



Overview of the sugar and ethanol sector in India

1 – General Information



- 2011 Population : 1 189 172 906
- 2011 Population growth : 1,34 %

- 2010 GDP (purchasing power parity) : 4,06 trillion USD
- 2010 GDP – real growth rate : 10,4 %

- 2010 Public Debt : 51,9 % of GDP
- 2010 Inflation rate : 12 %

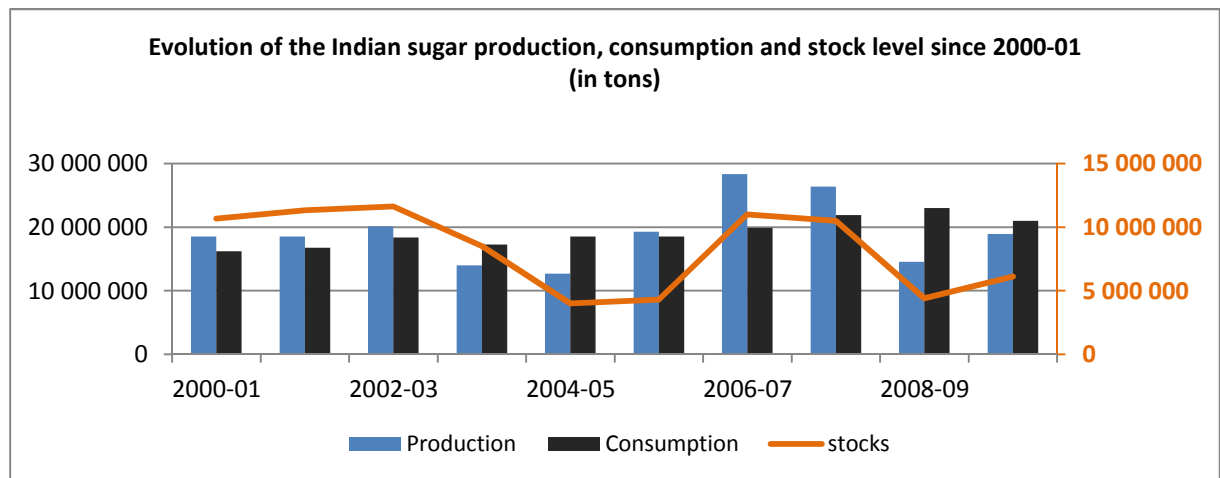
- Capital : New Dehli

Source: CIA – The World Factbook 2011

2 – Major characteristics from the Indian sugar sector

2.1 – Sugar consumption and production

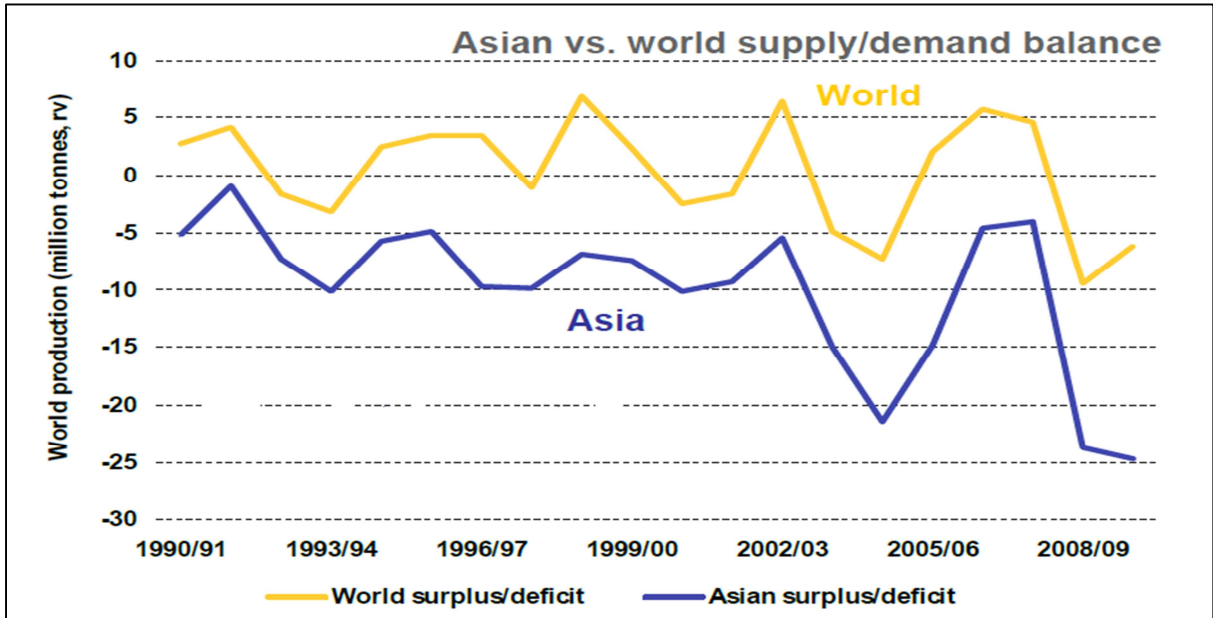
With 22,5 Mt of sugar consumed in 2010/11¹, India has the highest sugar consumption level in the world. As well as for consumption, the sugar production can significantly fluctuate from one year to another as the Indian cane crop cycle is very short (2 to 3-year cycle) when compared to other major cane countries like Brazil (5 to 6-year cycle). Practically, millions of farmers can switch from sugarcane to another crop when more profitable, therefore generating huge production swings (like in 2008-09 when production was reduced by more than 10 Mt when compared to 2007-08).



Source: ISMA – Handbook of sugar statistics - 2010

¹ Source : FO Licht – World Sugar Balances 2010/11 – 3rd estimates

Switching from a net importer to a net exporter every two/three years, India describes a cycle known as “the Indian cycle” and which is usually highly correlated with the deficit/surplus nature of the world sugar production on a designated campaign. In this sense, India appears to be a major key to world supply/demand balance.

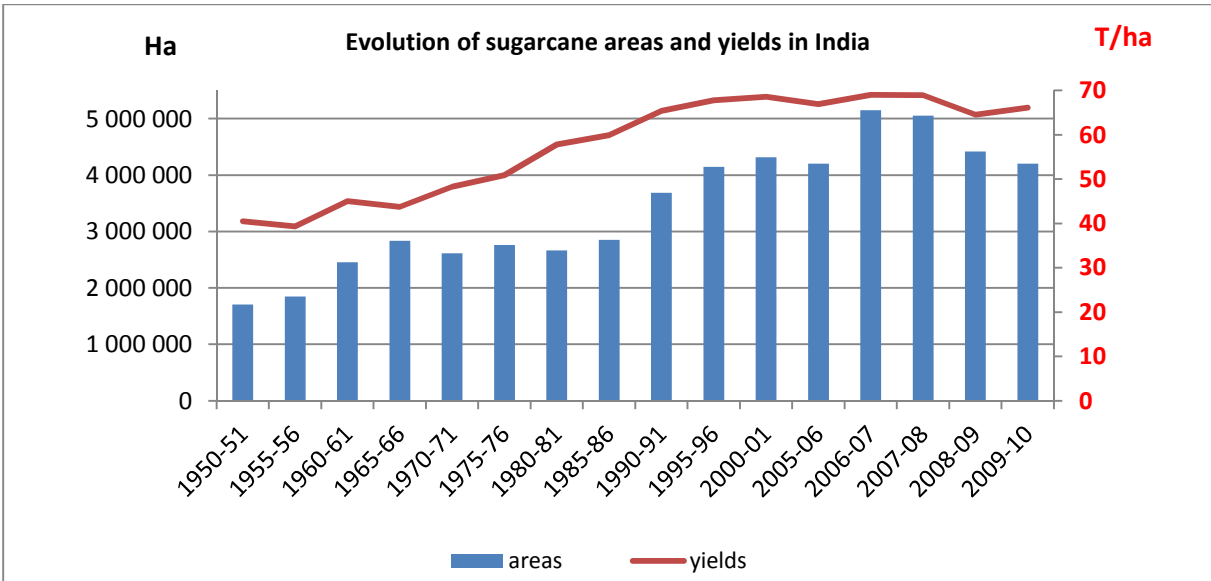


Source: LMC International – November 2009

2.2 – Sugarcane areas and yields

The evolution of sugarcane areas and yields shows:

- no significant improvement of sugarcane productivity since the mid-90’s with yields averaging 65 tons/ha on the 2001/02 – 2009/10 period,
- a significant fluctuation of sugarcane areas from one campaign to another (between 2005/06 and 2006/07 sugarcane areas increased by 22,5 % whereas between 2007/08 and 2008/09 they decreased by 12,5 %).



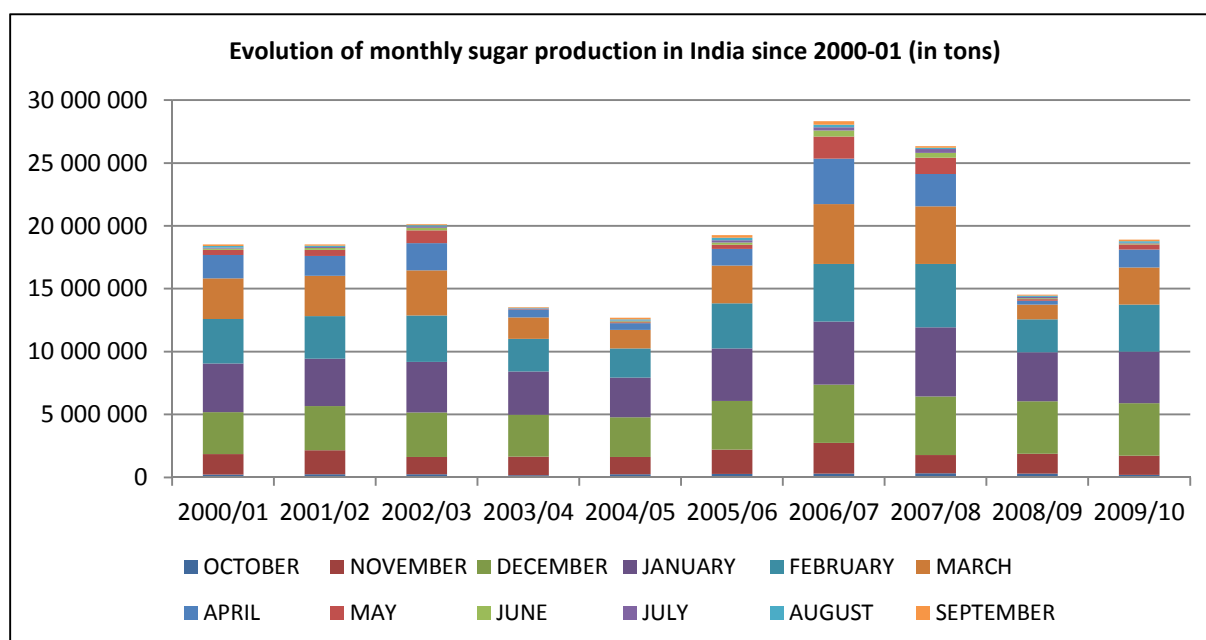
Source : ISMA – Handbook of sugar statistics – 2010

In 2009/10 the estimated sugarcane area for 2009/10 was estimated at 4,3 Mha while yields reached 63.9 tons/ha.

Basic production statistics of cane production and utilization					CANE USED FOR MAKING (%)			
Campaign	Area (mln ha)	Yields (t/ha)	Production (Mt)	Recovery (%)	Sugar	Khandsari	Gur	Seed
1985/86	2,9	60	174	10	39,7	6	41,1	13,1
1990/91	3,7	65,4	242	9,8	51,4	5,5	31,7	11,5
1995/96	4,2	68	285,6	9,8	62,2	3,5	23,6	10,7
2000/01	4,32	68,5	296	10,5	60	3,7	24,6	11,6
2001/02	4,41	67,4	297,2	10,3	60,8	3,5	23,8	11,8
2002/03	4,52	63,6	287,4	10,4	67,9	3,3	17,2	11,6
2003/04	3,94	59,4	233,9	10,2	59,1	4,3	26,5	10,1
2004/05	3,66	64,8	237,1	10,2	53,4	4	31,1	11,6
2005/06	4,2	67	281,2	10,2	66,5	3	17,9	12,6
2006/07	5,15	69	355,5	10,2	75	2,5	12,1	10,5
2007/08	5,06	68,8	348,2	10,6	72,6	2	16,2	9,2
2008/09	4,4	64,8	285	10,3	58,9	2,6	24,4	14,2
2009/10	4,3	63,9	274,7	10,3	59,9	2,6	24,1	13,4
Mean (2001-10)	4,4	65,7	289,6	10,3	63,4	3,2	21,8	11,7

Source : International Sugar Journal – August 2011

Located in the Northern Hemisphere, the country essentially produces its sugar between November and February. While sugarcane is irrigated in Western India (Maharashtra), North India (Uttar Pradesh - UP) can usually rely on abundant rainfalls during the monsoon season (from July to September each year) leading to lower cane costs in this area (around 740 Rs/t cane in UP against 920 Rs/t cane in Maharashtra).



Source : ISMA – Handbook of sugar statistics – 2010

2.3 - Number of sugar mills

From an industrial point of view, the Indian sugar and ethanol sector regroups around 630 mills but as for 2008-09 season (see table below), there is usually a substantial % of the mills that are not operating on every campaign. This is indirectly related to the rule fixing a radial distance between mills and cane farms to no more than 15 km at present time.

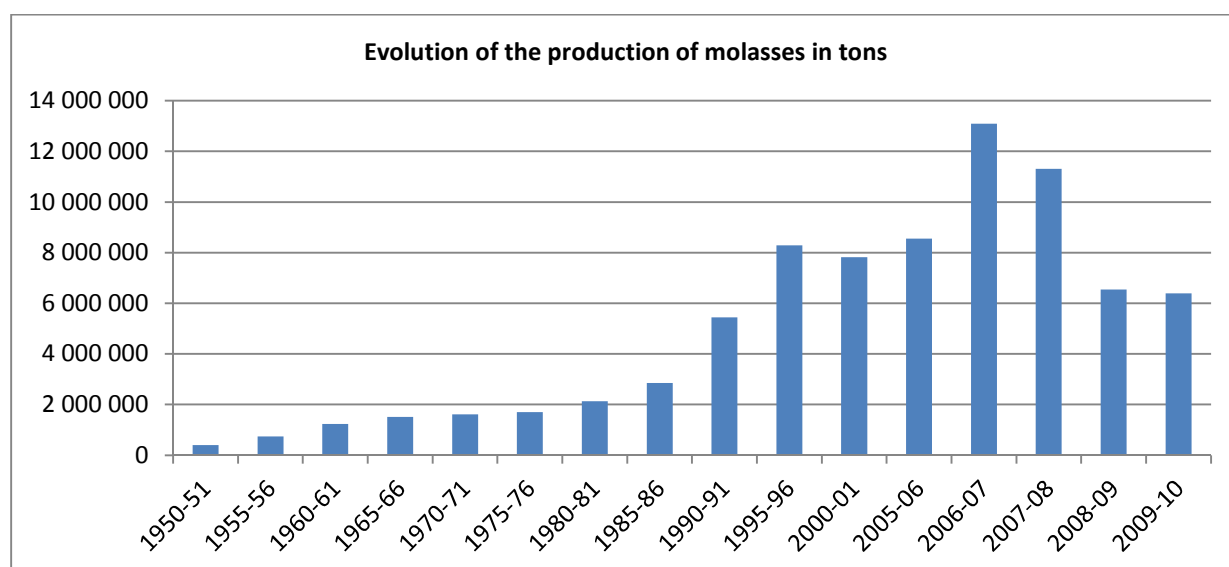
Number of mills and percentage of units not operating in sugar season 2008-09

STATE	Cooperative	Public	Private	All
North India	28 (10,7)	33 (57,6)	94 (3,2)	155 (16,1)
Western India	165 (27,9)		30 (6,7)	195 (24,6)
South India	55 (25,5)	7 (42,9)	88 (12,5)	150 (18,7)
Other	70 (28,6)	22 (86,4)	42 ((23,8)	134 (36,6)
India	318 (26,1)	62 (66,1)	254 (10,2)	634 (23,7)

Source: International Sugar Journal – August 2011

3 – About the ethanol policy in India

With more than 70% of its crude oil and petroleum requirements met through imports, India has launched a program intending to reduce its dependence to oil market fluctuations. This program has included the integration and development of a growing production of biofuels in the country including bioethanol. Mainly produced from molasses, the national production of ethanol is directly related to the sugarcane production level and ethanol prices are highly correlated to the price of molasses.



Source : ISMA – Handbook of sugar statistics – 2010

The Government of India (GOI) approved the National Policy on Biofuels on December 24, 2009. The policy proposes a target of 20 percent blending of bio-diesel and bio-ethanol by 2017. India's biofuel strategy continues to focus on the use of non-food resources; namely sugar molasses for production of ethanol and non-edible oils for the production of biodiesel. The government's current target of 5 percent blending of ethanol in petrol has been successful in years of surplus sugar production, but unfilled when sugar production declines. Biodiesel production in India is very small due to inadequate supplies of feedstock.