



# Sustainable Pricing Policy for Sugarcane

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# Agenda

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- Dr Rangrajan Committee report
- India policy – India, Maharashtra, Karnataka
- International Practices
- Way ahead

# India sugarcane pricing – Dr Rangrajan Report

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## Key recommendations

- Revenue sharing in 70-30 ratio in proportion of costs incurred by farmers and millers
- Sugarcane pricing - two methods
  - 70% of revenue from primary product:sugar and by-products revenue from bagasse, molasses and press mud
- OR
- 75% of the ex-mill revenue of sugar alone
- Actual payment in two steps – FRP as first payment and balance part to be paid subsequent to publication of half-yearly *ex-mill prices and values*

# Karnataka, Maharashtra – Sugarcane Board

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Sugarcane Board Structure	Karnataka	Maharashtra
Commencement	Jun-13	Dec-13
Board Chairman	Minister of Sugar	Chief secretary of State
Board Members	19	15
Sugar mills Representatives	4	5
Farmers representatives	5	5
Committee for revenue calculation-members	6	No
Sugarcane payment	Two phased	Two phased
First Payment	FRP	FRP
Board Meeting	-	Minimum Three

- Karnataka board has agronomist, sugar technologists as members of Sugarcane Board

# Brazil – Sugarcane prices

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## □ Brazil

- Sugarcane price basis the CONSECANA product price indices expressed per kilogram of sucrose per mt of cane

## Thailand

- Thailand Cane & Sugarcane board, basis the Quota B (Tender auction for export sugar) and Quota A (domestic) prices and molasses prices

## □ Australia

- Queensland Sugar Ltd and Cane Growers Association, basis the sugar prices & sugar recovery

# Global Practice - Institutional structure

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Structure	Brazil	Australia	Thailand
Cane pricing body	CONSECANA	Queensland Sugar Ltd	Thai Cane & sugar Board
Millers Body	UNICA	Queensland Sugar Ltd	Thai Sugar Millers corporation
Sugarcane growers	ORPLANA	Cane growers association	-
<b>Revenue sharing</b>	<b>60-40</b>	<b>66-33</b>	<b>70-30</b>
Price data -Frequency	Weekly	Monthly	By Tender - Quota B
<b>Explicitly linked to</b>	<b>Sugar &amp; Ethanol Price</b>	<b>Sugar Price</b>	<b>Sugar &amp; Molasses Price</b>

- Australia – Millers body, Cane growers association conduct annual negotiation, no government representatives on board
- Price-risk management is also one of the objectives of these institutions along with sugarcane pricing

# Brazil – Pricing Model

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- CEPEA - A University research centre conducts price survey of sugar and ethanol for both domestic and export markets
  - Price indices are disseminated on weekly basis
  - End of season final price indices in terms of ATR per mt are provided
- RSF is  $P_c = \text{Avg } P_p * \text{ATR}$ 
  - $P_c$  – cane price, Avg.  $P_p$  – average prices of all sugar, ethanol
  - ATR – Total reducible sugar or Sucrose content

Year	Avg Price	Season's	Cane Price	BRL-INR	Cane Price
	BR\$/Mt	ATR/Mt	BR\$/Mt	Exchange Rate	INR/MT
2011-12	0.5018	137.54	69.02	28.20	1,946
2012-13	0.4728	135.57	64.10	27.06	1,734
2013-14	0.4572	133.50	61.04	26.88	1,641
2014-15	0.4763	136.80	65.16	24.91	1,623
2015-16	0.4909	130.64	64.13	18.39	1,179

# Australia - Pricing model

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- QSL – Cane and Sugar price risk manager
  - Growers/Farmer Economic interest (GEI) and Supplier (sugar mill) Economic interest (SEI)
  - Growers have choices to adopt a conservative approach, be aggressive, commit future year's production or seek early payment
  
- RSF is  $P_c = P_s \times (90/100) \times (CCS - 4)/100 + 0.578$ 
  - $P_c$  – Price of cane,  $P_s$ -Price of sugar, CCS is total sucrose in cane
  - Standard efficiency of 90 mt of sugar for each 100 mt of CCS and cane of average quality (12% CCS) on the growers' part
  
- Cane payments are made through the season and maximum up to 60% advance of forecasted sugar price



# Australia - Pricing model

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- Guaranteed Pool – which gives minimum floor price and offers potential upside returns

Year	Floor Price	Actual Price	Cane Price	AUD-INR	Cane Price
	AU\$/Mt	AU\$/Mt	AU\$/Mt	Exchange Rate	INR/MT
2011-12	463	480	35.14	48.14	1,692
2012-13	477	481	35.21	55.31	1,947
2013-14	389	393	28.87	56.50	1,631
2014-15	427	429	31.47	55.06	1,733
2015-16 E	405	407	29.88	48.24	1,442

# Thailand - Pricing Model

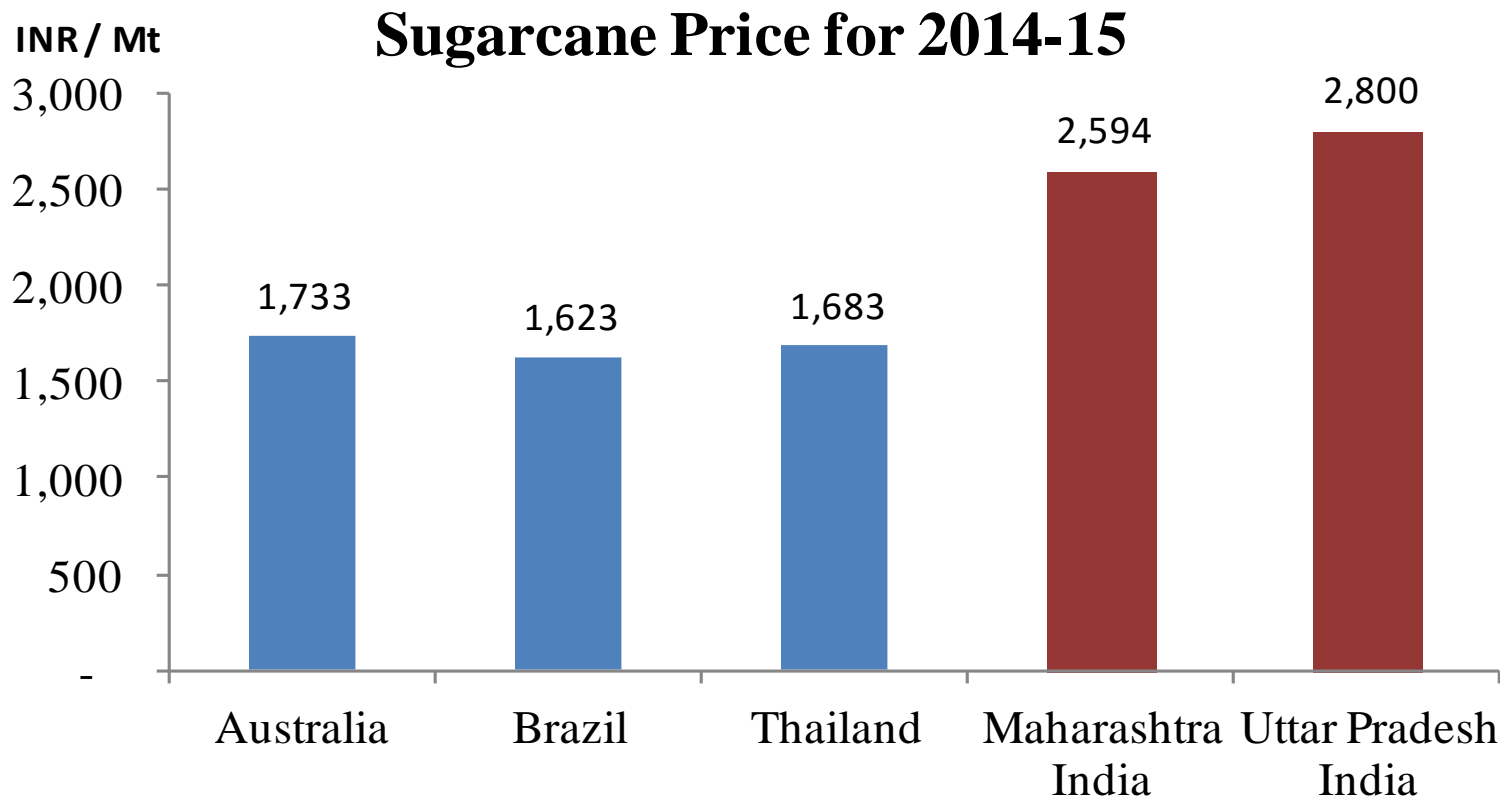
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- Thai Cane and Sugar Board (TCSB) – conducts tender auction of Quota B sugar which sets indicative price
  - Sugar millers need to earn from sugar equal or more than auction price
- RSF is  $P_c = P_1 + P_2 * CCS + M$ 
  - $P_c$  – cane price per mt,  $P_1$  – cane price,  $P_2$ - price vary to CCS,
  - C.C.S. – commercial cane sugar/Sucrose content,  $M$  – net income from molasses

- Cane price

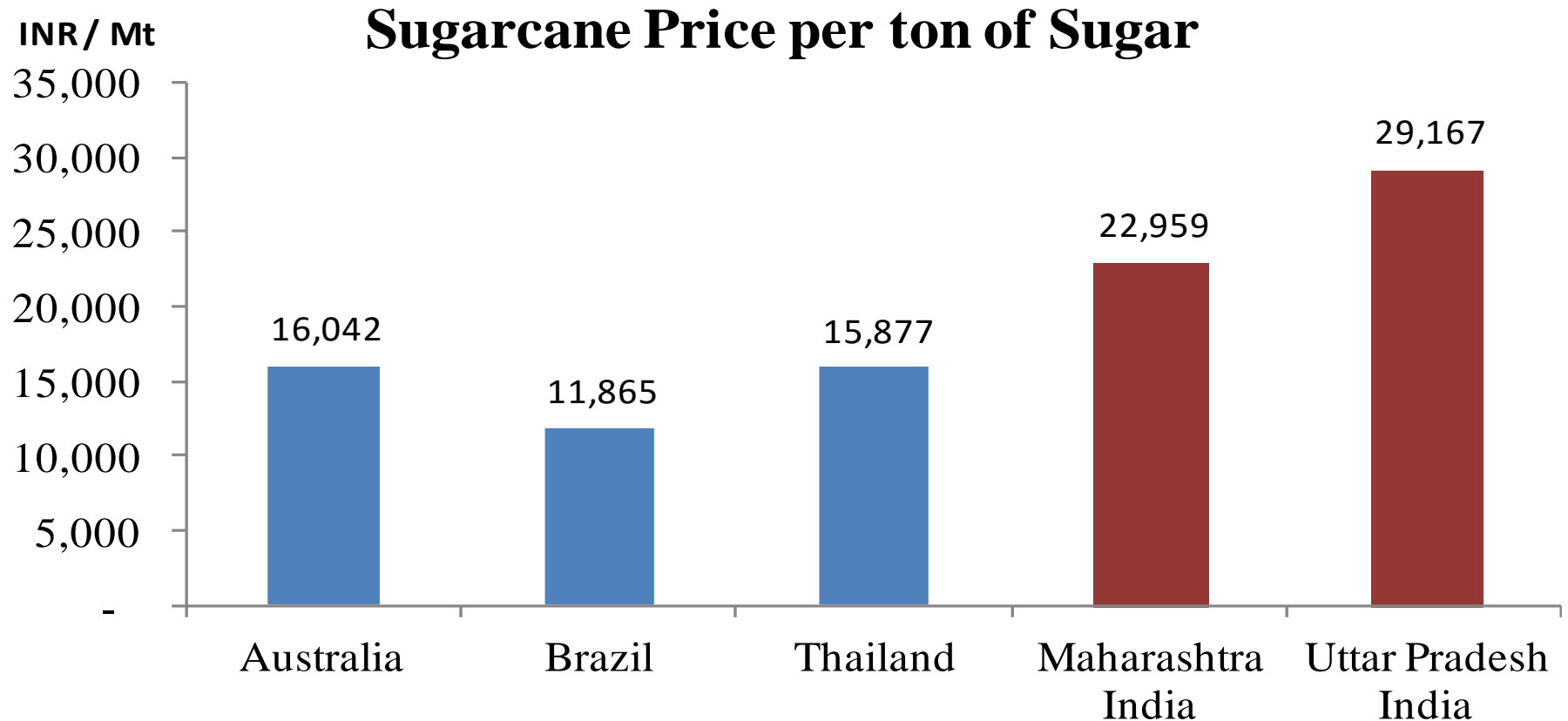
Year	Cane Price	THB-INR	Cane Price
	AU\$/Mt	Exchange Rate	INR/MT
2010-11	1000	1.53	1,530
2011-12	950	1.71	1,625
2012-13	900	1.9	1,710
2013-14	900	1.87	1,683
2014-15	900	1.87	1,683

# Global vs. India – Sugarcane prices



Note: Prices include cost of harvesting & transportation

# Sugarcane prices in terms of Sugar



Note: Prices include cost of harvesting & transportation

# India – RSF price vs FRP

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## Maharashtra state - 2015-16 comparison with previous years

### Sugarcane price - Based on Revenue Sharing Formula (RSF) 70%-30%

Particulars	Unit	2012-13	2013-14	2014-15	2015-16 F
Sugar recovery	Percent	11.4%	11.2%	11.3%	11.12%
Average sugar price - Kolhapur Center	INR/Qtl	3040	2,836	2,444	3,000
Sugar Revenue	INR/Qtl	3,466	3,185	2,762	3,336
Molasses - 40 Kg @ Rs 5.5 per Kg	INR/Qtl	220	220	220	240
Bagasse - 75 Kg @ Rs 2.0 per Kg	INR/Qtl	150	150	150	150
Press -Mud 35Kg @ Rs 0.25 per KG	INR/Qtl	9	9	9	9
Sugarcane price - at 70% of all revenue	INR/Mt	2,691	2,495	2,198	2,614
Sugarcane FRP at 9.5%	INR/Mt	1,700	2,100	2,200	2,300
Sugarcane FRP at 11+%	INR/Mt	2040	2,664	2,594	2,692
<b>RSF over FRP</b>		651	-169	-396	-78

- Revenue sharing ratio of 70-30

# Maharashtra Sugarcane Price scenario 2015-16

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## Sugarcane price - Based on Revenue Sharing Formula (RSF) 2015-16

Particulars	Unit	Scenario A	Scenario B	Scenario C
Sugar recovery	Percent	<b>11.1%</b>	<b>11.1%</b>	<b>11.1%</b>
Avg sugar price - Kolhapur Center (Oct-Apr)	INR/Qtl	2,924	2,924	2,924
Avg sugar price - Assumption (May -Sep)	INR/Qtl	<b>3,200</b>	<b>3,400</b>	<b>3,600</b>
Sugar Revenue	INR/Qtl	3,405	3,516	3,627
Sugarcane price - at 75% of sugar revenue	INR/Mt	2,554	2,637	2,721
Sugarcane FRP at 9.5%	INR/Mt	2,300	2,300	2,300
Sugarcane FRP at 11.1%	INR/Mt	2,687	2,687	2,687
<b>RSF over FRP</b>		<b>-133</b>	<b>-50</b>	<b>33</b>

- Sugarcane price based on RSF likely to be higher than FRP only under scenario C

# Uttar Pradesh Sugarcane Price Scenario 2015-16

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**Sugarcane price - Based on Revenue Sharing Formula (RSF) 2015-16**

<b>Particulars</b>	<b>Unit</b>	<b>Scenario A</b>	<b>Scenario B</b>	<b>Scenario C</b>
Sugar recovery	Percent	<b>10.6%</b>	<b>10.6%</b>	<b>10.6%</b>
Avg sugar price - Muzaffarnagar Center (Oct-Apr)	INR/Qtl	2,986	2,986	2,986
Avg sugar price - Assumption (May -Sep)	INR/Qtl	<b>3,500</b>	<b>3,700</b>	<b>3,900</b>
Sugar Revenue	INR/Qtl	3,438	3,544	3,650
Sugarcane price - at 75% of sugar revenue	INR/Mt	2,578	2,658	2,737
Sugarcane FRP at 9.5%	INR/Mt	2,300	2,300	2,300
Sugarcane FRP at 10.6%	INR/Mt	<b>2,566</b>	<b>2,566</b>	<b>2,566</b>
UP State Advised Price (SAP)	INR/Mt	2,800	2,800	2,800
<b>RSF over FRP</b>		<b>12</b>	<b>91</b>	<b>171</b>
<b>RSF over SAP</b>		<b>-222</b>	<b>-142</b>	<b>-63</b>

- Sugarcane price based on RSF likely to be higher than FRP under all three scenario
- However, when compared to SAP of Rs. 2,800 per mt, RSF based price lower under all three scenario

# Way ahead

- Revenue-sharing formulas are the most popular and robust sugarcane pricing systems worldwide
- In India, this season and the next season would mark a milestone as some surplus (additional cane payment) from revenue-sharing is looking likely.
- The next step would be to move to risk-management with the possibility of forward pricing for cane even at the time of planting.



Thank You