 - U.S. meal has higher levels of five key amino acids than Argentine, Brazilian, and Indian meal
 - Need to communicate the benefits of this to purchasing managers

Source: Asasoya.org Soy Export News Feb 2006; <http://www.agbioforum.org/v6n12/v6n12a05-kerley.htm>

New soybean production technology innovations & initiatives will provide opportunities for industry growth

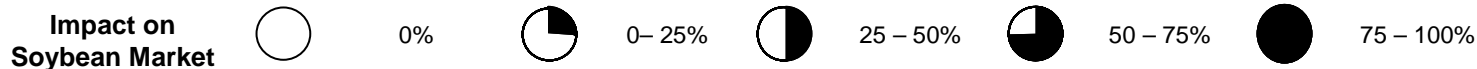
Group	Development	Impact
KFC	<ul style="list-style-type: none"> KFC to cook food in new trans fat-free cooking oil KFC and Monsanto working with seed oil producers to persuade farmers to plant new soybeans used in making new oil using offerings such as price premiums Planted acreage of Monsanto's new soybeans to triple from 500,000 acres in 2006 to 1.5 million in 2007 	
Kellogg's	<ul style="list-style-type: none"> Kellogg's to reduce trans-fat-producing oils in its products by using Monsanto Visitive soybeans for oil, which limit need for trans fat producing partial hydrogenation Kellogg's wants farmers and seed producers to increase supply of low linolenic soybeans to produce low linolenic soybean oil such as Monsanto's Visitive and Bunge-Dupont's Nutrium Estimated 181 million kilograms of new soybean oil produced in 2006 	
Monsanto	<ul style="list-style-type: none"> Visitive soybeans contain 3% linolenic acid reducing trans fat, improving taste, and increasing oil stability Soybeans with combined low-linolenic and mid-oleic qualities for greater shelf life debuting in either 2007 or 2008 After 2008, low-linolenic, mid-oleic, and low saturated fat soybeans for improved cardiovascular health will become available Research on soybeans that produce high levels of Omega-3 fatty acids, which are good for heart health, also being conducted 	
Monsanto Pioneer	<ul style="list-style-type: none"> Introducing glyphosate-tolerant (2008), drought-resistant, dicamba-resistant, lepidopteran-resistant and increased yield soybean traits (2010) 	
University of Nebraska	<ul style="list-style-type: none"> Investigating three fatty acid profiles related to high oleic acid content One variety with 85-95% higher oleic acid content reduce nitrogen oxide emissions in biodiesel by 50% Second variety has high oleic acid variety with increased amounts of stearic acid enhances ignition quality, but decreased cold flow properties 	
USDA	<ul style="list-style-type: none"> Seeks to modify soybeans for high yield levels of foreign and engineered proteins valuable in food, feed and industrial markets 	



Source: Purdue University; USDA; progressivefarmer.com; U.S. Soy Exports Jan/July 2006; Iowa State Daily; agweb.com; <http://www.int.iol.co.za/>; ABG team analysis

New soybean product innovations & end uses will create new market opportunities

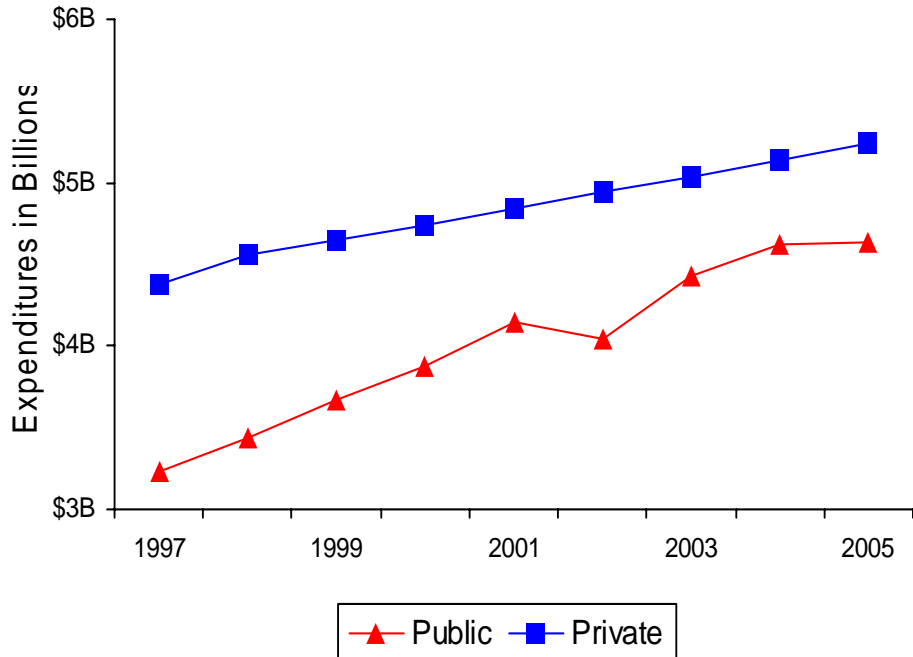
Group	Development	Impact
Purdue University	<ul style="list-style-type: none"> Researching potential soybean usage as jet fuel Alternative jet fuel is blend of 40% biodiesel and current fuel that can be used without any engine modifications, can operate at cold temperatures, and is economically feasible for large-scale production 	
USSEC	<ul style="list-style-type: none"> Created Ocean Cage Aquaculture Technology that uses soy-based floating aquafeeds for offshore cage fish production China to use 10 OCAT cages in 2006 with interest from other countries such as India, Columbia, and Turkey Global aquaculture industry is growing market for US soybean meal with use expected to double in next decade to a total of 450 million bushels of soybeans 	
USDA	<ul style="list-style-type: none"> USDA developed new soybean oil based metalworking lubricant that cuts down on fumes containing volatile organic compounds, which reduce risk of health problems such as respiratory conditions in workers Cost to be either even or half of the current cost of using petroleum based lubricants U.S. consumption of industrial lubricants expected to reach 7.5 million gallons by 2008 	
Iowa State	<ul style="list-style-type: none"> Developed new plastics with 40-80% composition of corn, soybean, and other bio-based oils New plastics have strong thermal and mechanical properties and are also good at dampening noises and vibrations One type of plastic made from soybean oil reinforced with glass fibers to be used to develop and test new hog feeders 	
USDA	<ul style="list-style-type: none"> Developed new soy-based plywood glue that requires less drying time, produces less waste than traditional plywood glues, and is \$0.50 per 100 kilograms cheaper than conventional plywood glues New glue could create additional domestic market for approximately 500,000 soybeans annually 	
Purdue University	<ul style="list-style-type: none"> Formulated home heating oil from soybean oil and conventional fuel oil that can be used in traditional furnaces without modifications and reduces sulfur emissions Replacing 20% of fuel oil with soybean oil for heating could save 1.3 billion gallons of fuel oil 	



Source: Purdue University; USDA; Jan/July 2006; Iowa State Daily; agweb.com; ABG team analysis

Agricultural research expenditures will continue to create value-added opportunities

Agricultural Research Spending



CAGR	Private	Public
1997-2005	2.03%	3.38%

Note
1999-2005 private research data projected using 1997-1998 CAGR

Past

- Public Sector was source of biological innovations
- Private Sector provided soybean oilseed processing and product development

Future

- Evolving biotechnology and intellectual property rights suggests different public and private sector relationship
 - Strategic discovery and development approach
 - Public sector to develop initial discovery and proof of concept
 - Private sector responsible for licensing and developing the best discoveries and producing final product for consumers

Research Ideas

- Biological processes that affect product quality and utility
- Breeding (e.g. biological engineering) for product quality and utility
- Biological mechanisms that influence actual or potential yields
- Maintaining seed quality

Source: <http://www.agbioforum.org/v6n12/v6n12a01-gardner.htm>; USDA

What's Next?

The successful implementation of Soy 2020 will require a collaborative effort from the entire value chain. Numerous efforts will work to fully implement strategies, monitor indicators, and create synergies within the value chain.

Broad-based industry strategies do not belong in a handsome report gathering dust on a shelf; they must be communicated, debated, and updated continually as the world and the industry co-evolve. The scenarios envisioned and the strategies developed within Soy 2020 will encourage better thinking and learning, thereby enabling industry decision makers to assess and reassess their strategic options, and act with confidence amidst great uncertainty.

Scenario planning as a methodology is a virtuous circle and an ongoing process. The value chain must keep returning to the beginning with a higher level of understanding of the past and the future. The value chain must learn to see many facets of the world at once and make more informed decisions in the present.

The following are work streams that the industry should take in order to fully implement Soy 2020.

Work stream #1: Rollout and Communication of Soy 2020

For Soy 2020 to be effective long-term, efforts need to be fostered to help organizations align their strategies more intuitively and rigorously with Soy 2020 scenarios, strategies, and implications. Under the leadership of the United Soybean Board and guidance from the steering committee, representatives must communicate Soy 2020 to state soybean organizations and other industry stakeholders. These stakeholders must understand the following:

- What is Soy 2020?
- What are the findings of Soy 2020?
- What are the elements, implications, and strategies of Soy 2020?
- What does Soy 2020 mean to your organization?
- How does your organization use the information in Soy 2020 in your future planning?

As stakeholders utilize Soy 2020 to guide their own futures, the following must be communicated to the entire value chain to ensure appropriate alignment and identification of trends:

- Best Practices
- Identification of key indicator trends and insights
- Additional opportunities for industry collaboration
- Key threats to address
- Key opportunities to leverage

Work stream #2: Soy 2020 Monitoring and Measurement

The value chain must adopt a process by which benchmarks for indicators are established and indicators are modeled for a higher level of quantitative analysis to monitor key drivers. This will enable Soy 2020 to have a starting point to monitor indicator trends. This will also allow for a clearer picture of the indicator trends and the intricate combination of indicators working together to forecast scenarios. Finally, a quantitative approach to monitor and measure progress will allow for a clearer, objective picture of strategy and indicator impact on the soy value chain. This information should be shared with the entire value chain on a Soy 2020 website, while implementing educational efforts to help organizations understand, interpret, and build tactical steps to fully leverage trends and indicator movement.

Work stream #3: Soy 2020 Sharing, Update and Collaboration

The value chain must adopt a process by which Soy 2020 stakeholders convene on a regular basis to do the following:

- Review and interpret indicator trends
- Reinforce common strategies and develop initiatives to implement scenario-specific strategies, including the following:
 - Identify industry collaboration efforts
 - Determine the roles of stakeholders in strategy implementation
 - Further define roles moving forward and build consensus on those roles

Work stream #4: Annual Sharing, Update and Collaboration

Soy 2020 stakeholders must adopt a process in which the Soy 2020 plan is examined deeply and refined accordingly based upon at least three years of data and progress of Soy 2020, which continues the relevance of the Soy 2020 process. This work stream could include the following elements:

- Convening of the Soy 2020 stakeholders
- A process by which the Soy 2020 stakeholders engage in the following:
 - Complete environmental scan
 - Refinement of scenarios
 - Refinement of and development of new strategies
 - Refinement of indicators

Work stream #5: Soy 2020 Ongoing Communication and Education

Soy 2020 stakeholders must adopt a communication and education plan that allows Soy 2020 stakeholders to be updated on a continual basis regarding Soy 2020 implementation, successes, trends, and implementation efforts. The following are elements that could be included in this effort:

- Soy 2020 web portal to deliver customized information to various value chain stakeholders
- Web-based educational modules to aid in Soy 2020 implementation efforts
- Relevant and ready to deliver news related to soybean industry trends and strategies