UPPER GANGES SUGAR & INDUSTRIES LIMITED

Management Discussion and Analysis
[For the quarter ended 30th June, 2009]

Business review

Our business of sugar

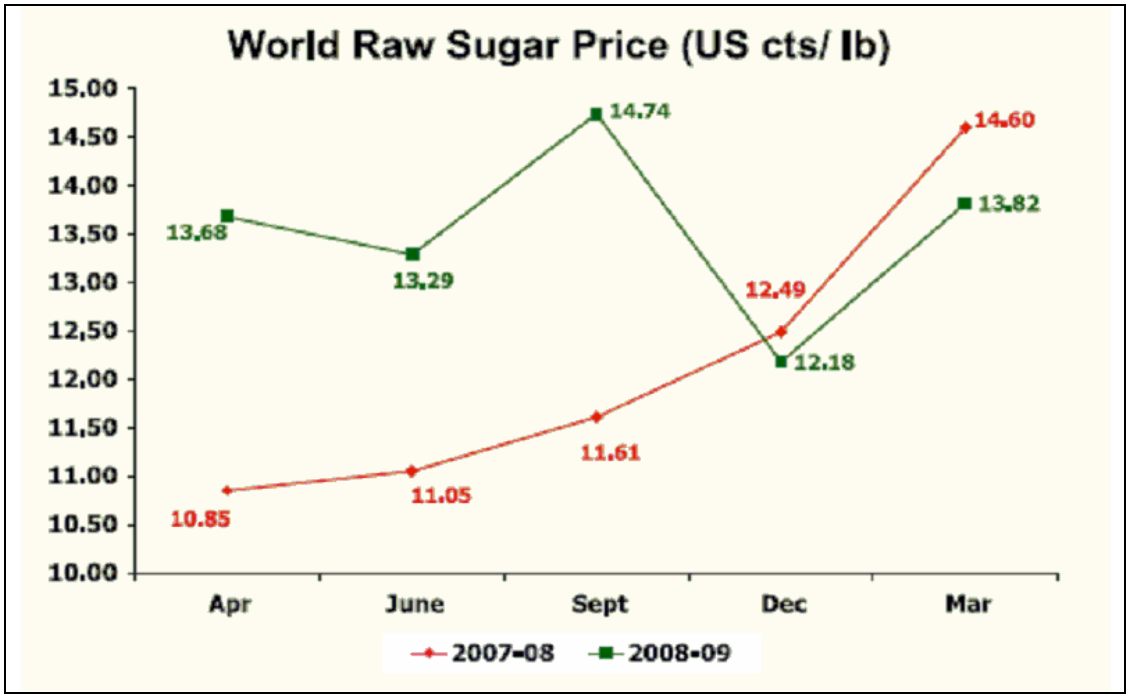
Global sugar overview

In 2008-09, global sugar production – 154.225 million tonnes as per International Sugar Organization - declined for the first time since 2004-05. Supply was affected on account of a significant production shortfall in India and EU, the combined decline estimated at a massive 13.064 million tonnes despite record growth in Brazil from 33.22 million tonnes in 2007-08 to 37.54 million tonnes in 2008-09. For the season 2009-10 While global consumption is expected to grow at 1.73% to 167.446 million tonnes from 164.593 million tonnes, global production is expected to be 8.404 million tonnes lower than consumption. Consequently, the outlook is expected to remain supportive to world market values. ISO estimated world export availability for 2009-10 at 51.964 million tonnes raw value as against 50.903 million tonnes in the previous crop cycle. Lower output from importing countries, India in particular, is expected to trigger additional import demand, which is estimated to reach 51.930 million tonnes up by 0.968 million tonnes.

World Sugar Balance

	2009-10	2008-09	Change	
	(million tonnes, raw value)		in million tonnes	in %
Production	159.042	154.225	4.817	3.12
Consumption	167.446	164.593	2.853	1.73
Surplus/Deficit	-8.404	-10.368		
Import demand	51.930	50.962	0.968	1.90
Export availability	51.964	50.903	1.061	2.08
End Stocks	53.234	61.672	-8.438	-13.68
Stocks/Consumption ratio in%	31.79	37.47		

Source: ISO quarterly market outlook, September, , 2009



(Source: ISO)

Globally, sugar prices hardened from early 2009 onwards owing to tightening supplies, rising imports from India, a weakening dollar and market sentiment. While India was the dominant global market driver, importers also included Pakistan, the US and Mexico.

Indian sugar overview

India retained its position as the world's largest consumer and second largest producer of sugar next only to Brazil [*source: USDA Foreign Agricultural Service*] while sugar (after cotton textiles) retained its position as the second largest Indian agro-processing industry. With over 600 mills across India, the industry remains a potent rural economy driver. About 50 million sugarcane farmers and a large number of agricultural labourers (around 7.5% of the rural population) are involved in sugarcane cultivation and ancillary activities. Besides, the industry employs around 2 million rural skilled/semi-skilled workers, among others [*Source: ISMA*].

The Rs. 700-billion Indian sugar industry, contributing almost Rs. 22.5 billion to the central and the state exchequer every year, stagnated for two years until a sectoral reversal happening in 2009.

Box item

Things to know about the Indian sugar industry

- The industry comprises organised (sugar factories) and unorganised manufacturers (gur and khandsari)
- Around 90 percent of India's sugarcane is grown on irrigated land, accounting for around 5 percent of the country's total irrigated area
- Industry accounts for around 1 percent of GDP of the country
- Allotted cane area for each sugar mill has to be at a distance of 15km form the other mill

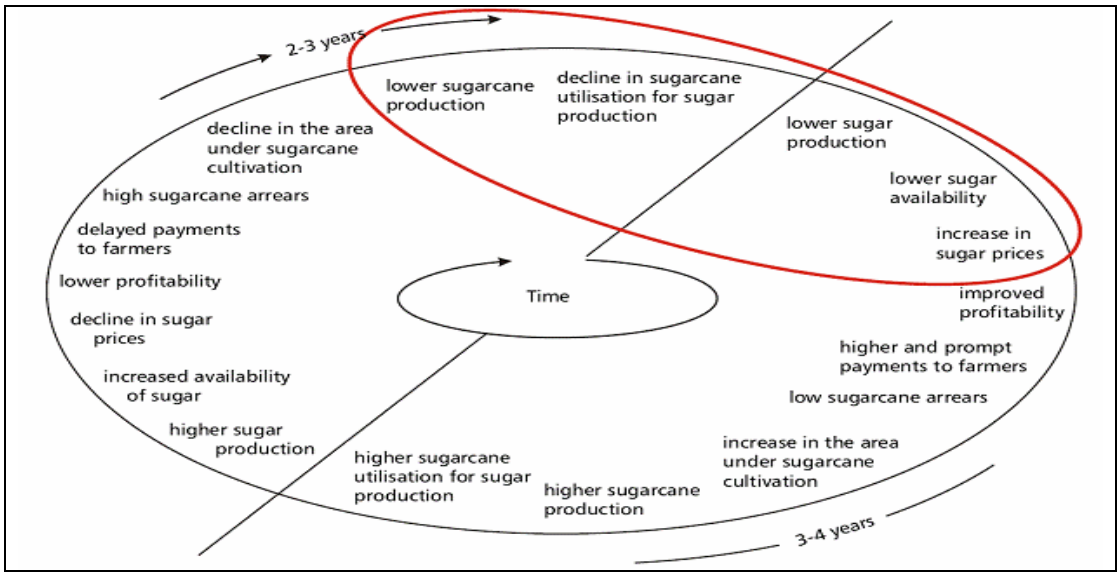
- There are two planting seasons - autumn & spring. Autumn plantation season starts from October to December and spring plantation from February to Mid May, followed by harvesting in October/November

- Crushing starts in October, peaks in January and continues till May
- Cane prices are determined by Statutory Minimum Price (determined by centre) and state advised price (determined by states)
- 10 percent of the mills production procured by the government at levy price for distribution through public distribution scheme (PDS)

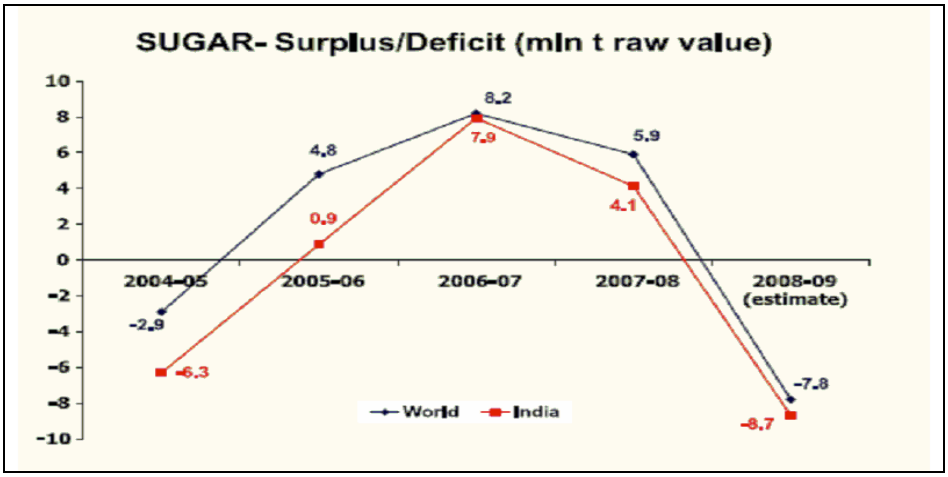
Box ends

The sugar cycle entering the bullish phase

India's sugar cycle downtrend generally starts with improved mill profitability, higher prompt payment to farmers, low sugarcane arrears to cultivators, higher area under sugarcane cultivation and a bumper sugar output. All these leads to a decline in sugar prices. The downtrend starts with increased sugar availability, decline in sugar prices, lower mill profitability, delayed payment to farmers, high sugarcane arrears, lower cane production and higher sugar prices. The sugar season 2008-09 marked the reversal of the sugar cycle indicating sectoral bullishness in terms of realisations.



Production: In the sugar year 2008-09 (October 2008 to September 2009), production is estimated at 14.75 million tonnes, the lowest in three years as against 26.33 million tonne in sugar season 2007-08. Consumption is expected to be around 22 million tonne, implying a deficit of around 7.25 million tonnes.



(Source ISO & ISMA)

Correspondingly, Uttar Pradesh's sugar output (India's largest sugarcane producing state) declined 30% in the 2008-09 crushing season following less area under cane, lower yield due to untimely rains while sugar recovery percentage was 0.75-1% lower than that in 2007-08.

The key reasons for the nationwide production decline comprised of:

- Shift in acreage from sugarcane to crops like wheat and paddy on account of higher realisations of the latter. Sugar prices stagnated and lost acreage area from 28.5 million hectares in 2007-08 to an estimated 21.4 million hectares in 2008-09
- Extra weak monsoon adversely affected production of Cane
- Average nationwide recovery declined by 0.9-1%

India's per capita sugar consumption at 18.6 kg is higher than that of China (8.6 kg) but lower than Brazil (57.6 kg). At an annual 2% consumption growth, India retains huge demand potential. Moreover, the rise in sugar consumption has a close co-relation with increased per capita income and population.

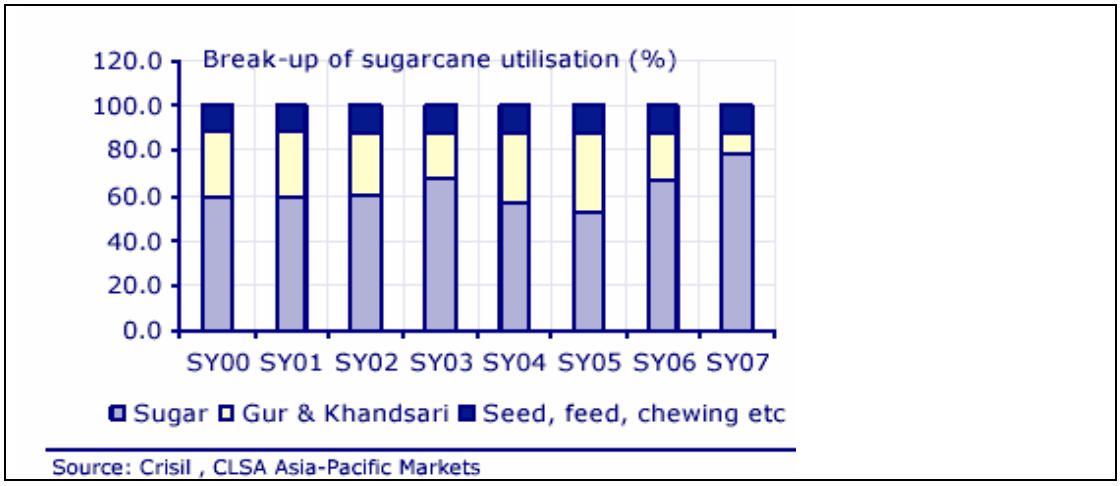
Box
The sugar industry in Bihar

At one time, Bihar was among India's largest sugar producing states owing to a suitable climate for quality cane cultivation and technologically advanced manufacturing facilities. However, Bihar's sugar production declined thereafter owing to legacy plants, uneconomic factory sizes, tax burden and poor management.

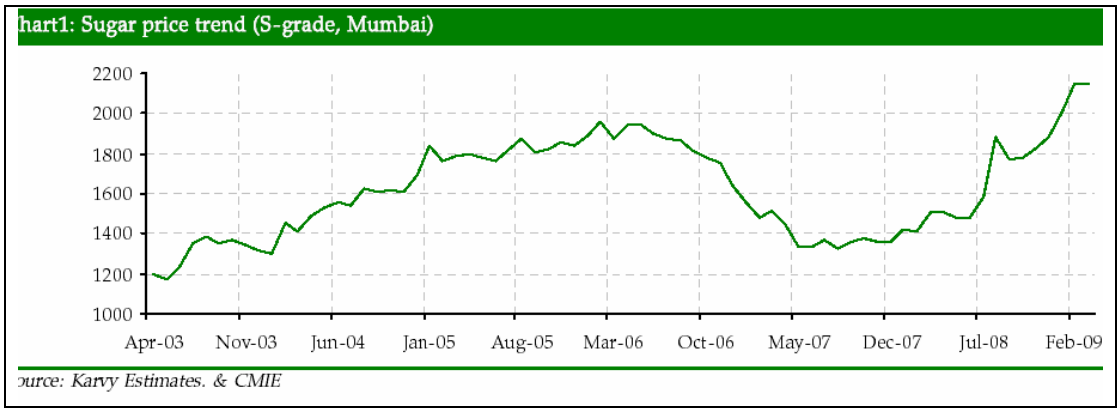
Today, the government is looking to revive the industry through incentives and privatisation. The state government invited bids for 15 public sector units and leased five units to successful bidders in 2008-09 for 60 years extendable by another 30. The mills expect to commence crushing by 2010-11.

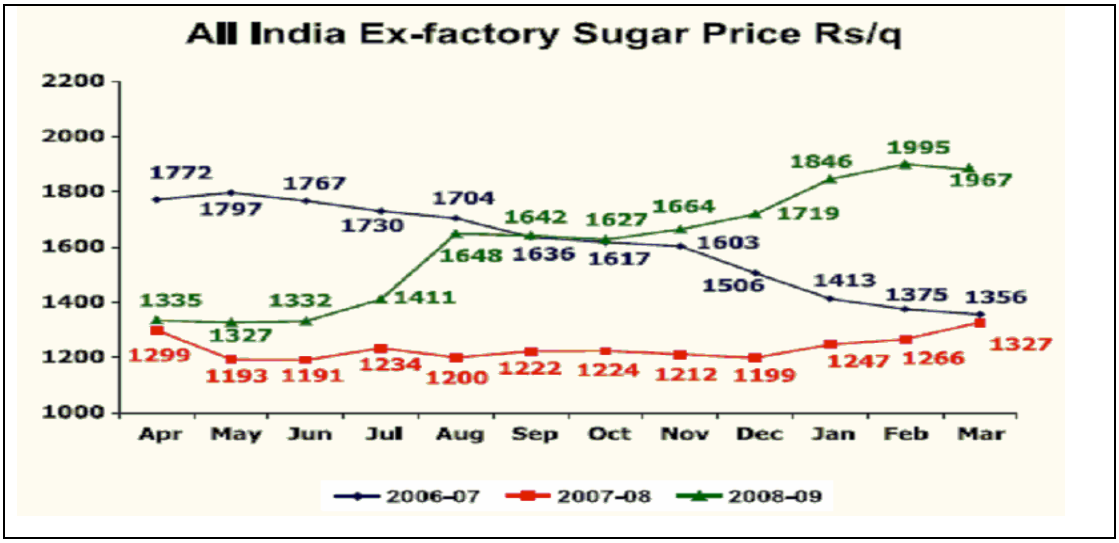
To accelerate private participation, the state needs to invest in infrastructure to facilitate timely cane availability.
Box ends

With a reduction in sugar production, almost 35% of the total sugarcane production is utilised towards the manufacture of gur and khandsari. As a result, the production of gur and khandsari was estimated to be around 10 million tonnes in 2008-09. The Centre intends to bring back gur (jaggery) under the Sugar Cane (Control) Order 1966, giving it power to regulate production to ensure adequate cane supplies to sugar mills. Moreover, rising incomes and urbanisation are expected to result in further demand shifts from gur/khandsari to white sugar. The growth of sugar demand is also fuelled by the food industries and other non-household users, which are estimated to account for about 45% of the total consumption, providing an additional impetus to longer-term market growth *(Source: ICRA)*.



Realisations: The tightening demand-supply situation strengthened Indian sugar prices more than 65% in the first nine months of SY 2008-09. Price for M grade sugar for instance, rose from Rs 14,191 per tonne in May 2008 to Rs 19,515 per tonne in January 2009, and further to Rs 28,675 per tonne during the first three weeks of August 2009.The prices strengthened buoyed by lower availability and increasing cane cost, despite the government's efforts to control them on account of Sugar being an essential commodity with a 3.6% weightage in the Wholesale Price Index.





(Source: ISMA)

For the 2008-09 crushing season, the Centre repeated 2007-08 statutory minimum price at Rs. 81.18 per quintal based on a recovery rate of 9%. Sugar mills across the country, especially in Uttar Pradesh, delayed cane crushing by one month in protest against the UP government's arbitrary cane pricing policy. For the 2008-09 sugar season, the UP government fixed the state advised price (SAP) at Rs 140 per quintal against the previous year's Rs 125. The sugar mills in UP filed a petition in the Allahabad High Court, challenging the state government's decision but faced a setback as the High Court rejected their plea. According to the court order, the mills will have to pay Rs 137.50 per quintal for the rejected cane variety, Rs 140 for the normal variety (up from last year's Rs 125) and Rs 145 for the early variety. The government suggested an SMP of Rs 107.76 per tonne for sugarcane year 2009-10 on a recovery rate of 9.5% against Rs 81.18 per tonne in 2008-09 based on a recovery rate of 9%.

Exports: In the 2007-08 sugar season, India became the third largest sugar exporter after Brazil and Thailand. India replaced Brazil in supplying raw sugar to the world's largest sugar refinery in Dubai. Rising domestic prices coupled with lower production rationalized India's sugar exports in the 2008-09 season. With effect from January 1, 2009, the government re-imposed the release order mechanism for exports.

Imports: India's import requirement is expected to be around 5.0 Million Ton, after considering the opening inventory of 4.00 MT. Out of 5.0 Million Ton contracts for import of 2.5 Million Ton or Raw and White sugar have already been done.

Government initiatives: Sugar continues to be one of the most regulated commodities in India, the government's reform agenda notwithstanding.

- In February 2009, the government permitted duty-free imports of raw sugar up to August 1, 2009.
- In April 2009. The Government permitted state-run trading firms to import 1 million tonne of white sugar.
- In the same month, the government limited the amount of sugar that can be stocked by traders and turnover limits to avoid hoarding and curtail the rise in sugar prices.

- In May 2009, sugar futures trading were banned to control prices.
- In June, central government extended the sugar stocks limit until 8th January 2010 to ensure adequate supplies in the domestic market.
- In the same month, central government raised the minimum price that mills must pay to farmers for sugarcane by a third to a record high of 107.76 rupees per 100 kg to encourage farmers to plant more.
- In July, the scheme to allow duty-free raw sugar imports was extended until March 2010 and that for white sugar imports up to November 2009.
- In August, the Government allowed the large sugar buyers to keep enough stocks to meet their demand for 15 days. The stock limit will be in force for six months and would be applicable to consumers whose monthly sugar use is at least 1,000 kg.

Outlook: India's population is expected to grow at 1.3-1.4 per cent annually; per capita income may rise 6.5-7.5 per cent annually. Consequently, sugar consumption is anticipated to grow at 4-4.5 per cent. The suggested (25-30%) hike in statutory minimum price (SMP) for the 2009-10 season is expected to improve production by 13% to 18.4 million MT in sugar year 2009-10. However, the increase in production will not be adequate to service domestic demand of around 22 million MT, resulting in an upward pressure on sugar prices resulting in improved industry profitability. However, profitability is unlikely to reflect the full impact of the increase in sugar realisations due to higher raw material costs and lower sugar production (arising out of lower cane availability).

SWOT analysis

Strengths

- Indian sugar industry is the second largest producer of sugar in the world after Brazil
- It has the potential to make the country self reliant in this highly sensitive essential commodity of mass consumption
- Provides direct employment including ancillary activities to near about 50 million workers, thus becoming a focal point of socioeconomic development of the rural India
- Supports the down stream industries by providing the raw material for forward integration
- Strong government policies as it come under essential commodity of mass consumption.

Weakness

- Lower installed capacities leading to higher production cost
- Outdated technologies
- Less professionalism
- Preponderance on vagaries of the weather

Opportunities

- High value of by-products for down stream industries
- Huge potential to increase the productivity of cane and sugar recovery rate
- Technology upgradation available for the byproduct utilization thus de risking the business.
- Increasing focus of Government towards ethanol utilisation, beneficial for ethanol producing sugar companies

Threats

- The sector is highly vulnerable to political interest and interferences

- Deterioration in the quality of soil due to overuse of fertilizer and pesticides to increase sugarcane yield
- Any adverse government policy
- High sugarcane price

Our operational review

During FY 2008-09, the Company produced 12.04 lakh qtls of sugar, a 26.93 % decrease over the previous financial year. The realisation per ton (net of excise) of free sugar for the Company increased from Rs. 13,585 in 2007-08 to Rs. 19209 in 2008-09.

Statutory minimum prices (Rs per quintal)

	2006-07	2007-2008	2008-09
Seohara	85.38	89.28	[92.88]
Sidhwalia	82.95	81.18	[81.18]
Hasanpur	83.85	-	[81.18]

Highlights, 2008-09

- The Company crushed 116.30 lakh qtls of sugarcane and produced 12.04 lakh qtls of sugar in 2008-09 compared to 164.53 lakh qtls of sugarcane crushed and 16.53 lakh qtls sugar produced in 2007-08.
- The Company produced 72.11 lakh litres of spirit, which decreased by 72.94% over 2007-08
- The Company sold 397.11 lakh units of power in 2008-09 as against 907.28lakh units in 2007-08

The comparative operational figures of the sugar factories

	Season 2007-08				Season 2008-09			
	Seohara	Sidhwalia	Hasanpur	Total	Seohara	Sidhwalia	Hasanpur	Total
Sugarcane crushed (lakh quintals)	140.60	23.93	–	164.53	89.18	16.34	10.78	116.30
Recovery (%)	10.26	8.73	–		9.88	8.51	8.25	
Sugar produced (lakh quintals)	14.44	2.09	–	16.53	9.85	1.36	0.84	12.04
Crushing days	140	75	–		121	67	68	

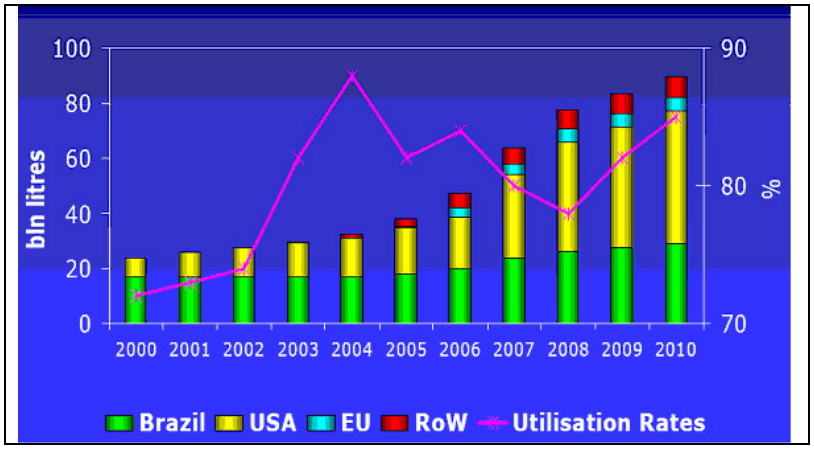
Business review

Our business of ethanol

Ethanol (generated as a byproduct in sugar manufacture) is a clear, colourless liquid with agreeable odor. It is used as an automotive fuel and can be mixed with gasoline to form 'gasohol' fuel ethanol. The most common blends of fuel ethanol contain 10% ethanol and 85% ethanol mixed with gasoline. Over one billion gallon of ethanol is blended with gasoline a year in the United States. Oxygen in the ethanol molecule makes it possible for the engine to combust fuel more completely, resulting in lower emissions. Since ethanol is

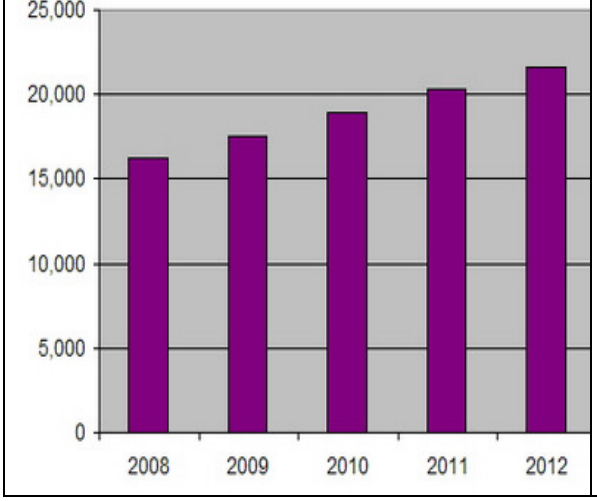
produced from crops that harness the power of nature, ethanol is also considered a renewable fuel.

According to F.O. Licht, utilisation rates have been increasing steadily since 2004 due to capacity built up. The capacity utilisation is expected to reach 85% by 2010.



(Source: F.O. Licht, "World Ethanol 2008: Ethanol in 2008/09 - Light at the end of the tunnel?")

Global ethanol production is poised to grow around 5% CAGR over 2008-12 and surpass 20,000 million gallons. While Brazil production is expected to grow at a CAGR of 2.8%, production in Germany and Canada are expected to grow above a CAGR of 9%.



Country-wise production forecast (min gallons)

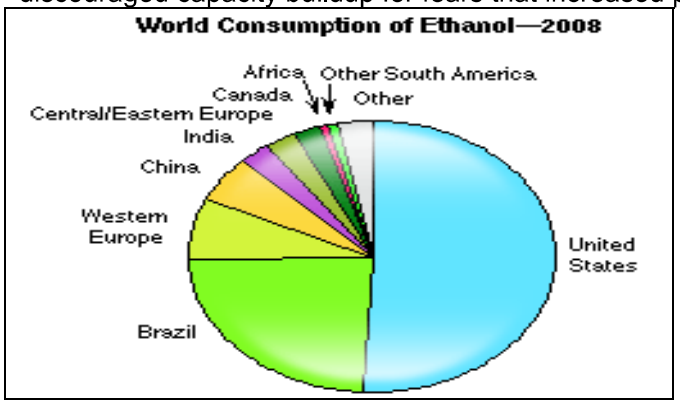
	2008	2009	2010	2011	2012	CAGR, %
Brazil	4,988	5,238	5,489	5,739	5,990	2.8%
U.S.	6,198	6,858	7,518	8,178	8,838	5.7%
China	1,075	1,101	1,128	1,154	1,181	1.4%
India	531	551	571	591	811	2.2%
France	285	301	317	333	349	3.2%
Spain	163	184	206	227	249	6.9%
Germany	319	381	444	506	569	9.7%
Canada	230	276	322	368	414	9.9%
Indonesia	76	84	92	100	108	5.6%
Italy	50	53	55	58	60	2.8%
ROW	2,302	2,548	2,794	3,040	3,286	5.7%
World	**16,215**	**17,574**	**18,934**	**20,293**	**21,653**	4.6%

2008 is over by now and 2009 is almost over

(Source: www.marketresearchanalyst.com) *(Source: CEH reports)*

Global ethanol consumption is predicted to increase annually by 9.3 percent over next five years. The US consumes 50% of the world's supply, largely due to mandated consumption levels. In Europe, ethanol consumption is likely to double in five years. In Brazil, the demand will rise as

consumers purchase flexible fuel cars capable of operating on pure ethanol and mixtures of ethanol and gasoline. In China, consumption may grow moderately as the government has discouraged capacity buildup for fears that increased production will cause food prices to rise.



(Source: CEH reports)

The factors driving the ethanol market comprise high oil prices, national energy security considerations, ethanol tax incentives, improved technology resulting in lower costs of ethanol production and climate change concerns.

Box item

Regulatory mandates will spur ethanol demand worldwide

Brazil	All gasoline must contain 20-25% anhydrous ethanol (currently 23%)
Canada	By 2010, 5% of all motor vehicle fuel must be ethanol or biodiesel
France	Set target rates for incorporation of biofuels into fossil fuels (by energy content). Called for 5.75% in 2008, increasing to 10% by 2010
Germany	Mandates 8% energy content in motor fuels by 2015, 3.6% coming from ethanol
Lithuania	Gasoline must contain 7-15% Ethyl Tertiary-Butyl Ether, or ETBE. The ETBE must be 47% ethanol
Poland	Mandatory "National Biofuel Goal Indicators" calls for biofuels to represent a set percentage of total transportation fuel use. On an energy content basis, 2008's standard was 3.45%
Argentina	Requires the use of 5% ethanol blends by 2010
Thailand	Gasoline must be blended with 10% ethanol
India	Requires 5% ethanol in all gasoline
China	Five Chinese provinces require 10% ethanol blend - Heilongjian, Jilin, Liaoning, Anhui, and Henan
The Philippines	Blended 5% ethanol in gasoline from 2008. The requirement is expected to expand to 10% by 2010
Bolivia	Intends to expand ethanol blends to 25% over the next five years. Current blend levels are at 10%
Colombia	Requires 10% ethanol blends in cities with populations over 500,000
Venezuela	Phasing in 10% ethanol blending requirement

(Source: Ethanol Industry Outlook 2008, Renewable Fuels Association.)

Box ends

Projected demand for ethanol in India

According to the Planning Commission's report of the committee on development of bio-fuel the projected demand for gasoline is expected to be 12.85 MMT by 2011-12 and at 16.40 MMT by 2016-17. The estimated ethanol blending requirements @ 5%, 10% and 20% for the projected demand for gasoline are given:

Year **Gasoline demand (MMT)**		**Ethanol blending requirement (in million metric tons)**		
		@ 5percent	**@10 percent**	**@ 20 percent**
2011-12	12.85	0.64 (811.15ML)	1.28 (1622.30 ML)	2.56 (3244.60 ML)
2016-17	16.40	0.82 (1039.29)	1.64 (2078.58 ML)	3.28 (4157.16 ML)

Pricing: Due to a lower recovery and higher cane cost, mills had to incur a higher cost of alcohol production. As a result, a price of Rs 23.50 per litre was agreed upon by major industrial players against the old price of Rs 21.50 per litre

Current ethanol demand-supply imbalance in India

Demand all over Country	5,000 lac liters
Existing Production	1,840 lac liters
Shortfall	3,160 lac liters

(Source: Govt. of India Ministry of Petroleum and Natural Gas, www.ethanolindia.net)

The new Bio-Fuel Policy 2017 mandates oil marketing companies to blend 10 per cent of ethanol with fuel and proposed to increase to 20 per cent by 2017, reducing the country's dependence on crude oil imports.

Indian petroleum companies received about 540 million liters of ethanol in two-and-a-half years of the launch of the ethanol-blended petrol programme. The government's aim of moving towards 15 percent ethanol blend by 2017 would also lend flexibility to producers to maximise returns by diverting more cane towards ethanol or sugar production, depending on their respective profitability. Cogeneration will prove counter-cyclical as higher bagasse availability in a down cycle will translate into higher profits from an increase in exportable power.

Business review

The business of co-generation

Cogeneration – a concept of producing two different energy forms from one fuel – is a relevant energy efficiency step today. The domestic sugar industry traditionally practiced cogeneration using bagasse as a fuel. Bagasse cogeneration describes the use of fibrous sugarcane waste - bagasse - to cogenerate heat and electricity on-site at high efficiency in sugar mills. Over the years, the energy requirements of sugar mills in India have increased, mainly due to the development of downstream units such as distilleries as well as ethanol, chemical, paper, effluent treatment and biogas generation plants. Apart from buying electricity from state power utilities, this has compelled sugar mills to use non cane-based fuels to meet energy requirements, particularly out of season. About one-third of the bagasse produced in a mill can provide enough steam and electricity for the mill's

requirements. Co-generation is also emerging as a growth driver for sugar producers, offsetting the negative trend in core sugar revenues.

Blurb
Every 1 MW of electricity fed from bagasse cogeneration project is equivalent to 1.67 MW fed by a coal-fired power plant.

According to the International Energy Agency, India's sugar sector possesses a potential of producing 5,100 MW of power through cogeneration across 550 sugar mills – 69% of the total cogeneration capacity of the country. With improved resources and technology, this could increase to 10,000 MW. At the end of 2007-08, India possessed an installed exportable capacity of 2,635 MW thorough 123 sugar mills across the country *(Source: ISMA)*

According to a report from WADE: *Bagasse Cogeneration - Global Review and Potential,* there is abundant opportunity for the wider use of bagasse-based cogeneration in sugarcane-producing countries like Brazil, India, Thailand, Pakistan, Mexico, Cuba, Colombia and the Philippines, which together account for 70% of global cane production (excluding China). Brazil and India are by some way the largest producers, and could generate 12% and 6% of their electricity needs from bagasse – large enough to account for 25% of Cuba's electricity demand.

The sale of surplus power generated through optimum cogeneration could help a sugar mill improve viability, apart from adding to domestic power generation capacity. Other than these obvious advantages, there are some other advantages of cogeneration:

- More secure, diverse, reliable and widespread supply of electricity for local consumers through power purchase agreements with the respective state electricity boards
- Minimal transmission and distribution (T&D) cost and reduced network losses as generation is located near important loads
- Greater employment for local populations
- Lower emissions of carbon dioxide and other gases than from conventional fossil fuel gene
- Cogeneration of power qualifies as a tax free income (MAT is payable) for sugar mills for a period of 10 years
- The surplus power can be exported to state grids and clean development mechanism (CDM) benefits can be claimed in return
- Carbon credits can be earned as sugarcane plants, while growing, absorb more carbon dioxide than is produced in burning bagasse for power cogeneration

During 2008-09, India's bagasse-based cogeneration capacity was 193 MW, while across the Eleventh Five Year Plan, another 1,200 MW bagasse-based power generation capacity (nearly twice the 750 MW addition during the Tenth Plan) is expected to be added. By 2017, India's exportable power potential through cogeneration is expected to touch around 9,700 MW. This could meet nearly 6% of the 128-GW projected domestic additional power requirement.

Bagasse and CDM implications

India is currently thought of as the country with the most CDM potential. As a developing country, India offers excellent potential for greenhouse gas emission reductions through the promotion of energy efficiency and renewable energy, improvements in fossil fuel-based generation and the use of cleaner technologies. In such a climate, CDM could prove an effective tool to mobilise resources internationally. A reasonable and achievable potential for emission trade by the year 2010 is expected to be around 9.75 million tonnes of CO2 per year, based on the assumption that bagasse cogeneration plants would operate for 250 days each year, generating 2GW of exportable surplus electricity in SEB grids whilst the current balance of fossil fuel generation remains at 70%. At an average emission trade price of US$5 per tonne of CO2, this equates to US$50 million in annual revenues *(source: WADE: Bagasse Cogeneration - Global Review and Potential)*

The business of tea plantation

The year 2008 was a turning point for the Indian tea industry as the country achieved a production of 980 mn kg against 947mn kg in 2007-08, with improved quality and higher realisations. Domestic tea consumption was recorded at 785 mn kg which was at par with 2007-08.

The Company's tea production increased by 6.58% percent over the previous year, while realisations increased by 24.16 % percent from Rs. 90.50 per kg in 2007-08 to Rs. 112.37 per kg in 2008-09.

Internal audit

Adequate control systems were institutionalised for monitoring all operational and managerial functions, in conformity with well-defined processes. The compliance of these processes and refinement of the same to reflect learning and changes in business environment is reviewed periodically. Internal audit teams regularly audit all key areas of business activities. The internal audit function is jointly carried out with external audit firms. The audit observations are reported and discussed by the senior management and also presented to the Audit Committee of the Board. The observations are discussed with the operations teams and the recommendations generated from there are implemented appropriately.

Cautionary statement

The statements in the Management discussion and analysis Report detailing the Company's objectives, projections, estimates, expectations or predictions may be forward looking within the meaning of applicable securities laws and regulations. As these statements are based on certain assumptions and expectations of future events, actual results could differ materially from those expressed or implied. Important factors that could make a difference to the Company's operations include economic conditions affecting global or domestic demand and supplies, political and economic developments in India or

other countries, government regulations and taxation policies, prices and availability of raw materials, prices of finished goods, abnormal climate and geographical conditions, among others. The Company assumes no responsibility in respect of forward looking statements that may be revised or modified in the future on the basis of subsequent developments, information or events.