

SOYBEAN 2013-14: Golden Bean Turned Brown

November 25, 2013



Corporate Office: AG 20, Shalimar Bagh, Delhi 110088

Tel: 011 4225 8000-13 Email: rohit@peeaarmail.com

Fax: 011-2748 9026 Web: www.peeaar.in

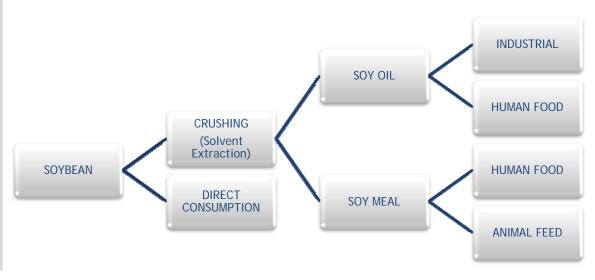


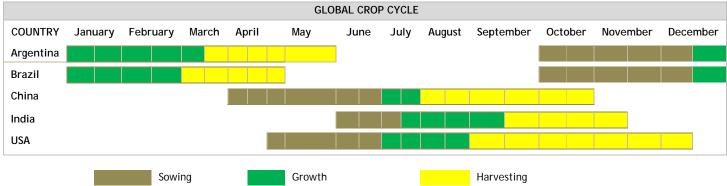
Introduction

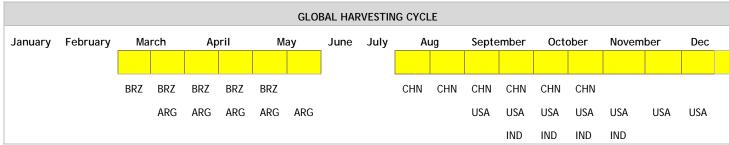
Soybean, also known as Golden Bean, is an important global crop consumed worldwide in various forms. It has been classified as an oilseed by the UN Food and Agricultural Organization. Soybean crushing and solvent extraction yields two by products Soy Oil (~18%) and Soy Meal (~82%). Soybean meal is a major source of protein, widely used in animal feed industry & Soy Oil is 2nd largest source of vegetable oil in world. USA, Brazil, Argentina, China & India are major producers accounting for ~90% of world production.

Sumit Maheshwari Research Analyst sumit@peeaarmail.com +91 97185 97184

Rohit Gupta Research Head rohit@peeaarmail.com +91 987 123 1113 India is the fifth largest producer of Soybean in the world accounting for \sim 4% of total global production. Soybean is a Kharif Crop. It's ideal growing conditions include loose well drained loamy soil, warm and moist climate, and temperature of 20°C to 30°C. Modern soybean varieties reach a height of \sim 1 meter(3 ft), and has crop cycle of about 60-120 days. In India, Madhya Pradesh, Maharashtra and Rajasthan are the major growing states accounting for \sim 95 % of total production.







Source: Pee Aar Research



Global Soybean Analysis

SOYBEAN BALANCE SHEET, GLOBAL (Thousand Metric Ton)									
Particulars	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14 (E)			
Opening Stock (A)	51,555	43,358	62,211	71,716	54,888	59,658			
Production									
US	80,749	91,417	90,605	84,192	82,561	88,661			
Brazil	57,800	69,000	75,300	66,500	82,000	88,000			
Argentina	32,000	54,500	49,000	40,100	49,300	53,500			
China	15,540	14,980	15,100	14,480	12,800	12,200			
Others	25,871	30,506	33,919	33,880	41,223	41,181			
Total Production(B)	2,11,960	2,60,403	2,63,924	2,39,152	2,67,884	2,83,542			
Total Supply (A+B)	2,63,515	3,03,761	3,26,135	3,10,868	3,22,772	3,43,200			
% Change in Supply	-7.3%	15.3%	7.4%	-4.7%	3.8%	6.3%			
Crushing (C)									
China	41,035	48,830	55,000	60,970	64,950	68,350			
USA	45,230	47,673	44,851	44,851	45,967	45,858			
Argentina	31,243	34,127	37,614	35,886	33,550	38,500			
Brazil	31,868	33,700	36,330	38,083	34,650	37,000			
EU-27	12,860	12,595	12,355	12,245	12,790	12,230			
Other	30,879	32,191	35,110	34,296	37,245	37,634			
Total Crushing (C)	1,93,115	2,09,116	2,21,260	2,26,331	2,29,152	2,39,572			
Direct Consumption & Seeding (D)	27,042	32,434	33,159	29,649	33,962	33,576			
Total Demand (C+D)	2,20,157	2,41,550	2,54,419	2,55,980	2,63,114	2,73,148			
% Change in Demand	-5.4%	9.7%	5.3%	0.6%	2.8%	3.8%			
Ending Stock (A+B-C-D)	43,358	62,211	71,716	54,888	59,658	70,052			
Stock/Usage Ratio	19.7%	25.8%	28.2%	21.4%	22.7%	25.6%			
Net Change in Supply	-1.9%	5.6%	2.0%	-5.3%	1.0%	2.5%			

Source: USDA

Global Supply of Soybean is poised to increase by ~6.3%, owing to increase in global production by ~4.7% and opening stock by ~8.7%. Production is expected to increase mainly in USA, Brazil and Argentina by 3.8%, 7.3% and 8.5% respectively. However, in India and china a production is expected to decline mainly due to adverse weather conditions. Production has increased rapidly in Argentina and Brazil in past few years and Brazil may surpass USA to become biggest producer in the current crop cycle. Global soybean demand is expected to increase by ~3.8% due to high expected crushing in Argentina, China and Brazil by 14.8%, 5.2% and 6.8% respectively. Thus, it is expect that supply will top the demand in the current year and thus leading to

higher ending stocks and an increase in stock to usage ratio to 25.6%.

Soybean crop has arrived in USA, China and India and we don't expect much change in their production estimates now. However, Brazilian and Argentine production which are expected to be good, unfavorable weather conditions in Argentina and appearance of corn earworms and insects in Brazil remains a matter of concern.

We expect global sentiment to remain bearish and soybean prices tepid in global markets, if South American production remains intact



US - Higher than expected production, tepid local demand

USA - SOYBEAN BALANCE SHEET (Thousand Metric Ton)								
Particulars	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14 (E)		
Opening Stock	5,580	3,761	4,106	5,852	4,610	3,826		
Production	80,749	91,417	90,605	84,192	82,561	88,661		
Imports	0	0	0	0	0	0		
Total Supply	86,329	95,178	94,711	90,044	87,171	92,487		
Crushing	45,230	47,673	44,851	46,348	45,967	45,858		
Exports	34,817	40,798	40,957	37,150	35,913	39,463		
Direct Consumption & Seeding	2,521	2,601	3,051	1,936	1,465	2,538		
Total Demand	82,568	91,072	88,859	85,434	83,345	87,859		
Closing Stock	3,761	4,106	5,852	4,610	3,826	4,628		

Source: USDA

There revision in US soybean production estimates in November USDA report seemed drastic, due to non-availability of data in October; owing to federal government shutdown. Soybean production estimates have increased by ~3.4% (from 85,706 Thousand MT to 88,561 Thousand MT). This is due to increase in expected yield estimates from 2.77 MT/Hectare to 2.87 MT/Hectare owing to favorable weather conditions in late summer and thus,

extended growing season. The 2013 U.S. Soybean production is projected to increase by 7.4% on YoY basis. Soybean Exports for 2013-14 are expected to increase by ~10% on YoY basis (from 35,913 thousand MT to 39,463 Thousand MT). However, the ending stocks and stock/usage are expected to increase due to reduced local demand and higher production giving a slight bearish global sentiment in coming months.

Brazil - Soybean Planting rate quicker than average

BRAZIL - SOYBEAN BALANCE SHEET (Thousand Metric Ton)								
Particulars	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14 (E)		
Opening Stock	18,898	12,642	17,480	23,636	12,916	15,757		
Production	57,800	69,000	75,300	66,500	82,000	88,000		
Imports	0	0	0	0	0	0		
Total Supply	76,698	81,642	92,780	90,136	94,916	1,03,757		
Crushing	31,868	33,700	36,330	38,083	34,650	37,000		
Exports	29,987	28,578	29,951	36,315	41,904	44,000		
Direct Consumption & Seeding	2,201	1,884	2,863	2,822	2,605	3,000		
Total Demand	64,056	64,162	69,144	77,220	79,159	84,000		
Closing Stock	12,642	17,480	23,636	12,916	15,757	19,757		

Source: USDA

Hot and dry weather spell in Brazil till last week of September, led to a slower than normal start in Soybean planting. Improved Weather conditions thereafter, led to good planting conditions in most soybean growing areas. Soybean planting has paced up over past few weeks, and nationwide soybean planting is ~60% complete, slightly ahead of the five year average. In three biggest Soybeans producing states viz. Mato Grosso, Parana and Rio Grande do Sul planting has reached 86%, 75% and 20% respectively.

The only matter of concern is the appearance of corn earworms and insects. In the state of Parana the insect has already been found in newly planted soybeans fields. Farmers in Mato Grosso, who normally make four insecticide applications per season, may now do up to seven applications, which may increase the cost of production.

As per USDA November report Brazilian production is expected to increase by 7.3%. This is mainly owing to increased yield achieved by capex investment. Yield



is expected to increase by ~2.9%, from 2.96MT/Hectare to 3.04MT/Hectare on Y-O-Y basis. The demand of soybean for crushing and export are

also expected to increase by 6.8% and 5.0% respectively. Brazil may overtake the U.S. as the world's top soybean grower in the 2013-14.

Argentina – High expected production, rainfall shortage detrimental

ARGENTINA - SOYBEAN BALANCE SHEET (Thousand Metric Ton)							
Particulars	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14 (E)	
Opening Stock	21,760	16,588	22,277	22,872	18,100	24,350	
Production	32,000	54,500	49,000	40,100	49,300	53,500	
Imports	0	0	0	0	0	0	
Total Supply	53,760	71,088	71,277	62,972	67,400	77,850	
Crushing	31,243	34,127	37,614	35,886	33,550	38,500	
Exports	5,590	13,088	9,205	7,368	7,850	9,700	
Direct Consumption & Seeding	339	1,596	1,586	1,618	1,650	1,675	
Total Demand	37,172	48,811	48,405	44,872	43,050	49,875	
Closing Stock	16,588	22,277	22,872	18,100	24,350	27,975	

Source: USDA

Argentina Sowing season began in mid of October. About ~4.7% of area (~930,000 hectares) of soybeans has been planted, till October end, ahead of last year. The 2013/14 Argentine Soybean Production is expected to be 53500 Thousand MT up 8.5 % from 2012 due to increased Yield & Area under cultivation by 6.5% and 1.9% respectively. Record opening stock of 24350 Thousand MT up 34.5 % from 2012 coupled with higher production expected will lead to highest supply of Soybean in the history of Argentina.

The only matter of concern is inadequate rainfall and shortage of subsoil moisture. Argentina needs

more rainfall for crop development in the current and next month. The shortage of rain water coupled with drier January can be unfavorable for the crop.

Crushing & argentine Exports are expected to increase by 14.8% and 23.6 % respectively on Y-o-Y basis due to increased competitiveness to Brazil and higher demand from China. It is expected that closing stock for the year 2013 is to be 27975 Thousand MT, Highest in the history of Argentina. Higher expected opening stock, Production and closing stock supports the bearish sentiment globally in coming months.

China – High expected demand, flood & heavy rainfall detrimental to local supply

CHINA - SOYBEAN BALANCE SHEET (Thousand Metric Ton)						
						2013-14
Particulars	2008-09	2009-10	2010-11	2011-12	2012-13	(E)
Opening Stock	2,752	7,555	13,259	14,558	15,924	12,193
Production	15,540	14,980	15,100	14,480	12,800	12,200
Imports	41,098	50,338	52,339	59,231	59,865	69,000
Total Supply	59,390	72,873	80,698	88,269	88,589	93,393
Crushing	41,035	48,830	55,000	60,970	64,950	68,350
Exports , Direct Consumption &						
Seeding	10,800	10,784	11,140	11,375	11,446	11,380
Total Demand	51,835	59,614	66,140	72,345	76,396	79,730
Closing Stock	7,555	13,259	14,558	15,924	12,193	13,663
Stock/Usage Ratio	14.6%	22.2%	22.0%	22.0%	16.0%	17.1%

Source: USDA



Chinese Soybean production in 2013/14 is expected to be ~12,200 Th. MT, which is down ~4.7% on YoY basis. This is mainly due to heavy rains and flooding in Heilongjiang region, the biggest soybean producing province of china, accounting for ~35% of total soybean production in china.

China, being the fourth largest producer of Soybean is also the largest importer of soybean in the world accounting for ~65% of world imports. Chinese imports of Soybean have continually increased since

2008-09. Its domestic demand for the year 12-13 was 76,396 Thousand MT out of which ~78% was met through imports. This year imports are expected to increase drastically to meet its demand for consumption. We expect a growth of ~15.3% in Chinese imports

Thus, falling production in current year coupled with drastic fall in stock/usage ratio to ~16% in 2012-13 and increased expected crushing activity, will put an upward price pressure on global soybean prices.

EU import

EUROPEAN & WORLD IMPORTS							
Year	European	World					
2007-08	15,123	78,162					
Y-O-Y(%)	-1.1%	13.2%					
% of Total	19.3%						
2008-09	13,000	75,999					
Y-O-Y(%)	-14.0%	-2.8%					
% of Total	17.1%						
2009-10	12,695	86,853					
Y-O-Y(%)	-2.3%	14.3%					
% of Total	14.6%						
2010-11	12,488	88,729					
Y-O-Y(%)	-1.6%	2.2%					
% of Total	14.1%						
2011-12	11,957	93,222					
Y-O-Y(%)	-4.3%	5.1%					
% of Total	12.8%						
2012-13	12,450	95,465					
Y-O-Y(%)	4.1%	2.4%					
% of Total	13.0%						
2013-14(E)	12,100	104,402					
Y-O-Y(%)	-2.8%	9.4%					
% of Total	11.6%						

EU is the second largest importer of soybean and sixth largest crusher of soybean in the world. The economic downturn in EU led to drastic decrease in its imports by ~21% from 2007 to 2012. However, in 2012 -2013 EU reported significant increase in imports by 4.1% on YoY basis, lead by improved economic conditions. This year we expect import demand to remain similar this year. Thus overall impact will be steady with negative bias. This is primarily due to decrease in their crushing activity.

Source: USDA



Soybean Analysis, India

India is the fifth largest producer of Soybean in the world accounting for ~4% of total global production. In terms of area, India is fourth largest with area under cultivation in excess of 10,000 Th. Hectares. India is also the sixth largest crushers of soybean in the world accounting for ~4% of global crushing.

SOYBEAN BALANCE SHEET, INDIA (Thousand Metric Ton)						
Particulars	2010-2011	2011-2012	2012-2013	2013 - 2014 (E)		
Opening Stock(A)	1,573	505	316	391		
Production						
Madhya Pradesh	5,600	6,166	6,685	4716		
Maharashtra	2,700	3,560	3,995	3700		
Rajasthan	650	1,248	1,232	958		
Andhra Pradesh	150	162	217	239		
Chattisgarh	160	153	175	143		
Others	240	361	373	384		
Total Production	9,500	11,650	12,677	10,140		
Total Supply (A+B)	11,073	12,155	12,993	10,531		
% Change in Supply	12.6%	9.8%	6.9%	-19.0%		
Crushing	9,768	10,639	11,602	9,127		
Direct Consumption & Seeding (D)	800	1,200	1,000	1,203		
Total Demand (C+D)	10,568	11,839	12,602	10,331		
% Change in Demand		12.0%	6.4%	-18.2%		
Ending Stock (A+B-C-D)	505	316	391	200		
Stock/Usage	4.8%	2.7%	3.1%	1.9%		
Net Change in Supply		-2.3%	0.4%	-0.8%		

Source: Pee Aar Research, SOPA, NCDEX, SEA

The sowing period of Soybean which began in mid June had early and widespread monsoon rainfall which ensured adequate moisture in the soil. This encouraged increased soybean planting and resulted in record planting across the country, and thus, bumper crop was expected.

During the growth period, Soybean requires water & Sunlight at regular intervals. However, due to continued excessive rainfall in major growing areas of Madhya Pradesh, Maharashtra, and Rajasthan,

badly damaged the growth, productivity and quality of soybean.

These rains got extended to harvesting period, thus, delaying the harvesting and damaging the matured crops. Farmers who have sown seed with 60-65 days crop cycle have experienced very good yield else seed with 90 day crop cycle have been bitten the most. Historically, the proportion of 90 day crop cycle seed accounts for 90 -95% of total sowing in the country.





We expect production to decrease by ~19.0% to 10,140 Thousand MT in 2013-14. The area under cultivation has seen a significant increase in the current year in Madhya Pradesh and Maharashtra. The area under cultivation is expected to increase by 1,338 Thousand hectares. However, we expect the Yield to fall by ~17.1% from 1.02MT/Hectare in 2012-13 to 0.84MT/Hectare in 2013-14.

Demand is also expected to fall, mainly due to decreased supply and reduced crush margins. Thus, we expect demand to fall by ~18.2%. Overall we expect demand to exceed supply in this crop cycle leading to drastic fall in stock/usage ratio from 3.1% to 1.9% this year.

Field Visit - Madhya Pradesh

Our team of analysts visited various mandis across Madhya Pradesh to analyze the crop situation. During the various mandi auctions and interaction with farmers and traders we observed that there is huge variation in the quality and thereon prices of soybean.

In the last season almost all the crop was of average or good quality, whereas in the current season the proportion of poor/below average quality crop is very high. The moisture content and damaged crop which is usually ~10% and ~3% respectively has increased to ~15% and ~6% respectively in the current season. Since the farmers are expecting shortage of good quality seed for next sowing season, it is trading at a premium of Rs. 300-500/Quintal over the NCDEX

Seed Quality Variation & Pricing								
Crop Quality	Prices		Moisture		Damaged			
Crop Quanty	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14		
Average /Below Avg	2,500-3,000 /QtI	2,000-3,800/QtI	12- 15 %	12-20%	>5%	>5%		
Good	3,000-3,200/QtI	3,800-4,200/QtI	8-12%	8-12%	2-5%	2-5%		

Source: Indore, Vidisha & Ujjain Mandi



Soybean Crush Margins

		C	Gross Crush Ma	rgin				
2012-13								
Total Cost	October	November	December	January	February	March	April	May
Soybean Cost/QtI(A)	3,240.0	3,252.0	3,280.0	3,230.0	3,272.0	3,579.0	3,936.0	3,863.0
Total Revenue								
Soyoil Price/Ltr.	69.8	70.5	71.8	69.9	68.3	71.0	70.1	69.0
Oil Extraction (Ltrs./Qtl)	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
Soyoil Revenue(B)	1,256.4	1,269.0	1,292.4	1,258.2	1,229.4	1,278.0	1,261.8	1,242.0
Soymeal Revenue/kg	27.8	28.1	26.8	27.7	32.1	35.6	34.1	34.1
Meal Extraction (Kgs/Qtl)	82.0	82.0	82.0	82.0	82.0	82.0	82.0	82.0
Soymeal Revenue(C)	2,280.4	2,308.1	2,199.6	2,274.6	2,630.8	2,920.3	2,797.6	2,792.1
Crush Margin								
GCM (in Rs) $\{(D)=(B+C)-(A)\}$	296.8	325.1	212.0	302.8	588.2	619.3	123.4	171.1
GCM (in %) {(D)/(A)}	9.2%	10.0%	6.5%	9.4%	18.0%	17.3%	3.1%	4.4%
			2013-14					
Total Cost	October	November	December	January	February	March	April	May
Soybean Cost/QtI(A)	3,687.0	3,882.0	3,905.0	3,938.0	3,952.0	NA	NA	NA
Total Revenue								
Soyoil Price/Ltr.	72.5	72.8	72.5	72.5	72.3			
Oil Extraction (Ltrs/Qtl)	18.0	18.0	18.0	18.0	18.0			
Soyoil Revenue(B)	1,305.0	1,310.4	1,305.0	1,305.0	1,301.4			
Soymeal Revenue/kg	35.0	35.2	35.6	35.8	36.1			
Meal Extraction (Kgs/Qtl)	82.0	82.0	82.0	82.0	82.0			
Soymeal Revenue(C)	2,868.4	2,890.0	2,921.0	2,934.1	2,957.6			
Crush Margin								
GCM (in Rs) {(D)=(B+C)-(A)}	486.4	318.4	321.0	301.1	307.0			
GCM (in %) {(D)/(A)}	13.2%	8.2%	8.2%	7.6%	7.8%			

Source: NCDEX, Pee Aar Research

Note: Prices of Soymeal are only available till November 2013. There after we have run a regression analysis on soybean prices to derive soymeal prices.

We have observed from our research that there is a high positive correlation of 99.03% between prices of soybean and soymeal, whereas there is very low positive correlation of 11.70% between prices of soybean and Soyoil. Also, we have seen a huge variation in crush margins. Thus, we conclude that the GCM of Soybean in India is mainly governed by Soya oil Prices.

The crushers and Soy product traders can trade on crush margins to maximize the return on capital invested. We, suggest taking long position in Soyoil to hedge against future sale and take short position in Soybean when the gross margins are considerably low.



Indian Soymeal, Inelastic Demand

Soymeal production in India is ~9,000 Thousand MT, out of which ~50% is consumed domestically. The remaining Soymeal is exported. Iran, EU and Japan are the biggest importers of Indian meal, comprising ~94% of total exports. Based on currency movement of India's biggest importers and world's major exporters we saw that INR has depreciated the most thus, giving an edge over competitors.

Country Wise Exports (Apr'13 to Sep'13)						
Country	% of Total Export					
Iran	65.1%					
Vietnam	0.1%					
Japan	6.2%					
Europe	22.1%					
Thailand	1.4%					
South Korea	0.1%					
Others	11.2%					
Total	100.0%					

Currency Movement: Indian Importers Vs. World Exporters								
Particulars	Argentina	Brazil	India	Paraguay	USA			
Iran	79%	84%	77%	89%	102%			
Vietnam	-10%	-7%	-11%	-5%	1%			
Japan	-11%	-9%	-13%	-6%	0%			
Europe	-16%	-13%	-17%	-11%	-4%			
Thailand	-6%	-3%	-7%	-1%	6%			
South Korea	-15%	-12%	-16%	-10%	-4%			

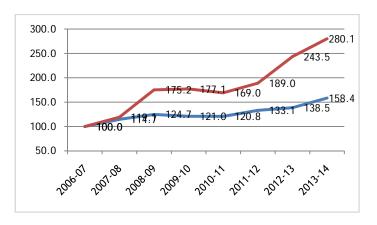
Source: SEA Source: xe currency, Pee Aar Research

Relation between Price & Area

Year	Area ('000 Hectares)	Year	Price (Per Qtl.)
2006-07	7,716	2005-06	1,246
2007-08	8,850	2006-07	1,484
2008-09	9,624	2007-08	2,182
2009-10	9,334	2008-09	2,205
2010-11	9,320	2009-10	2,105
2011-12	10,269	2010-11	2,354
2012-13	10,689	2011-12	3,033
2013-14	12,222	2012-13	3,488

Source: SOPA, NCDEX

We have observed that there is a lagging relationship between Soybean prices and Area under cultivation. A positive correlation of ~96.7% has been observed over data of past 8 crop years. Increased MSP and market transparency has led to increased prices over years, which have incentivized farmers to plant

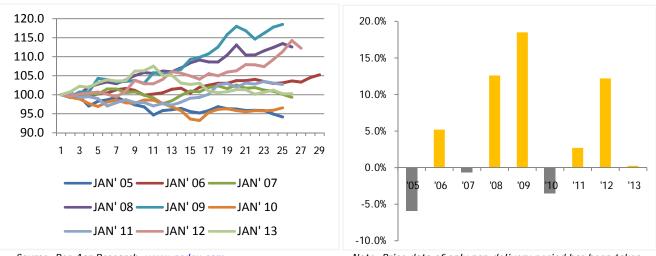


more soybeans compared to its competitive crops like maize etc. This year, also we expect soybean prices to higher than previous year, and we may witness further growth in soybean cultivated area next year.



Historical Price & Return Analysis

January

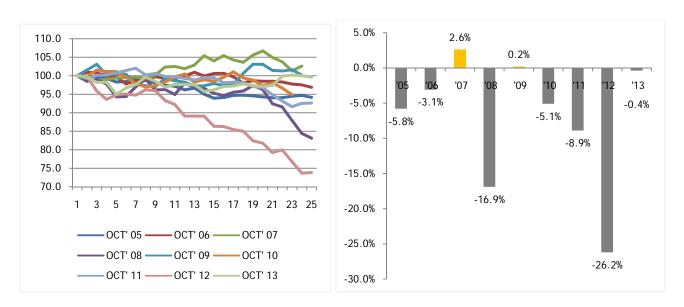


Source: Pee Aar Research, www.ncdex.com

Note: Price data of only non-delivery period has been taken

Out of 9 years price rise has been observed in 6 years, with an average return of 4.6%. Thus we recommend taking long position in soybean futures in the January contract. Position needs to be taken from 10th - 12th December on price dips.

October



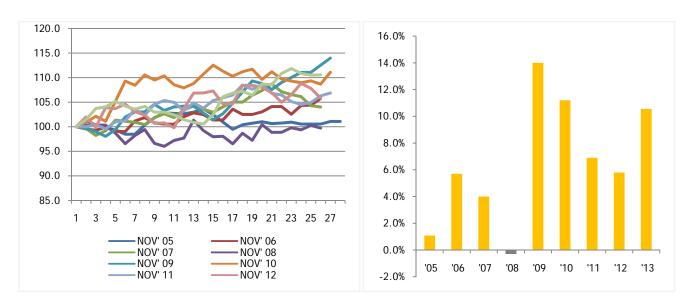
Source: Pee Aar Research, www.ncdex.com

Note: Price data of only non-delivery period has been taken

Out of 9 years price decline has been observed in 7 years, with an average return of (-) 7.1%. Thus, we recommend taking short position in soybean futures in the October contract. Position needs to be taken from 10^{th} - 12^{th} September on price rise.



November



Out of 9 years price rise has been observed in 8 years, with an average return of 6.5%. Thus, we recommend taking long position in soybean futures in the November contract. Position needs to be taken from 10th - 12th october on price dips.

Conclusion

The global sentiment is bearish due to high expected, higher inventory levels and increasing stock/usage. Increased expected production in world's three biggest soybean producing nations has led to bearish sentiment among investors. However, there are still few months until South American crops arrive and the reasons of worry are already visible.

Continued excessive rains, which extended to the harvesting period has led to huge variation in yield and quality of crop. Thus, supply side is expected to remain very tight during the entire season. Soy oil demand has remained very strong in India and India is the second largest importer of Soya oil in the world, imports 55-60% of its consumption. On the meal side, Indian meal demand has remained inelastic in past few years, as Iran is the biggest importer of meal from India, owing to US sanctions. However, with latest development pertaining to lifting of economic sanctions, Indian meal may face tough competition from US. Though, this may not have immediate impact as further developments are expected.

Soybean prices on the NCDEX bourse are expected to be very volatile in the current season. All market participants including crushers, exporters and farmers are puzzled due to changing Indian and global environment. However we feel that significantly low domestic production will be the dominating factors for soybean this season and we remain bullish on the soybean prices with a target of Rs. 4400-4500 in the futures market in current season. In the spot market, however we expect prices to go upto Rs. 5000-5200 for the seed quality soybean during the sowing period.

CMP: Rs.3,850

Price Target: Rs. 4,400 - 4,500



RESEARCH TEAM

Name	Designation	E-Mail	Phone No.
Ved Prakash Gupta	Head - Commodities	vpq@peeaarmail.com	+91 98114 82101
Rohit Gupta	Research Head	rohit@peeaarmail.com	+91 98712 31113
CFA Level III (USA), FRM, MBA (NMMS), 5 Years experience in Equity and Commodities Research & Private Equity			
Sumit Maheshwari	Research Analyst	sumit@peeaarmail.com	+91 97185 97184
CFA Level II (USA), PGDRB (Symbiosis), 4.5 Years experience in Equity and Commodities Research & Corporate Banking			
Shipra Bansal	Research Associate	shipra@peeaarmail.com	+91 11 4225 8000
CFA (ICFAI), M.COM(Finance)		

Disclaimer: This Document has been prepared by Pee Aar Securities Ltd. The information, analysis and estimates contained herein are based on Pee Aar Securities Ltd research assessment and have been obtained from sources believed to be reliable. This document is meant for the use of the intended recipient only. This document, at best, represents Pee Aar Securities Ltd Research opinion and is meant for general information only. Pee Aar Securities Ltd Research, its directors, officers or employees shall not in any way be responsible for the contents stated herein. Pee Aar Securities Ltd expressly disclaims any and all liabilities that may arise from information, errors or omissions in this connection. This document is not to be considered as an offer to sell or a solicitation to buy any commodity. Pee Aar Securities Ltd Research, its affiliates and their employees may from time to time hold positions in commodity. referred to herein. Pee Aar Securities Ltd Research or its affiliates may from time to time solicit from or perform investment banking or other services for any company mentioned in this document.

Address: Pee Aar Securities Limited, AG – 20, Shalimar Bagh. Delhi – 110088

Website: <u>www.peeaar.in</u> **Phone:** +91 11 4225-8000