

Feed Conclave-2017, Pune

Mapping the market thought: Oil meals, DORB and Maize

Paper by

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About TransGraph: *“What to do and what not to do”*

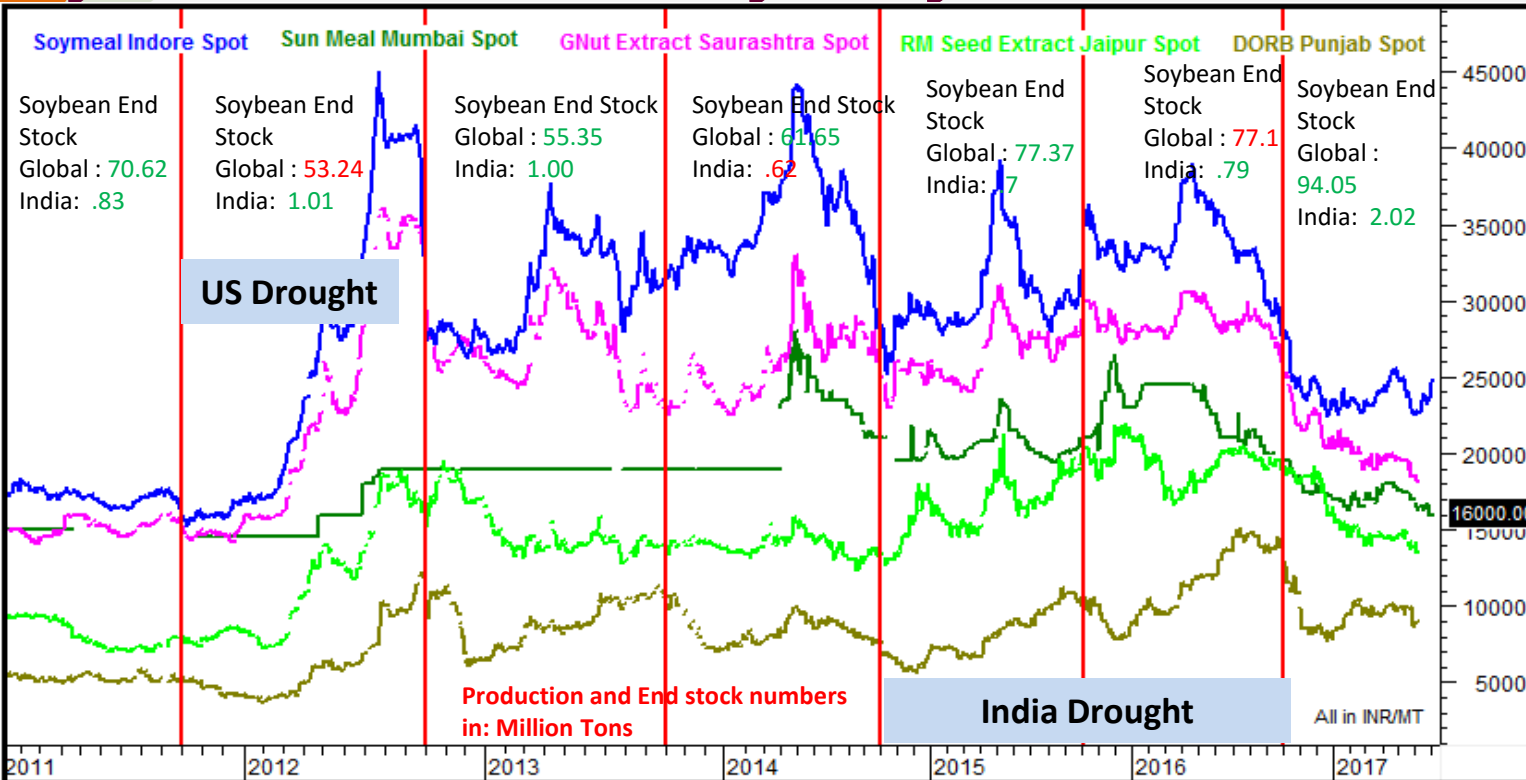
Company Name	TransGraph Consulting Pvt. Ltd.
Niche Area	Commodities and currencies
Competencies	<ul style="list-style-type: none"> Price forecasting, value chain analysis and risk management Mix of consulting services and software product
Location	Hyderabad, India
Inception	2003
Founder	Mr Nagaraj Meda
Main Brands	“TransGraph”, “TransRisk”, “Mapping The Market Thought”
Numbers	50+ employees 100+ clients in 20+ countries

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Soymeal continue to remain a Key driver for Indian oil meal basket..



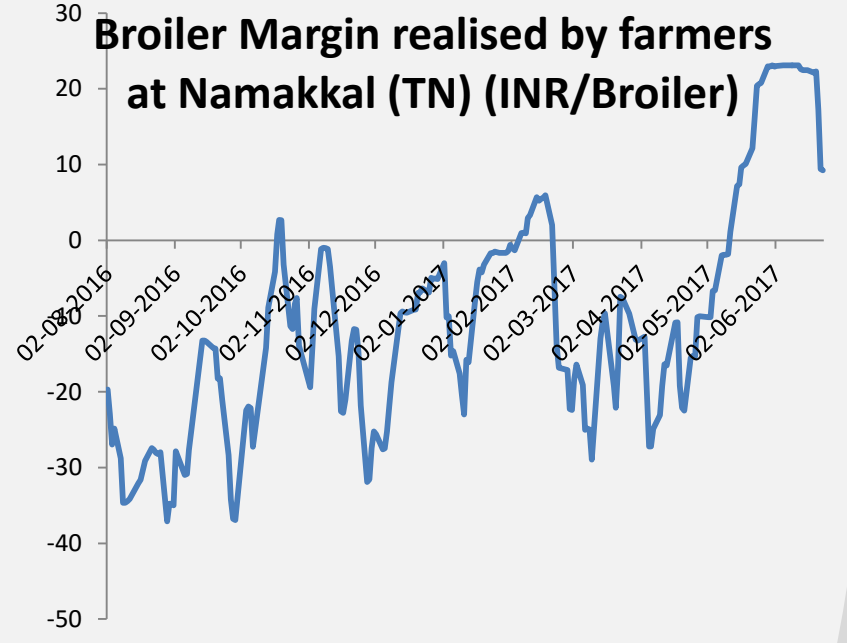
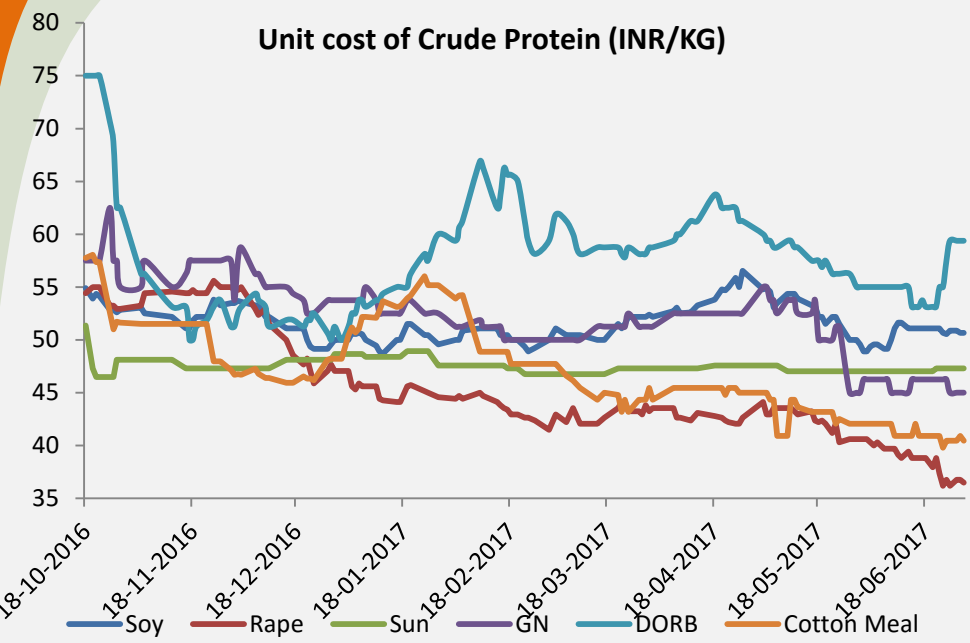
- Higher soymeal prices from 2012 to 2016 kept domestic consumption under check due to higher feed costs impacting the poultry margins.
- At the same time, exports could not materialize due to consecutive growth in global meal production
- In this context, Feed industry had to look for substitutable protein sources in the form of Rape meal, Sun meal & Palm kernel meal etc.
- In 2016-17 MY, Soy meal offtake has remained higher due to its competitive pricing Vis-à-vis other meals.
- However, entire meal/cake supply could stay on a surplus note due to good prospects for the 2017-18 MY

Year	2011	2012	2013	2014	2015	2016	2017
India Production Rape meal:	1.67	1.78	1.78	1.89	1.67	1.67	1.85
Sun meal:	.50	.50	.33	.33	.33	.25	.50
GN Meal:	.93	.93	.29	.57	.43	.21	.93
DORB:	5.67	5.87	6.0	6.1	5.39	5.67	5.92

Note: Production is of meal/extract/DOC
Mustard meal MY is in RMS

Unit cost of crude protein from rapemeal is the cheapest...

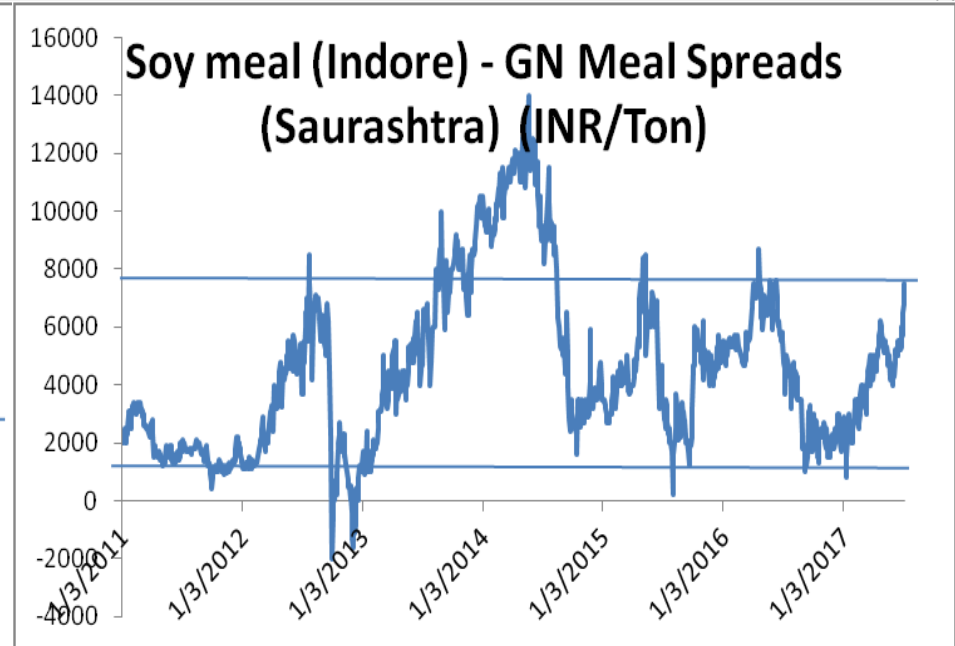
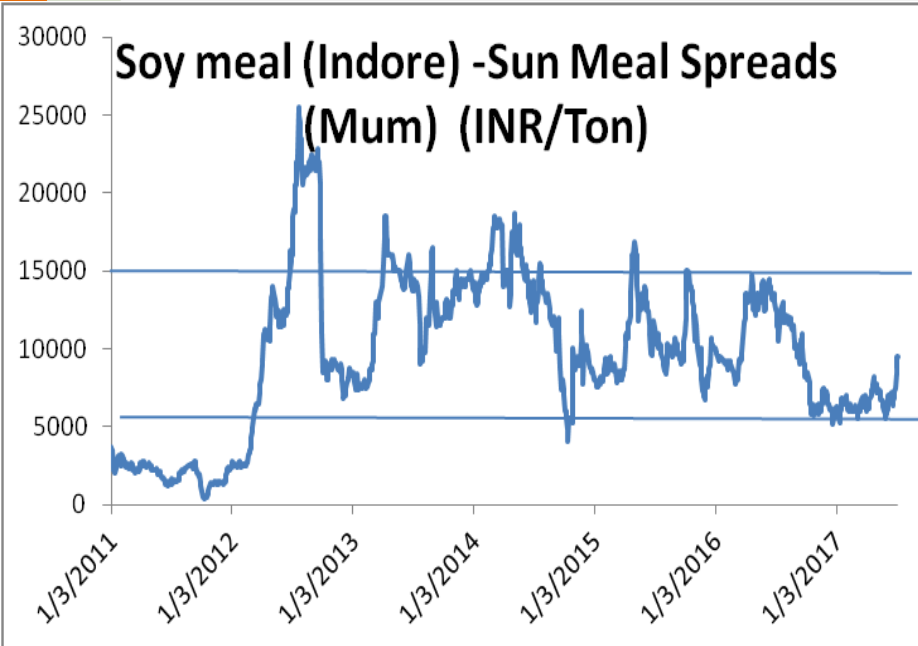
TransGraph



- Mustard Meal protein is the most competitive
 - Thus Mustard meal has good prospects for substituting soymeal in poultry as well as cattle feed
 - But given the availability & palatability, Soymeal continue to stay a key driver for protein based sources
- Note: Soymeal: Indore, rapemeal: Jaipur, Sunmeal: Adoni, GN Meal: Rajkot, Cottonmeal: Guntur

- With no feed rationing and substitution of soy meal, broiler margins has been highest for the season
- As cattle trade for slaughtering taking setback across nation, higher broiler prices is expected to keep the margins high in coming months
- Thus the y-o-y growth in meal consumption can clock double digit growth

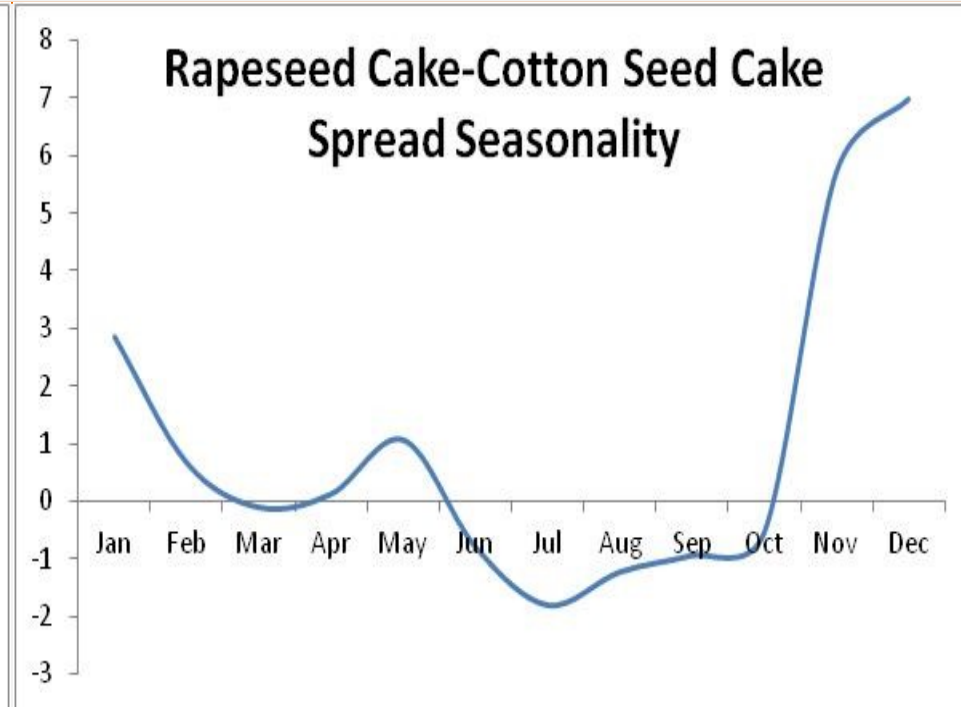
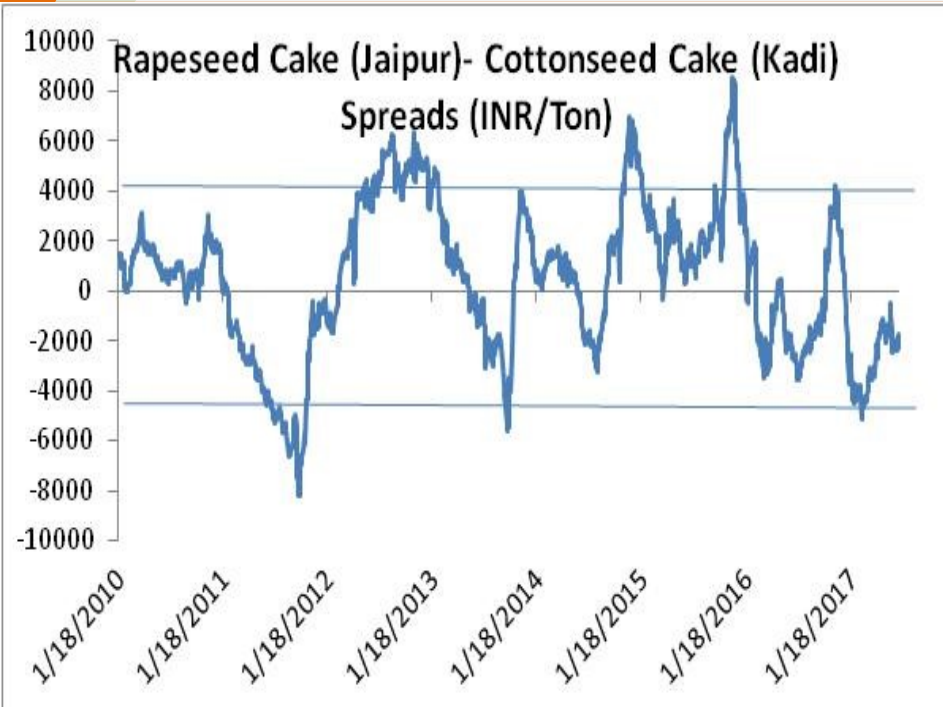
Higher Volatility b/n Soy Meal with its substitutes..



- Spread volatility between Soy-Sun & Soy-Groundnut has been very high.
 - Soy-Sun meal spreads Stood between INR 6500 to INR 14500 per ton
 - Soy-GN Meal spreads traded between INR 1500 and INR 7800 per ton
- These kind of spreads would result in high variance in substitution demand between soy and other meal

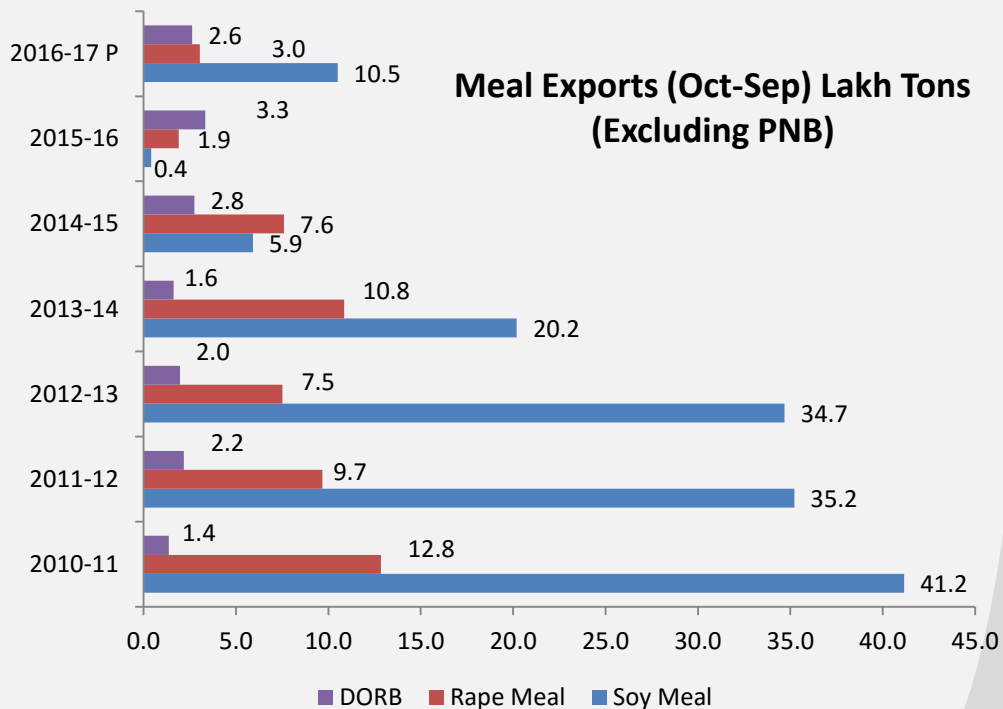
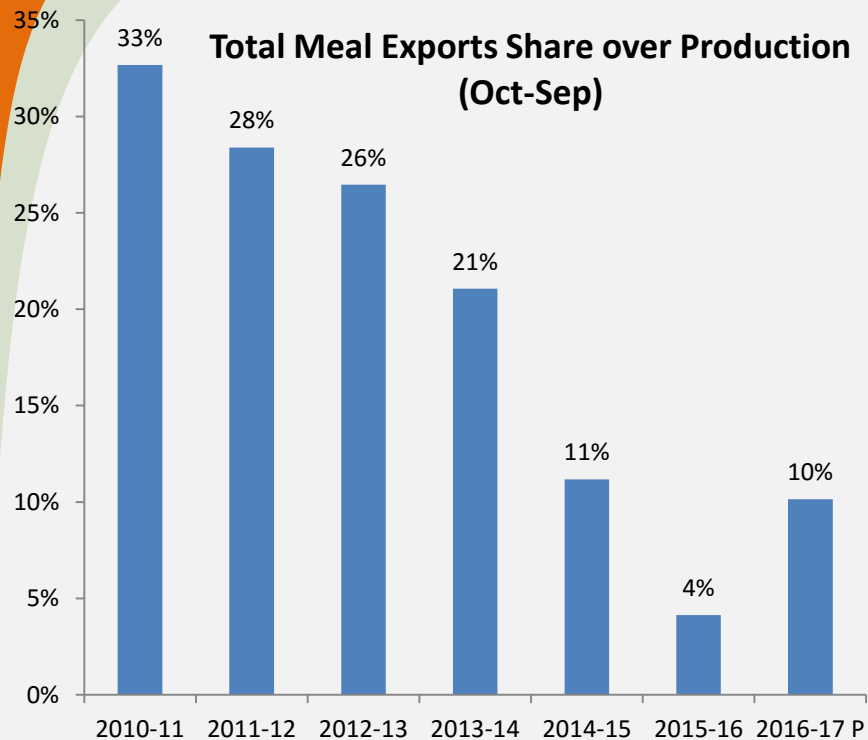
Average Spreads	
Soy-Sun	9236
Soy-GN	4449

Cottonseed Cake and rapeseed Cake prices influences each other...



- On the other hand, Spreads between Rapeseed – Cotton seed cake stood range bound between INR -4000 to +4000 per Ton
- Supply of these Commodities is split between Kharif and Rabi which balances the Spread and reduce Volatility

Exports revived last year due to Competitive pricing but yet to reach full potential due to cheaper origins



- Indian Rapemeal and Soymeal exports demand has been replaced by cheaper availability of International Soymeal
- PNB: Pakistan, Nepal and Bangladesh

Sowing progress for the 2017-18 KMS (Kharif Marketing Season)..

Sowing Progress as on 7th July in Lakh Hectares					
Crop Category	5 Year Average	Normal Sowing Progress	2016-17	2017-18	Y-oY Change
Groundnut	41.5	16.0	17.3	16.3	-6%
Soybean	110.4	48.0	48.6	53.6	10%
Sunflower	2.3	0.6	0.9	0.5	-42%
Other Oilseeds	29.9	3.2	3.0	2.5	-17%
Total Oilseeds	184.1	67.8	69.7	72.9	4%
Cotton	122.5	71.7	67.9	71.8	6%
Total Oilseeds + Cotton	490.6	207.2	207.4	217.6	5%

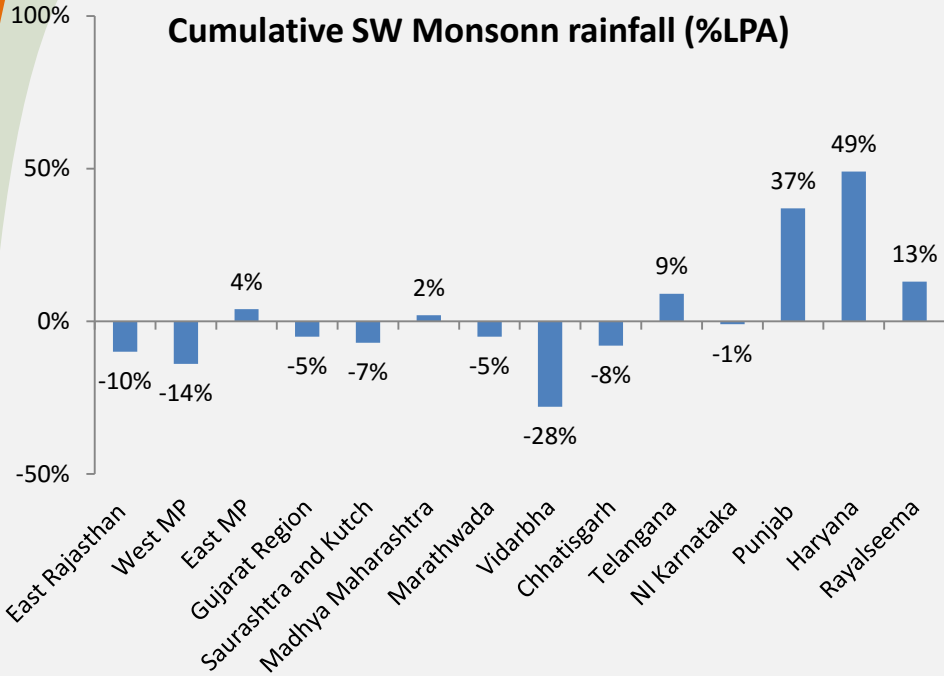
- Overall sowing pace is 8% high y-o-y with soybean high by 10%, GN low by 6%, Sun low by 42%, Cotton high by 6% and Rice high by 6%
- Pluses sowing is high by 23% mainly driven by Urad and Moong

A stable y-o-y kharif production is foreseen in 2017/18.....

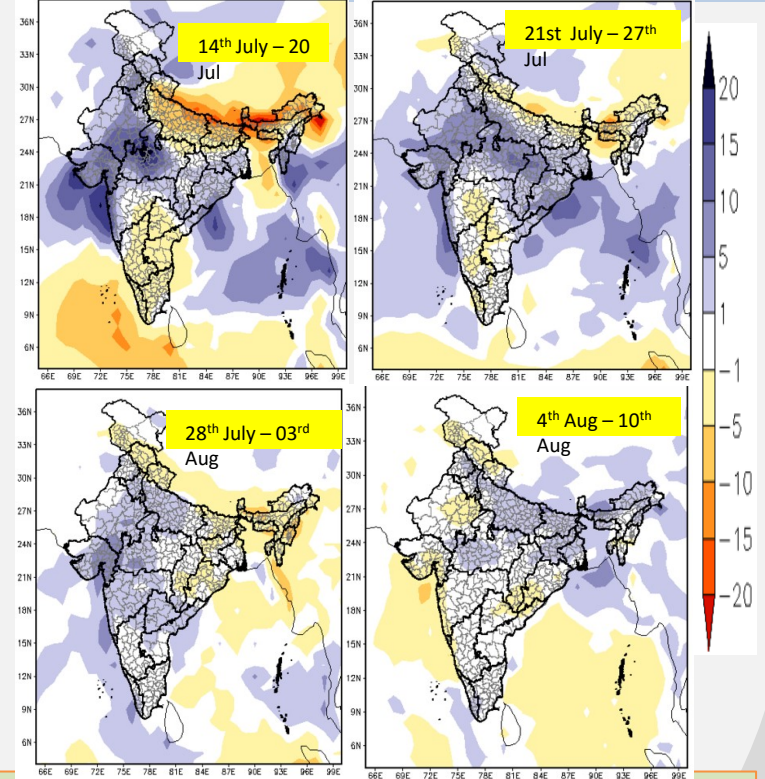
Kharif Oilseeds						
	2016-17			2017-18		
	Acreages (Lakh Hectare)	Yield (Kg/Hectare)	Production (Lakh Tons)	Acreages (Lakh Hectare)	Yield (Kg/Hectare)	Production (Lakh Tons)
Soybean	113.8	907.0	103.2	110.0	908.0	99.9
Groundnut	47.8	1180.0	56.4	47.0	931.0	43.8
Sunflower	2.8	431.0	1.2	2.8	533.1	1.5
Cotton	105.0	546.5*	105.6	118.0	520.0	122.6
Total	269.4		266.4	277.8		267.7

- Cotton yield in terms of kg Lint per hectare
- GN yield and production for Unshelled Groundnut

Indian Monsoon Snapshot – So far



Weekly Rainfall Anomaly Forecast (mm/day)



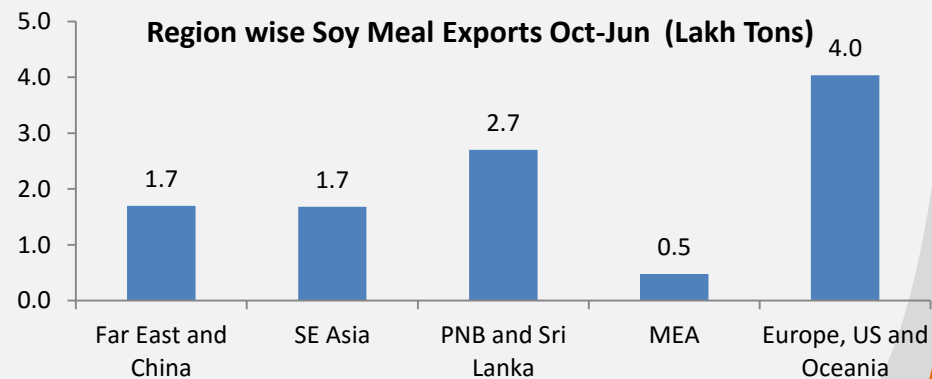
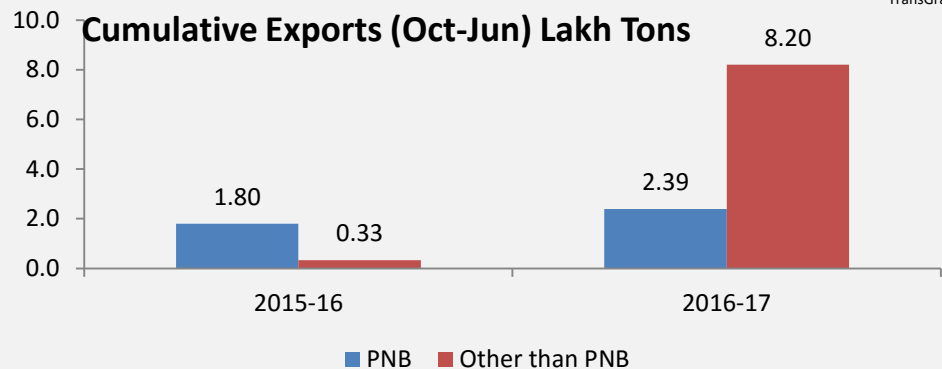
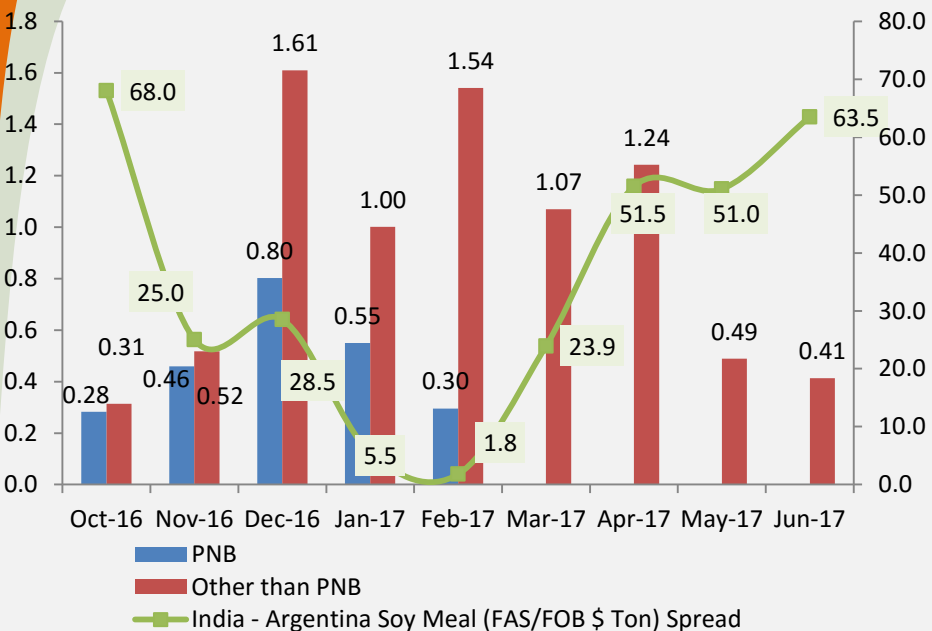
- Cumulative rainfall has been below normal to normal in key oilseeds and cotton growing regions except Punjab, Haryana and Rayalseema
- Forecast of next 4 weeks is indicating good rains in central India. Southern peninsular India, Telangana, AP, Karnataka is focasted to experience reduced rainfall activity in the week 14th to 20th July

Soy Meal



Exports of soymeal ...

Monthly Soymeal Exports (Lakh Tons)

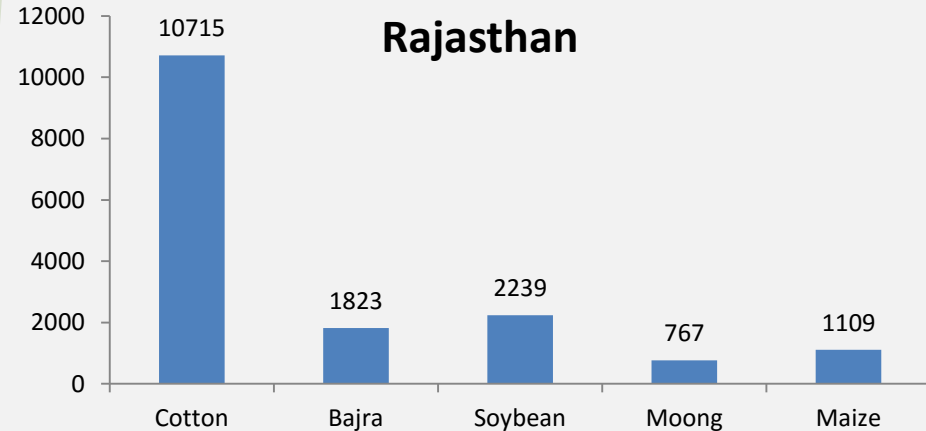
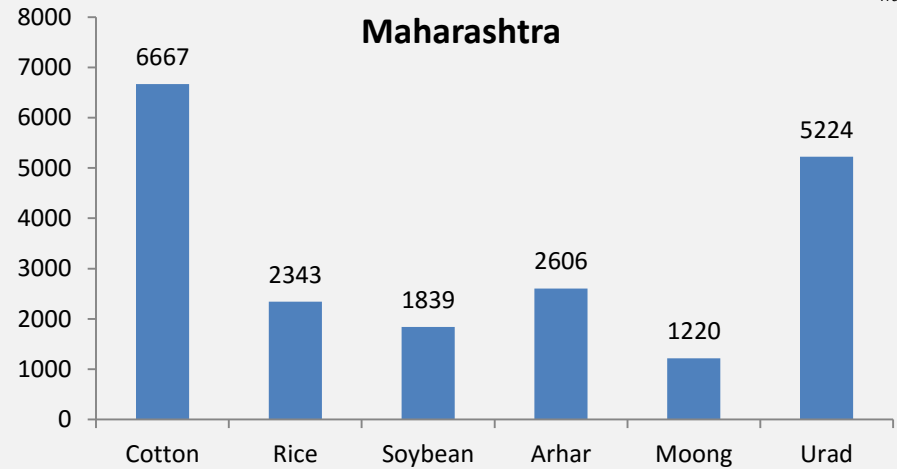
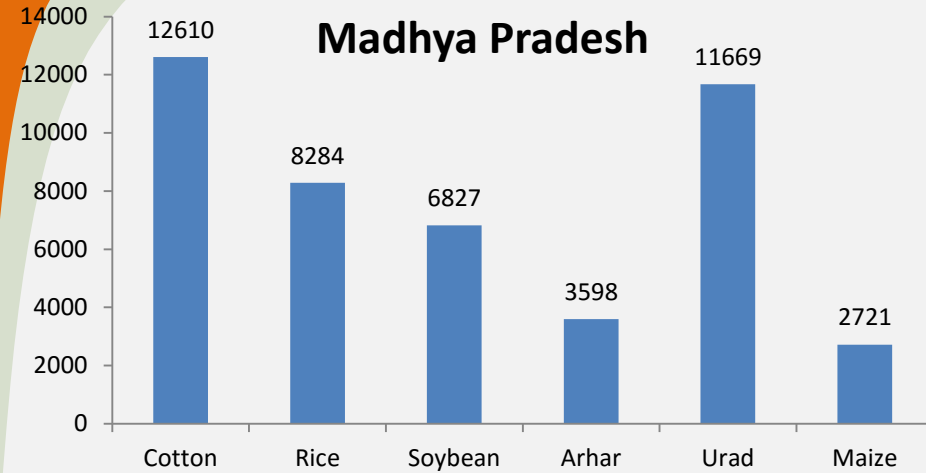


- Among PNB more than 90% of meal was exported to Bangladesh. Pakistan and Nepal took very limited quantity of Indian meal due to political reasons.
- European buyer were more active and demand from SE Asian nations were limited
- Favorable Spreads remained from Nov'16 to Mar'17 (Below \$30) but exports demand didn't improve enough to eat away surplus stock

Note: PNB: Pakistan, Nepal and Bangladesh

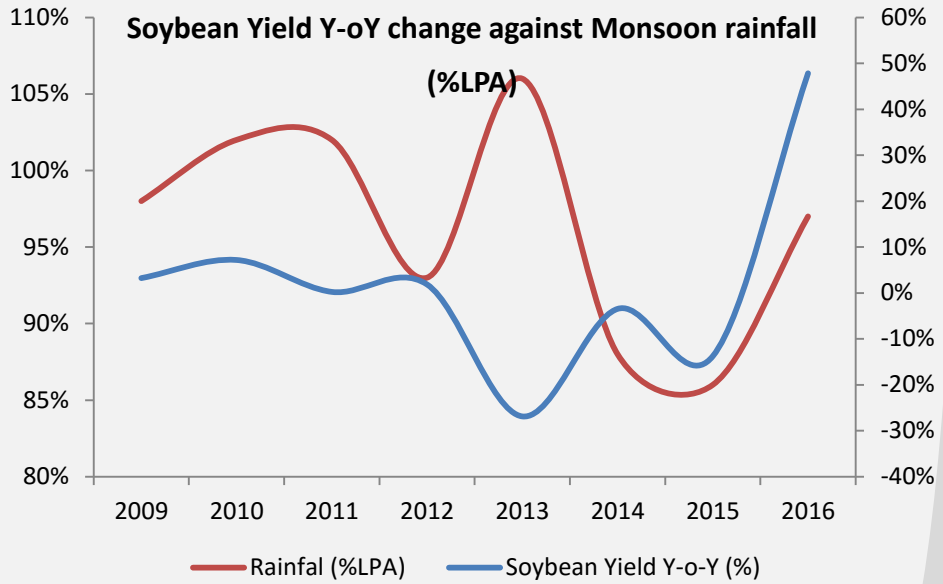
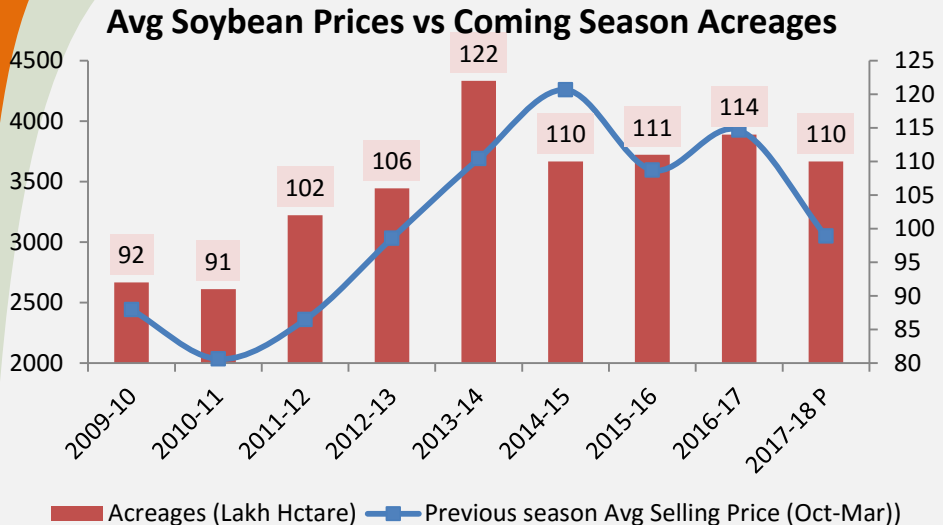
Profit realizations (INR/Hectare) in key soybean growing states

TransGraph



- Cotton and urad are showing promising returns
- Pulses has lost its attractiveness this year
- IN MP soybean realization is still significant
- Thus soybean acreages is expected to decline in Maharashtra and Rajasthan but is expected to remain favorable in MP

Soybean Acreages is expected to fall in 2017-18 MY



Soybean Yield Range (Kg/Hectare)	
Mean	908
Median	924
Max	1193
Min	613

- Soybean acreages has been more or less stable in last 3 years, we are expecting the same trend to continue with competition coming from cotton esp. in Maharashtra over profit realization thus a 4- 5 lakh hectares of acreage drop can happen in coming season
- With pulses MSP recommended to raised famers tendency against pulses is expected to be limited, cotton is expected to take acreages of pulses and Soybean
- Yield has been dependent on rainfall
- Thus a near repetition of bean production is expected in 2017-18 with forecast of normal monsoon

Soybean and Meal balance sheet

Annual Soybean Balance sheet (MY: Oct-Sep)

Indian soybean Balance sheet	2014-15	2015-16	2016-17 E	2017-18 P
Beginning Stock	6.71	9.41	7.95	20.16
Crop size	78.00	68.50	103.20	99.88
Total Supply	84.71	77.91	111.15	120.04
Marketable Surplus	71.41	63.30	95.96	104.62
Arrivals (Oct-Sep)	65.00	57.05	79.98	88.80
Crush (Oct-Sep)	62.00	55.35	75.80	84.60
To be arrived	6.41	6.25	15.98	15.82
Stocks with crushers and stockiest (Ending Sep)	3.00	1.70	4.18	4.20
Total uncrushed seed available	9.41	7.95	20.16	20.02

Source: Industry and TG research; All Units in lakh tons

Indian Meal Balance Sheet (Oct-Sep)

Parameter	2014-15	2015-16	2016-17	2017-18
Beg Stock for Season	3.88	4.67	3.85	2.47
Crush	62	55.35	75.8	84.6
Meal Production	50.22	44.83	61.4	68.53
Supply	54.1	49.5	65.25	71
Export	5.91	0.41	10.38	10.5
Export (PNB)	3.52	1.74	2.6	2.8
Total Exports	9.43	2.15	12.98	13.3
Dom Consumption	40	43.5	49.8	55.4
Total Demand	49.43	45.65	62.78	68.7
End Stock	4.67	3.85	2.47	2.3

Units:- Lakh tons

- As the meal exports didn't revive strongly even though the Indian meal was offered at competitive prices the bean end stocks is expected to rise on limited crush
- SE Asian nations has been reluctant in booking large volume of meal due to issues of mixing sand with meal in early years
- In coming years too demand from SE Asian nations is not expected to be robust
- However the domestic consumption is expected to remain high on favorable poultry margins

Soymeal Spot Indore, INR/MT



Soymeal Meal Indore Spot prices are likely to trade mixed within a broad range of INR 27500 to 24000 in the coming couple of months ahead of turning higher towards INR 28000 in the coming 5 to 6 months.

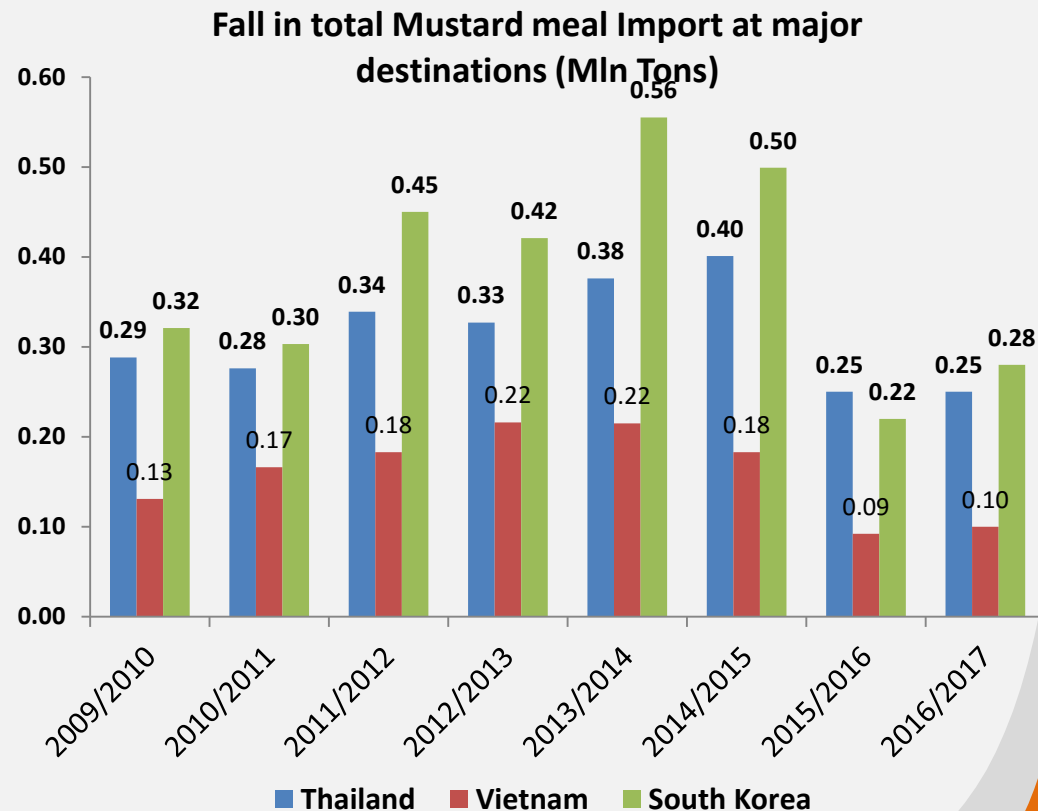
Rape Meal



Lower Mustard meal exports in the last two years...

Rapemeal Exports In Thd tons (April-March)						
	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
South Korea	427.2	380.6	516.2	512.8	277.5	167.8
China	272.0	0.0	0.0	0.0	0.0	0.0
Thailand	143.0	115.4	160.3	204.3	11.6	4.2
Indonesia	97.6	100.3	46.9	47.3	8.8	3.0
Vietnam	58.7	45.7	29.8	68.8	2.6	11.6
Taiwan	43.3	22.3	66.5	34.9	19.8	4.4
Japan	29.6	0.6	7.5	6.7	2.0	0.0
Malaysia	5.5	5.1	15.0	2.6	2.0	2.8
Iran	14.4	16.0	8.7	141.8		
Others	80.5	100.6	63.2	48.1	6.9	20.9
Total	1171.8	786.7	914.1	1067.2	331.2	214.7

Exports by land is not included

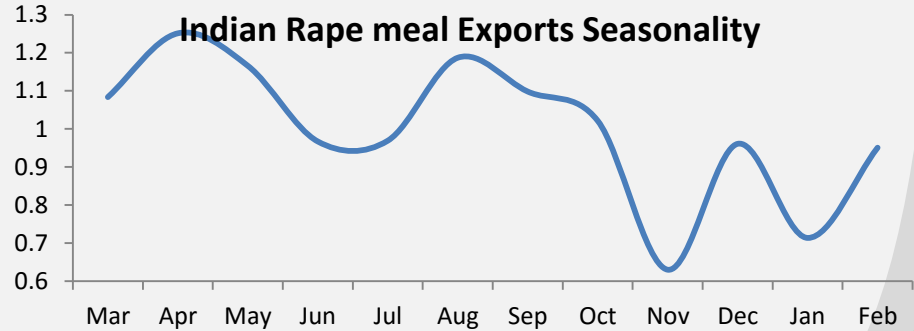
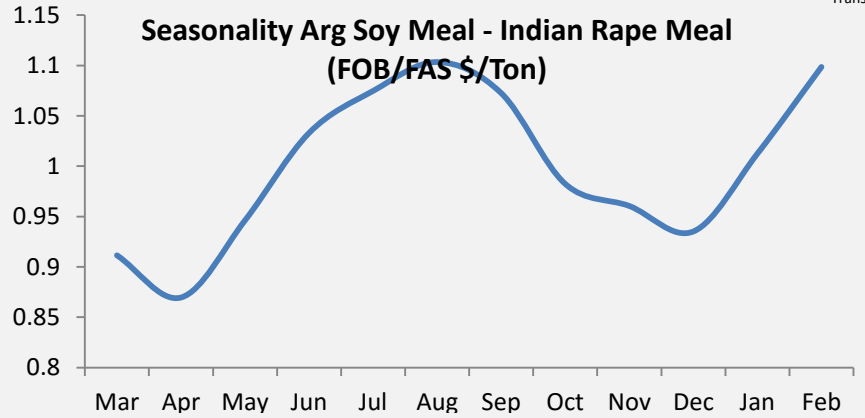
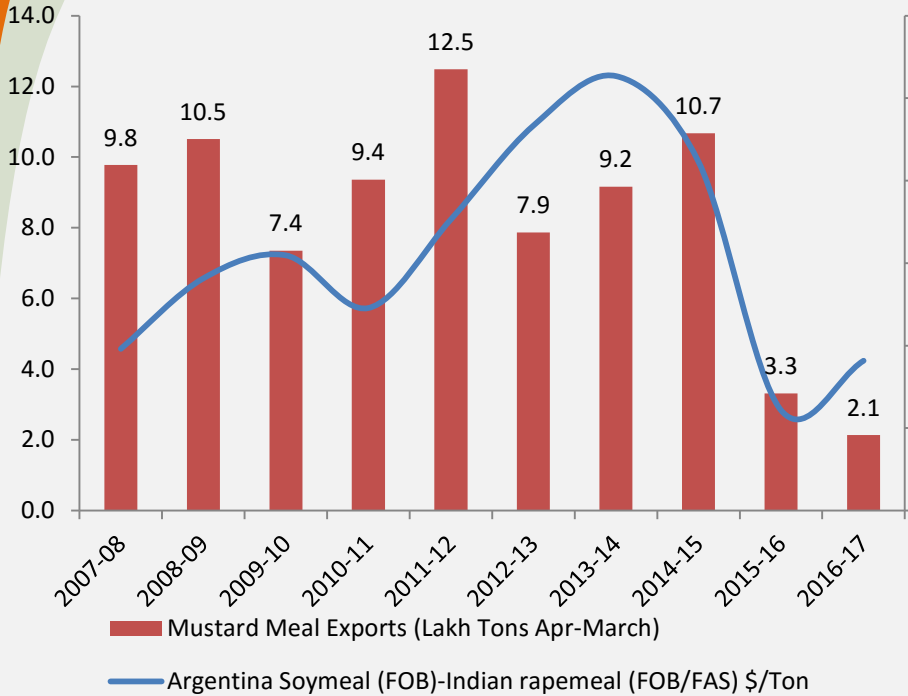


- China banned Indian rape meal in 2012
- Thailand, Indonesia and Vietnam switched to soy meal due to parity favoring soy meal
- S. Korea started importing more meat as their cattle head count declined thus impacting Mustard meal imports
- Overall there is shift from Mustard meal to soymeal at major destination markets

Indian rapemeal exports decline when Indian rape meal discount narrows to Argentinean meal

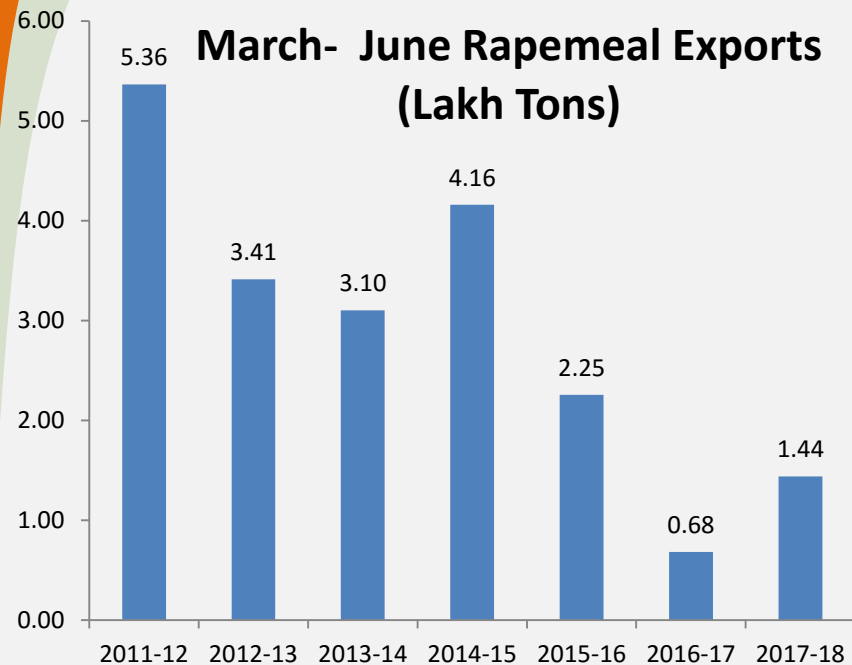
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Mustard Meal Exports against spreads with Soymeal



- Price parity with soy meal will be crucial to increase in volume of exports
- At current spreads some exports demand can be witnessed till Sep post which seasonal narrowing of spreads is expected to deter the same
- Exports seasonality is also suggesting same

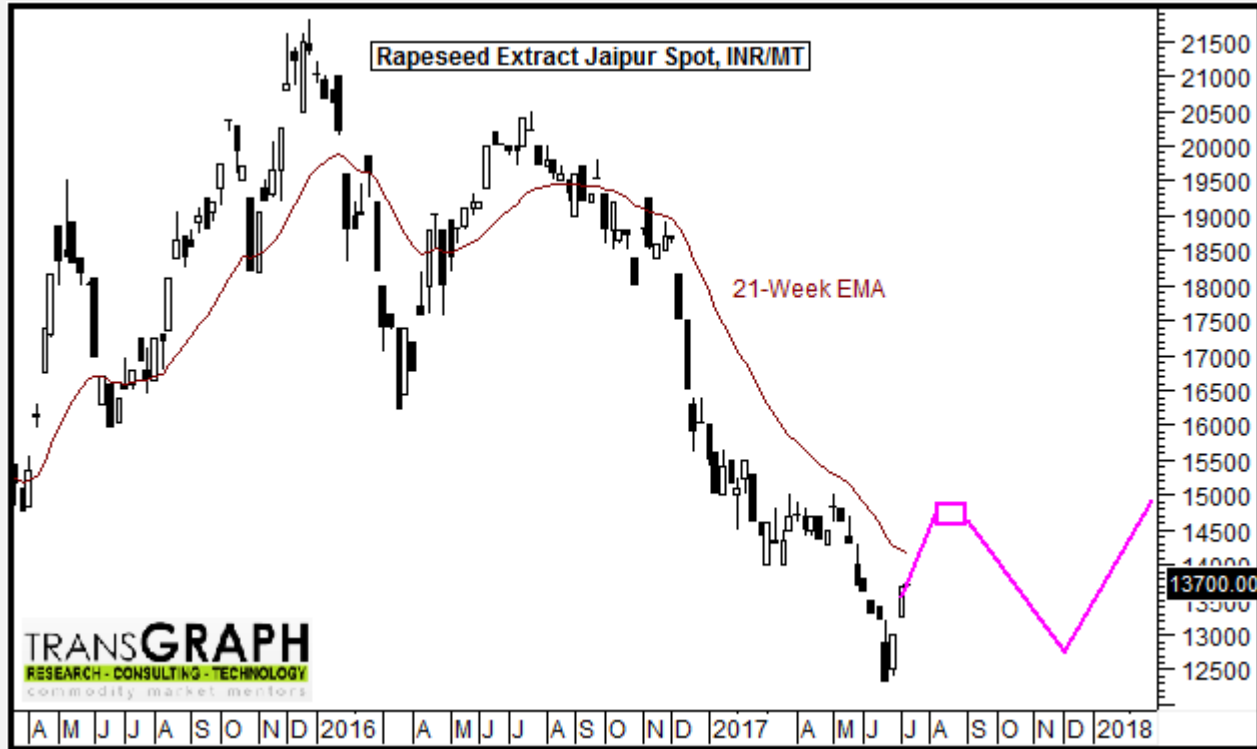
Mustard Seed and Mustard Meal+Cake balance sheet



Rapeseed Cake +Meal (Mar-Feb) Lakh Tons				
Particulars	2014-15	2015-16P	2016-17	2017-18
Crush	62.3	48.5	49.3	63.5
Beginning Stock	1.80	1.20	0.35	0.16
Production	39.87	31.04	31.55	40.64
Imports	0.00	0.00	0.00	0.00
Total Supply	41.67	32.24	31.90	40.80
Exports	10.98	3.89	2.14	3.50
Consumption Domestic	29.50	28.00	29.60	35.00
Total Demand	40.48	31.89	31.74	38.50
End Stock	1.20	0.35	0.16	2.30

- Current exports pace is expected to result in exports of nearly 3.5 lakh tons of meal
- With record production of mustard seed in 2017-18 consuming cake/meal surpluses will be challenging
- In 2015-16 -2016-17 poultry feed rationing resulted good demand of rapemeal
- This year cheaper availability of soymeal and high margins in broiler farming will spur limited feed rationing

RM Seed Extract Spot Jaipur, INR/MT



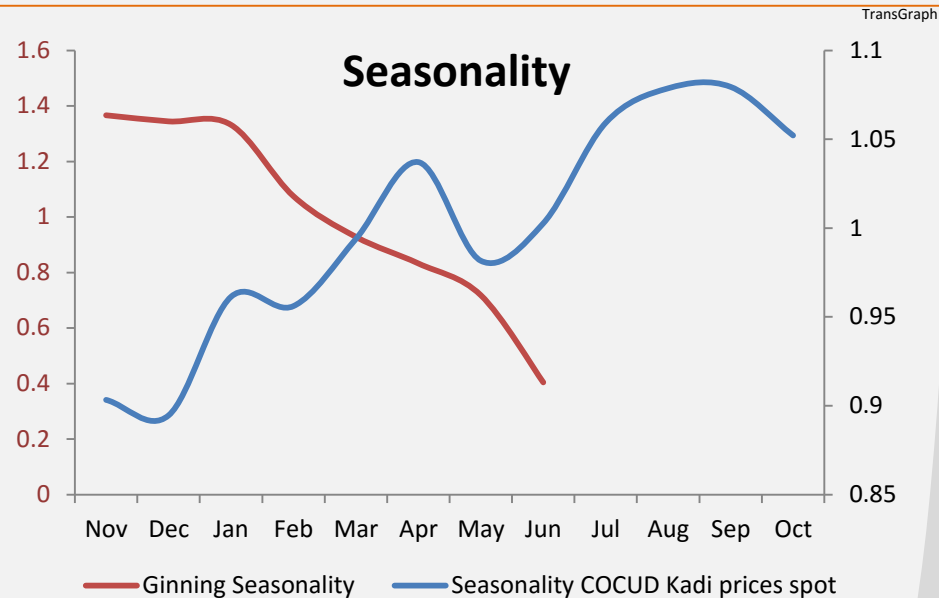
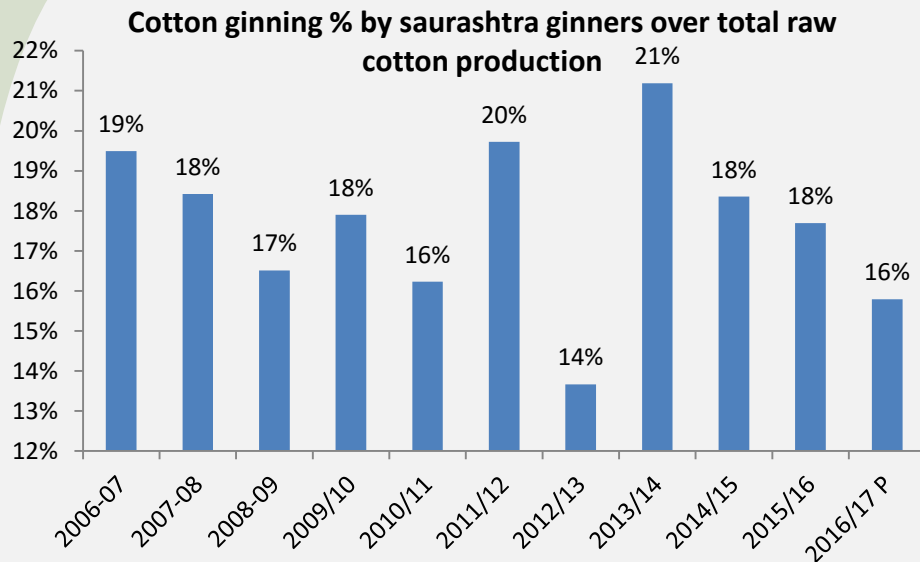
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RM Seed Extract Jaipur Spot prices are likely to witness initial gains towards INR 15000 in the coming couple of months and trade within a broad range of INR 15000 to 13000 until end of 2017.

Cottonseed Cake

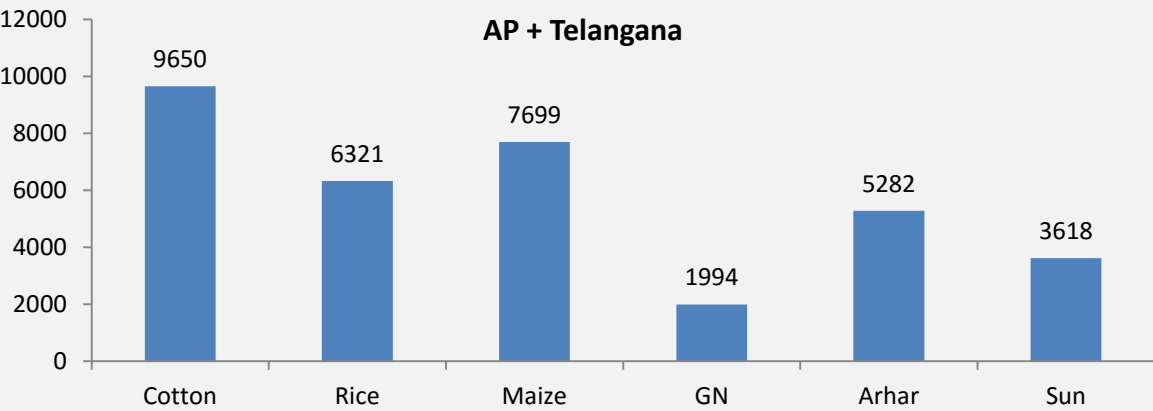
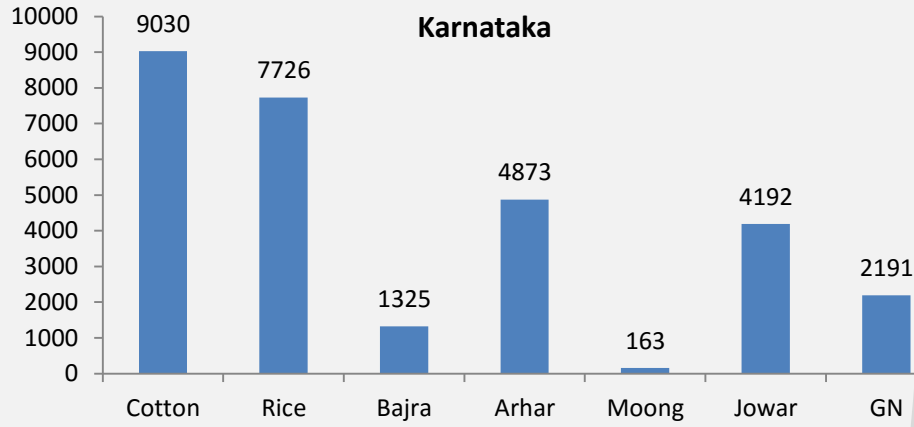
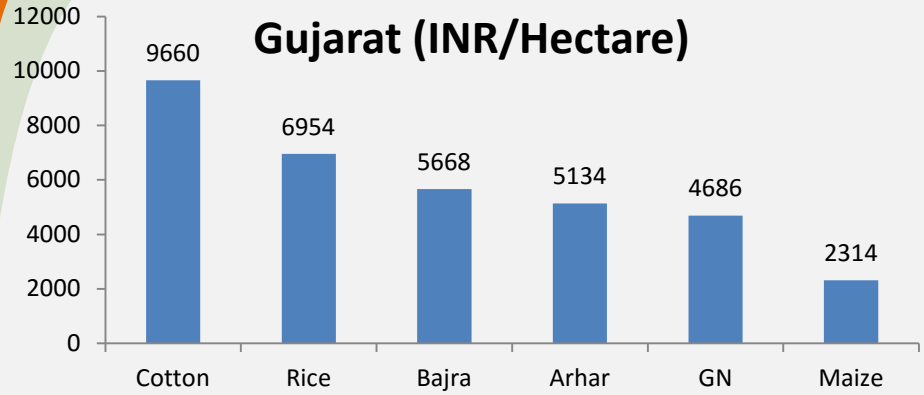


Nov-May cotton seed production by Saurashtra Ginners recovered to the last year levels



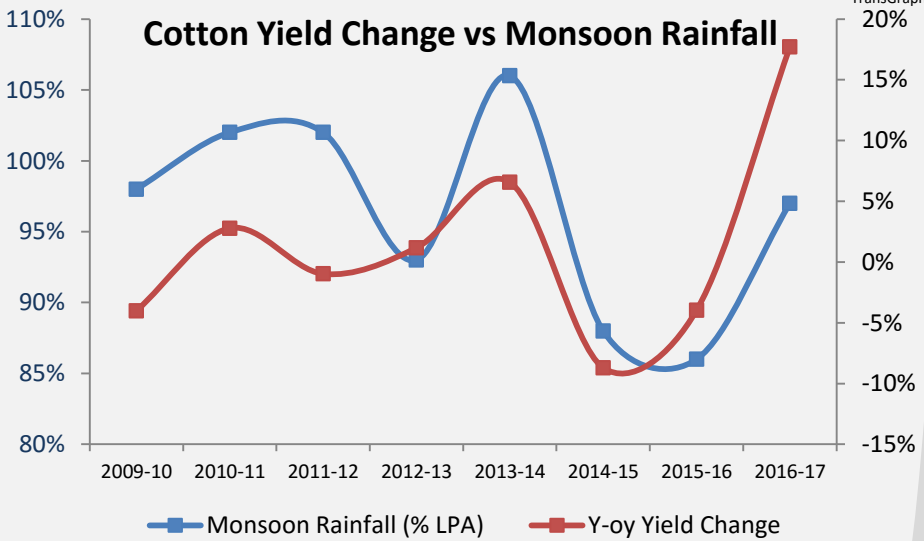
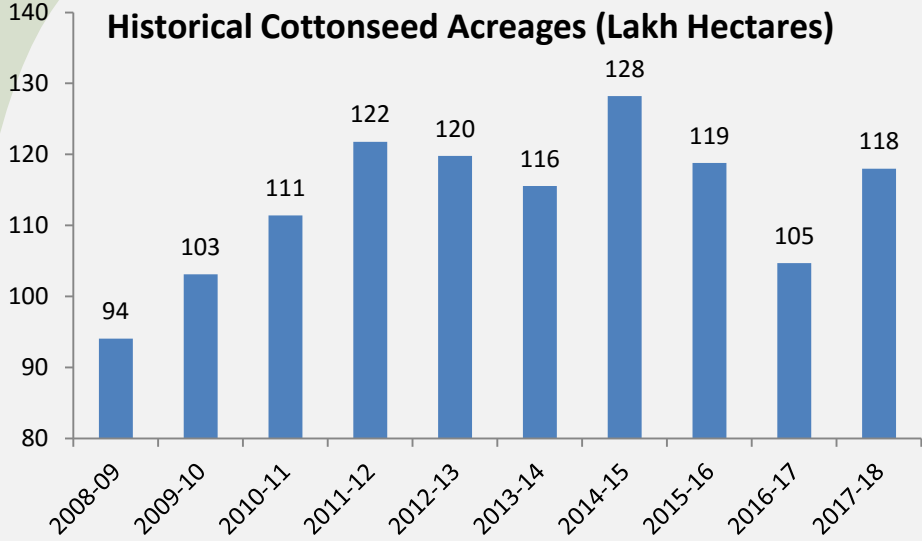
- Saurashtra Ginners used to produce on an average 18% of total cottonseed produced. This year the ginning is expected to be low by 2% against last year (Ginning season culminated in June)
- Net supplies of cottonseed in saurashtra market is low this year
- Post June, prices rise seasonally as the cottonseed supplies from ginners get limited
- As the cotton cake is short in supplies a premium over rape cake of 4000 is expected to push cottonseed cake maximum to INR 1900 to 2000 per quintal given the coming season crop is in offing with incremental acreages.

Raw Cotton profit realization (INR/Hectare)-the best this year



- Cotton is the most attractive crop for the 2017-18 cropping season

Cottonseed acreage is expected to revive as the realization has been high



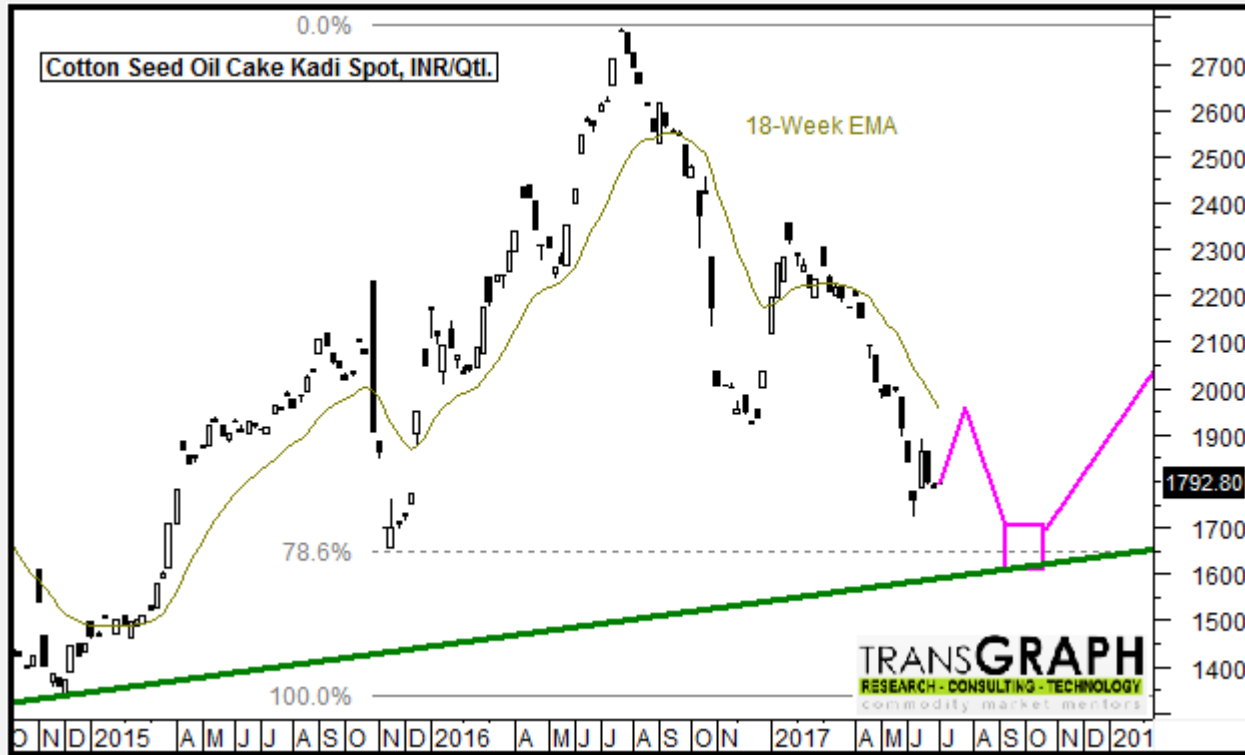
10 Years Yield range (Kg Lint/hectare)	
Max	570
Min	484
Mean	520
Median	517

- Higher realization in cotton is expected to bring incremental acreages under cotton cultivation
- Yield has been directly correlated with monsoon rainfall
- With average yield of cotton the production is expected to increase to 396 lakh bales VS 341 LY and therefore an equivalent production of 123 lakh tons of cotton seed is expected
- *Assumption: rainfall to evenly distributed and biotic stresses to be minimum*

Cotton Seed Cake Un-decorticated (Lakh Tons)				
Particulars	2014-15	2015-16	2016-17	2017-18
Crush	111.6	101.0	93.2	115.0
Beginning Stock	1.15	0.55	0.12	0.12
Production	93.74	84.84	78.29	96.60
Total Supply	94.89	85.40	78.41	96.73
Exports	0.14	0.08	0.08	0.08
Consumption Domestic	94.20	85.20	78.20	95.50
Total Demand	94.34	85.28	78.28	95.58
End Stock	0.55	0.12	0.12	1.14

- With good monsoon rains 2017-18 supplies of cottonseed cake is expected to rise by 23%

Cotton Seed Oil Cake Kadi Spot, INR/Qtl



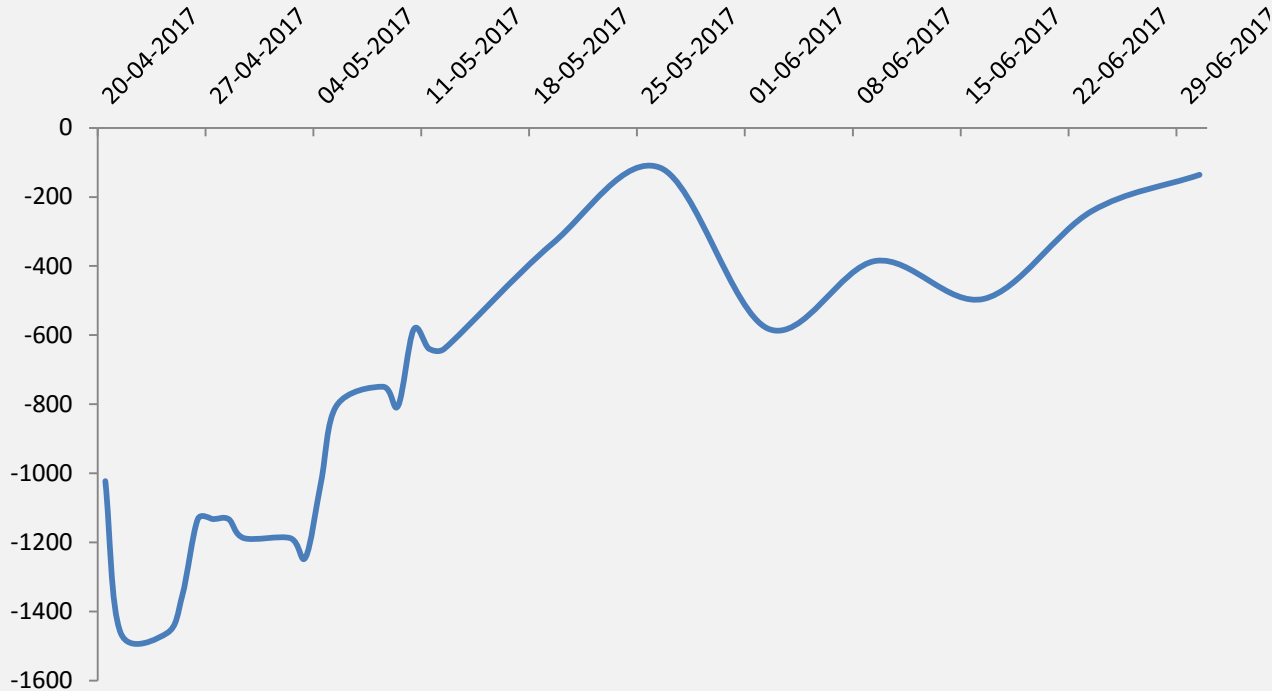
COKUD Kadi Spot prices are likely to witness a corrective bounce towards INR 1900 to 1950 and test INR 1650 in the coming 3-4 months ahead of setting the stage for recovery towards INR 2000 or higher.

Sun Meal



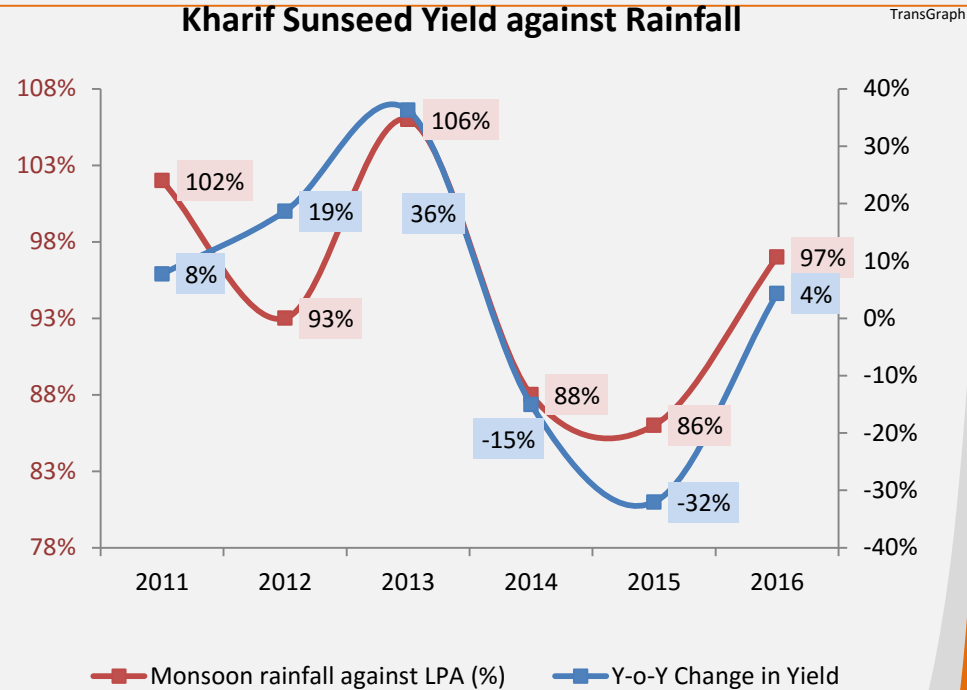
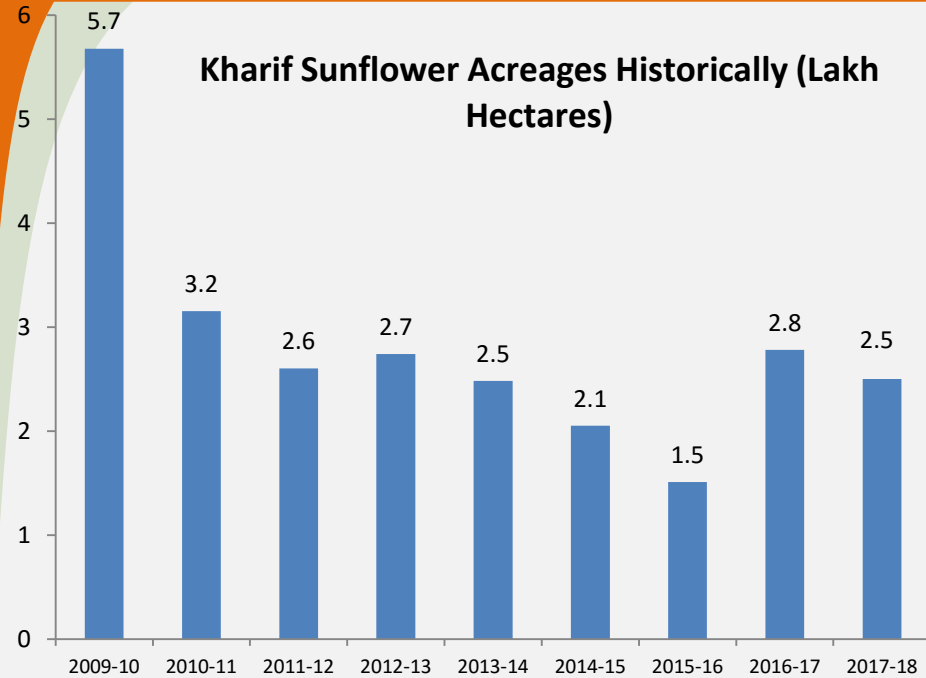
Crush margins for imported seeds has improved in past two months...

Imported Sunseed Crush Margin @Mumbai (INR/Ton)



- With crush margin of import Sunseed remaining negative import volumes of sunseed is not expected to be high given centre reducing import duty on sunseed from 30% to 10%

Historical Sun Acreages...



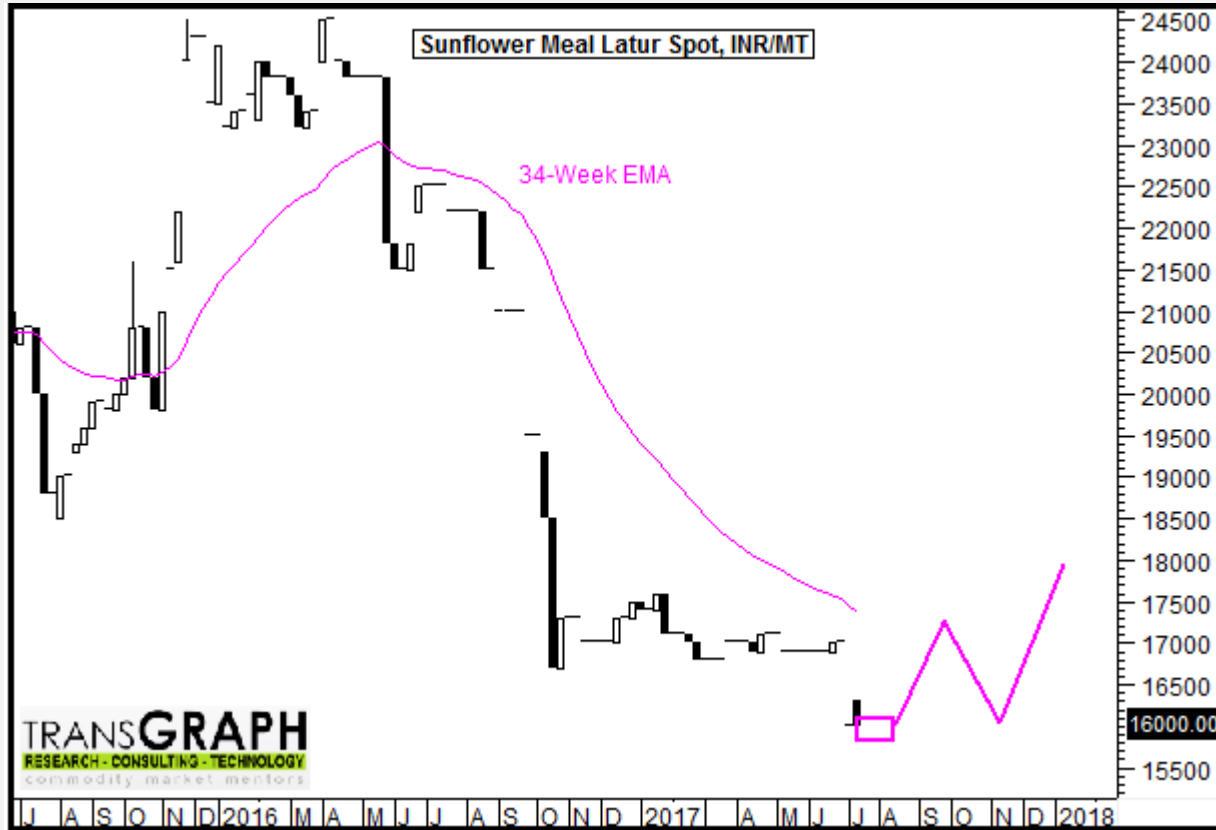
- There has been general reluctance in sun farming due to unsupportive policy of govt on procurement of the same on MSP.
- Yield has been directly correlated with monsoon rainfall

Sunmeal Balance Sheet

Sunflower meal Balance Sheet (Lakh Tons)				
Particulars	2013-14	2014-15	2015-16	2016-17 P
Crush	5.13	3.22	2.42	2.65
Beginning Stock	0.01	0.31	0.11	0.28
Production	3.23	2.03	1.52	1.67
Imports	0.37	0.32	2.05	0.40
Total Supply	3.61	2.66	3.68	2.35
Consumption Domestic	3.30	2.55	3.40	2.10
Total Demand	3.30	2.55	3.40	2.10
End Stock	0.31	0.11	0.28	0.25

- Imports of sunmeal fell as domestic supplies of soy meal has been ample at lower prices giving good margin to poultry farmers

Sunflower Meal Latur Spot, INR/MT

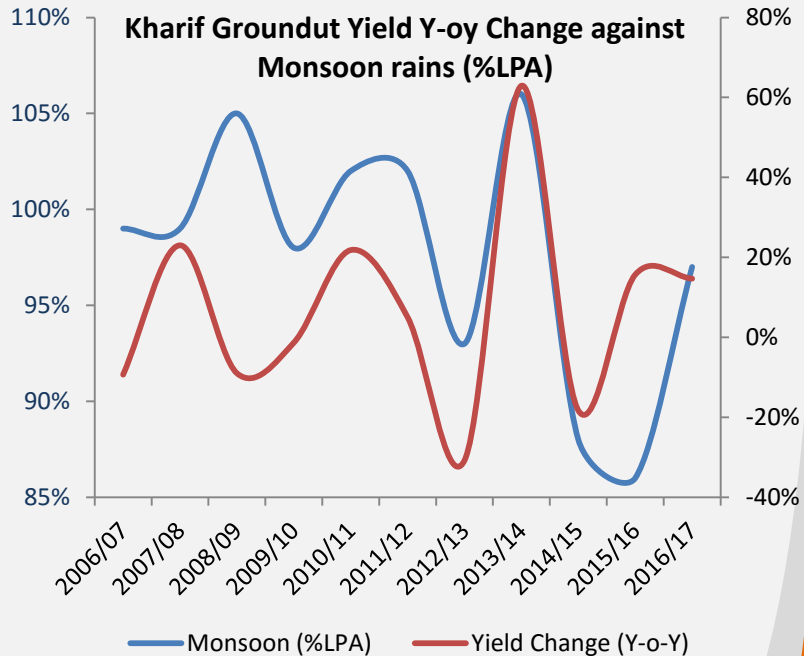
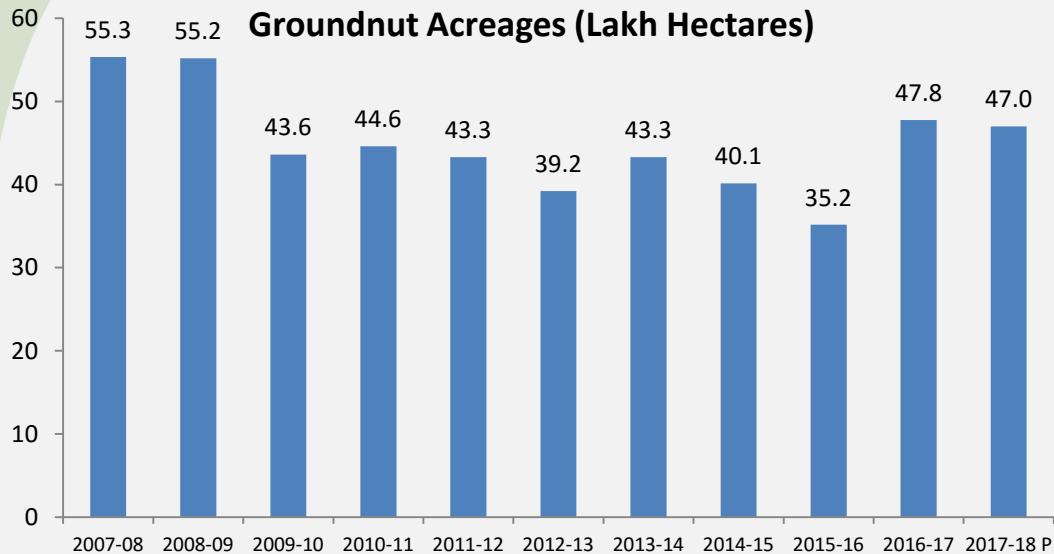


Sunflower Meal Latur Spot prices are likely to trade mixed within a broad range of INR 18000 & 15500 in the coming 3-4 months ahead of a recovery attempt in the medium term.

GN Meal



Groundnut Acreages..



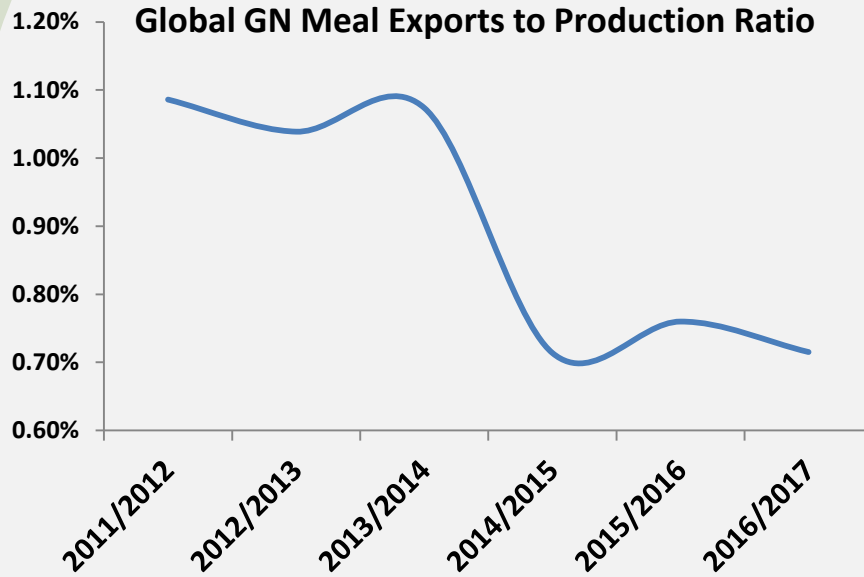
Groundnut Yield range (Pods) Kg/Hectare	
	Kharif
Min	668
Max	1180
Median	890
Mean	889

With average yield and acreages at 47 lakh hectares given the farmers preferring GN over rise in MSP and good realization in 2016-17 MY, a production of 41.8 lakh tons is on cards

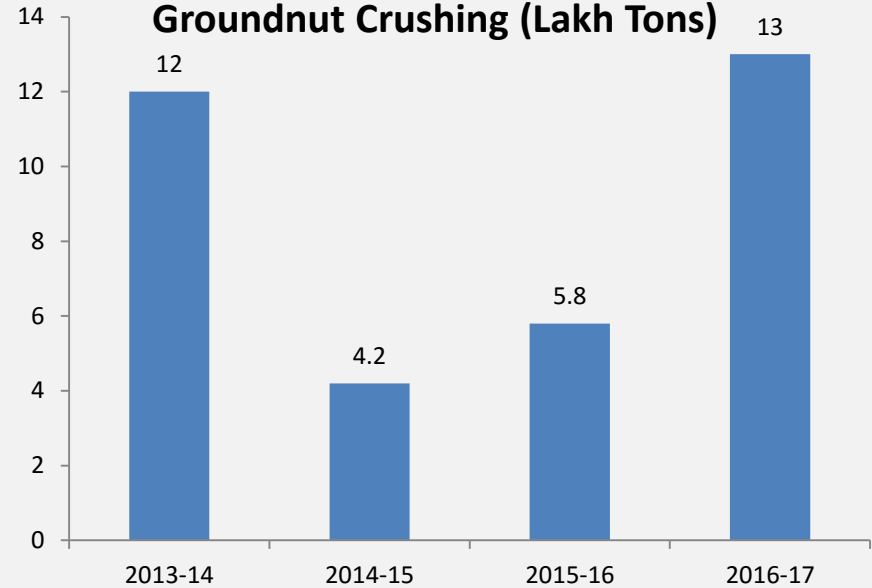
Higher GN Meal production and subdued GN meal exports...

TransGraph

Global GN Meal Exports to Production Ratio



Groundnut Crushing (Lakh Tons)



- Global demand of GN meal has declined and thus the exports demand of Indian GN meal is not expected to remain insignificant
- With rising crush surplus GN meal has to be consumed domestically and has to compete with soy to find demand

Groundnut Cake/Meal Balance Sheet

Shelled Groundnut Balance Sheet (Lakh Tons, Oct-Sep)				
Particulars	2013-14	2014-15	2015-16	2016-17
Beginning Stocks	2.2	1.0	0.9	0.2
Production	44.0	33.9	31.6	49.0
Marketable Surplus	39.5	29.4	26.6	44.0
Imports	0.1	0.1	0.1	0.1
Total Supply	41.8	30.6	27.6	44.4
MY Exports	5.8	6.4	5.6	7.4
Crush	12.0	4.2	5.8	13.0
Domestic Consumption	23.0	19.0	16.0	23.0
Total Consumption	40.8	29.6	27.4	43.4
Ending Stocks	1.0	0.9	0.2	1.0

GN Meal/Cake Balance Sheets (Lakh Tons, Oct-Sep)				
Particulars	2013-14	2014-15	2015-16	2016-17
Beginning Stocks	0.3	0.44	0.096	0.1
Production	6.96	2.436	3.364	7.54
Total Supply	7.26	2.876	3.46	7.64
MY Exports	0.02	0.03	0.01	0.02
Domestic Consumption	6.8	2.75	3.35	6.70
Total Dom. Cons.	6.82	2.78	3.36	6.72
Ending Stocks	0.44	0.096	0.1	.92

- Exports of GN has been high due to favorable price parity and good quality
- This has left with crushable GN volume to 13 lakh tons
- Thus the supplies of meal/cake is 121% high which is enough to keep the prices subdued for the season

Groundnut DOC Jamnagar Spot, INR/Qtl



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commodity market mentors

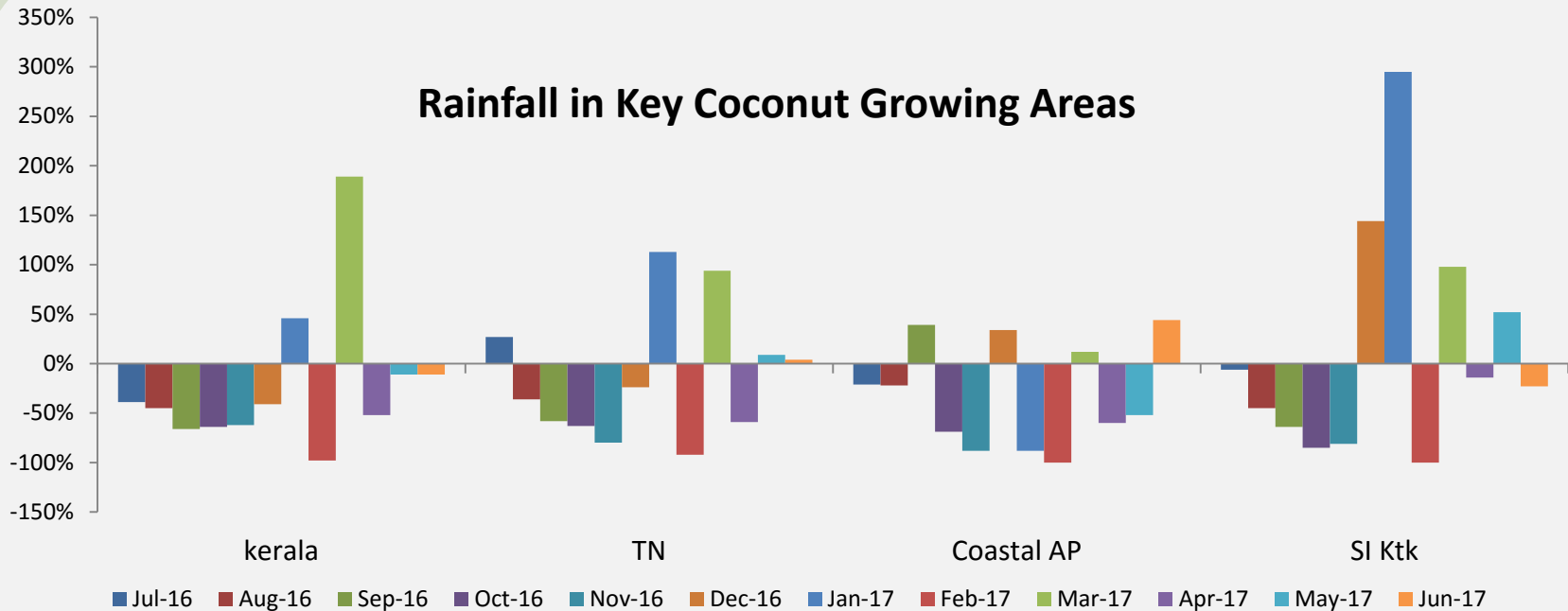
19000.00

Groundnut DOC Spot prices are likely to scale up towards INR 22000 and turn lower towards INR 18500 in the coming 3-4 months ahead of a medium term recovery.

Copra Cake

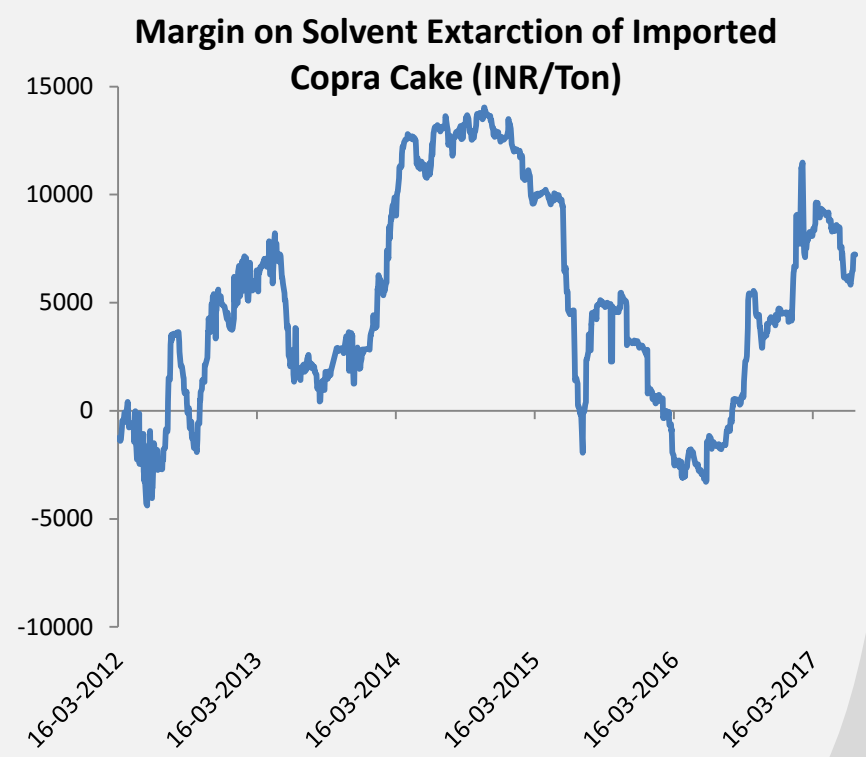
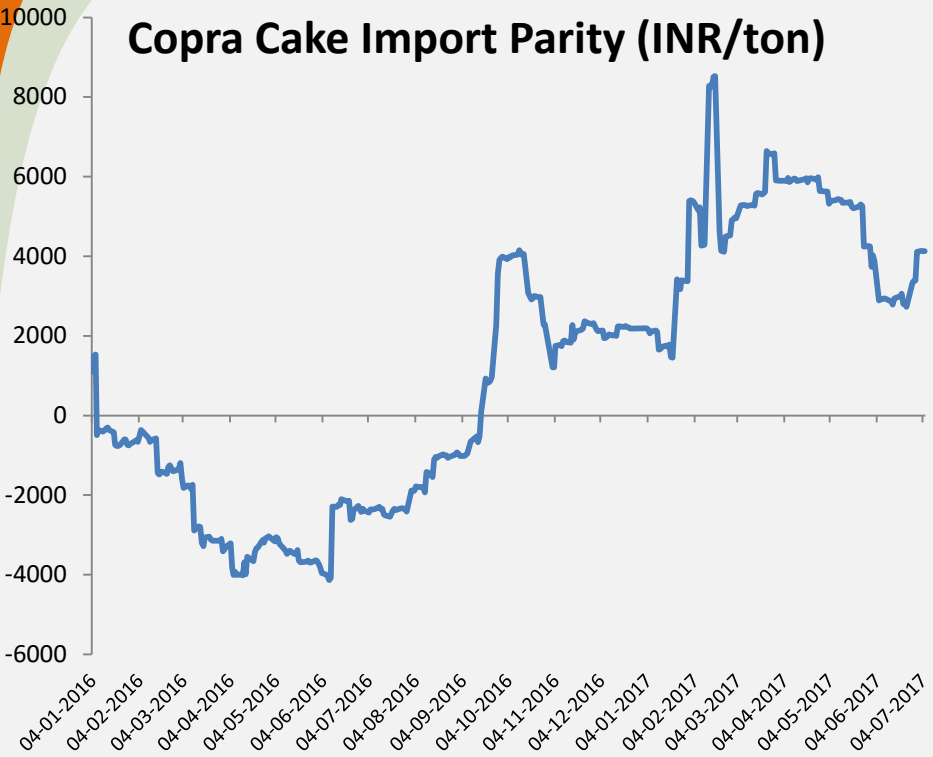


July-June Coconut Season closed with deficient rains...



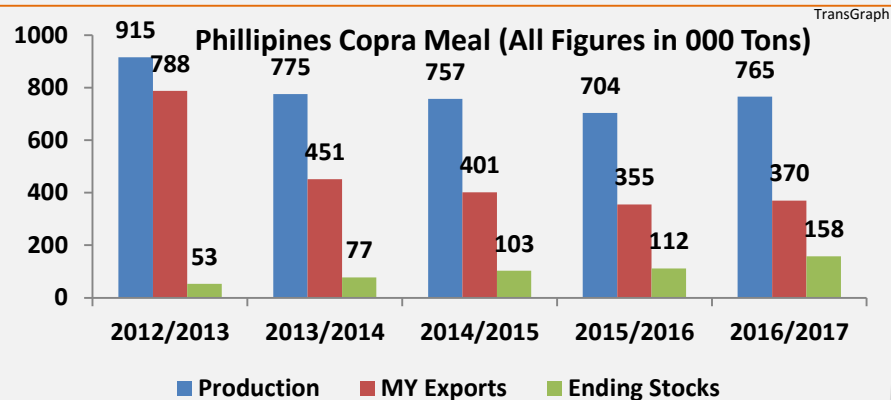
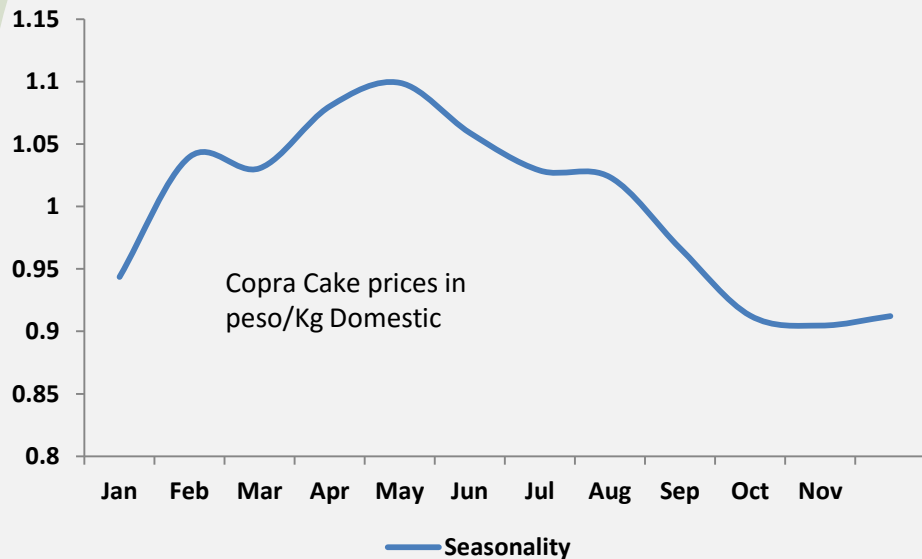
- Overall the coconut plantation across key producing areas was at moisture stress
- There has been reports of coconut trees completely withered out in states of Karnataka, Kerala and Tamil Nadu. In Hassan nearly 11 lakh trees died out of 85 lakh trees. Similar reports of permanent loss of plantation in several districts of above mentioned states to a tune of 5-10%

Importers of copra cake for feed and for solvent oil are finding excellent parity



Philippines Copra Cake seasonality

Seasonality



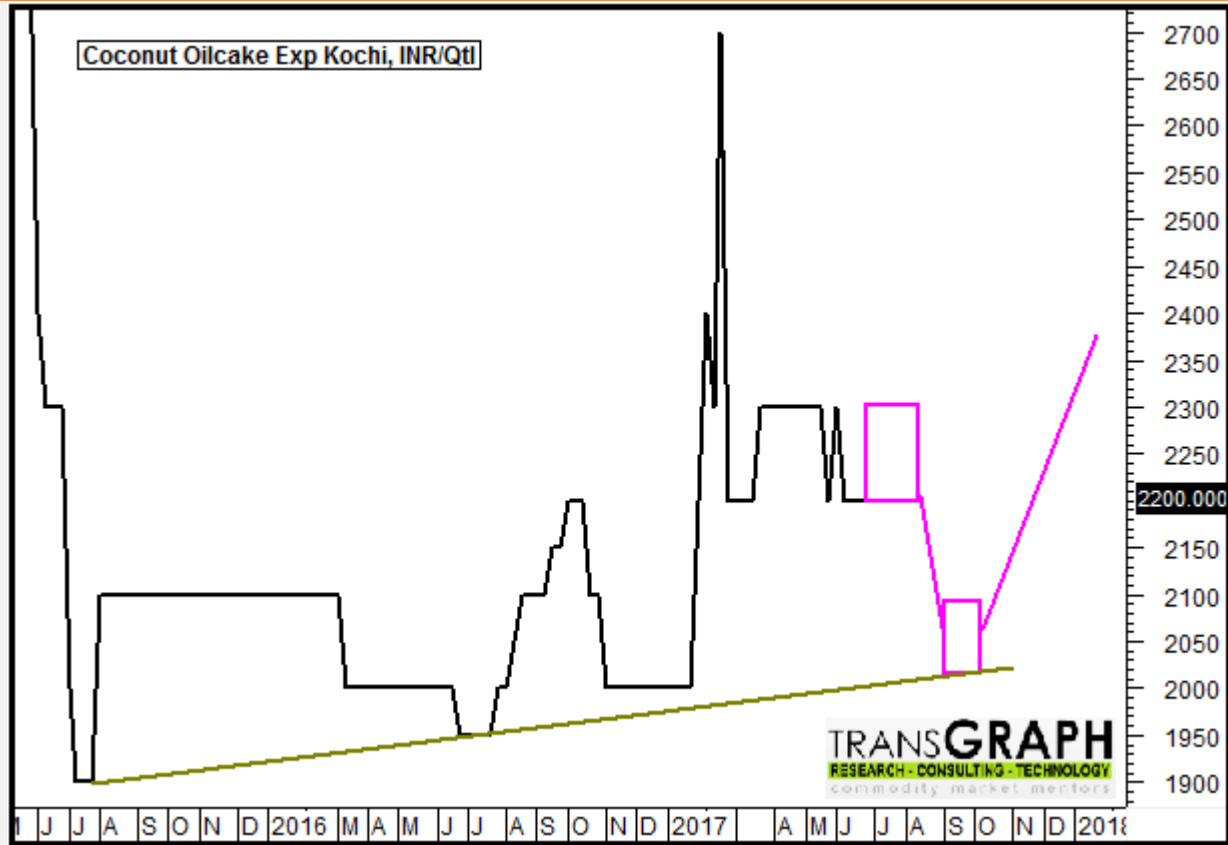
- Since Copra cake prices in Philippines are ruling low, favorable import parity will continue resulting in consistent imports in India

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Philippines	Orange	Orange	Orange	Green	Green	Green	Green	Green	Green	Orange	Orange	Orange
Peak production Months	Green	Lean production Months					Orange					

Coconut Meal/Cake Annual Balance Sheet			
Particulars	2015-16	2016-17	2017-18 E
Begining Stock	0.18	0.26	0.35
Imports	1.34	1.44	1.70
Production	2.31	2.21	1.84
Total Supply	3.82	3.91	3.89
Consumption Food	0.01	0.01	0.01
Consumption Feed	3.55	3.55	3.55
Total Demand	3.56	3.56	3.56
End Stock	0.26	0.35	0.33

- Higher imports will nullify the supply squeeze form domestic production

Coconut Oilcake Exp Kochi Spot, INR/Qtl



Coconut Oilcake Exp Kochi Spot prices are likely to witness a fall towards INR 2050 to 2000 in the coming 2-3 months ahead of witnessing a medium term recovery towards INR 2400.

DORB



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Paddy Production & Corresponding Rice Bran /DORB Production

in Million MT	2013-14	2014-15	2015-16	2016-17E	2017-18 P
Paddy Production	159.44	157.69	155	162	165
Rice Bran Production	10.26	10.14	10.20	10.66	10.86
DORB Production	5.81	5.63	5.67	5.96	6.02

✓ Paddy production in 17/18 is projected to be 165 mln ton, 3 mln ton higher than current year estimate of 162 mln ton on account of better monsoon progress and 4.5 lakh ton higher sowing progress overall up to July 7th (79.8 lakh ha against 75.28 lakh ha)

✓ DORB Production for 17/18 is projected to be 6.02 mln ton, 0.06 mln ton higher than 5.96 mln ton in 16/17 on account of above.

S.No.	State	% of Paddy production
1	West Bengal	14%
2	Uttar Pradesh	13%
3	Punjab	10%
4	Andhra Pradesh+ Telangana	12%
5	Odisha	6%
6	Bihar	7%
7	Chhattisgarh	6%
8	Assam	4%
9	Tamil Nadu	7%
10	Haryana	4%
11	Karnataka	4%
12	Maharashtra	3%
13	Jharkhand	3%
14	Madhya Pradesh	2%
15	Gujarat	2%
16	Kerala	1%
17	Others	2%

GOI Rice Production Estimate and Paddy Seasonality

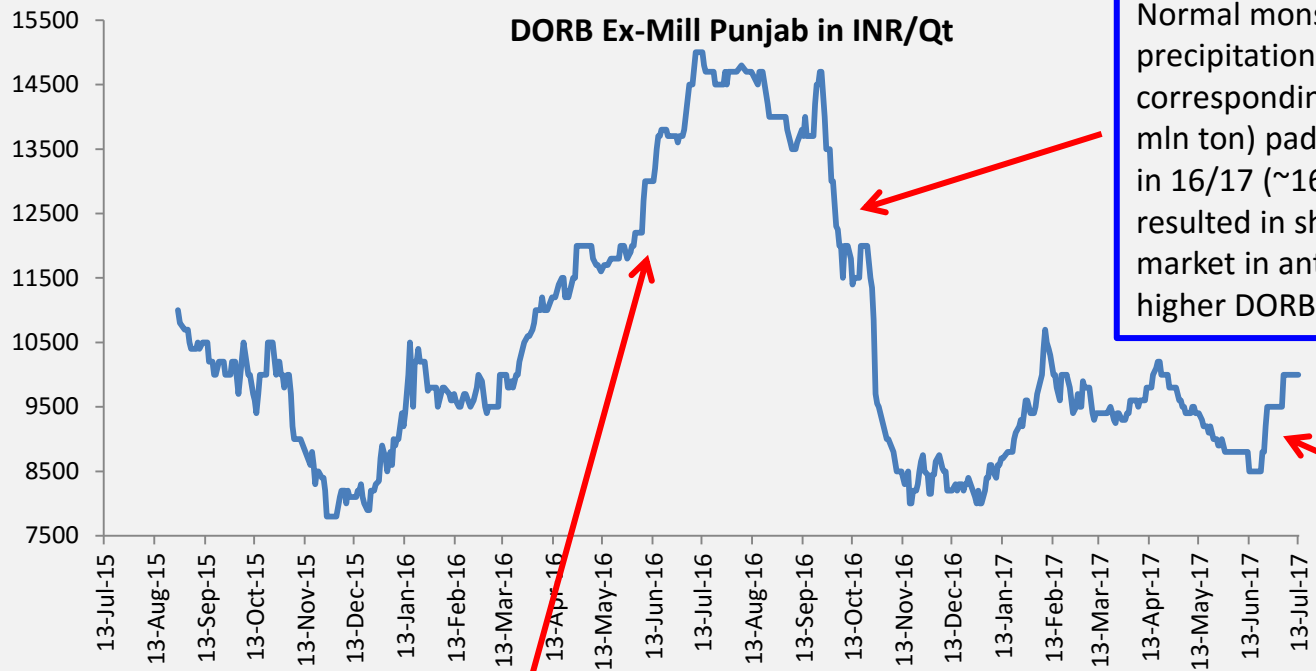
Crops	2015-16(4 th Ad. Estimate) , GOI in Rice in mln ton			2016-17 (P) GOI 3 rd Advance Estimate in Rice			Net increase/decrease)
	Kharif	Rabi	Total	Kharif	Rabi	Total	(In Million ton)
Rice	91.41	13.0	104.41	96.09	13.06	109.15	+4.74

State	Paddy Seasonality	
	Kharif	Rabi
PUN	~100%	-
HR	~100%	-
CG	~85%	~15%
AP	~70%	~30%
UP	~100%	-
WB	~95%	~5%
KA	~80%	~20%

As per GOI 3rd advance estimate Rice Production is higher by 4.74 mln ton in 16/17 compared to previous year leading to higher Bran & DORB Production.

Note: 1 kg Rice = 1.49 kg Paddy (67% conversion ratio)

DORB Price movement dynamics



Normal monsoon precipitation coupled with corresponding higher (+ 6 mln ton) paddy production in 16/17 (~161 mln ton) resulted in sharp fall in market in anticipation of higher DORB Production

Picking up feed mill demand post GST (after a lull in May-June) along with lateral support gained from improving meal basket price across board, lifted DORB to move higher.

Sharp gain in market noted amid back to back drought in country in previous 2 years coupled with persistent feed mills demand to fill pipelines.

State wise DORB production Projection 17/18 in Lakh ton

State	DORB Production in Lakh tons (yr) 15/16	DORB Production in Lakh tons (yr) 16/17	Projected DORB Production in Lakh tons (yr) 17/18	Diff
Punjab	9.1	9.8	9.6	-0.2
Haryana	3.4	3.6	3.8	+0.2
Chattisgarh	3.9	4	4.6	+0.6
Karnataka	2.4	2.2	2.0	-0.2
Andhra Pradesh+ Tgn	6.9	6.9	6.9	0
Others	31	33	33.3	+0.3
Total (Lakh ton)	56.7	59.6	60.2	+0.6

✓ DORB Production in 17/18 likely to be 60.2 lakh ton Vs 59.6 lakh ton in 16/16 (+0.6 lakh ton) amid higher paddy and corresponding bran production.

✓ Approx. 165 million tons of Paddy production is projected in 17/18 against 162 Million tons Paddy production in 16/17 (+3 mln ton)

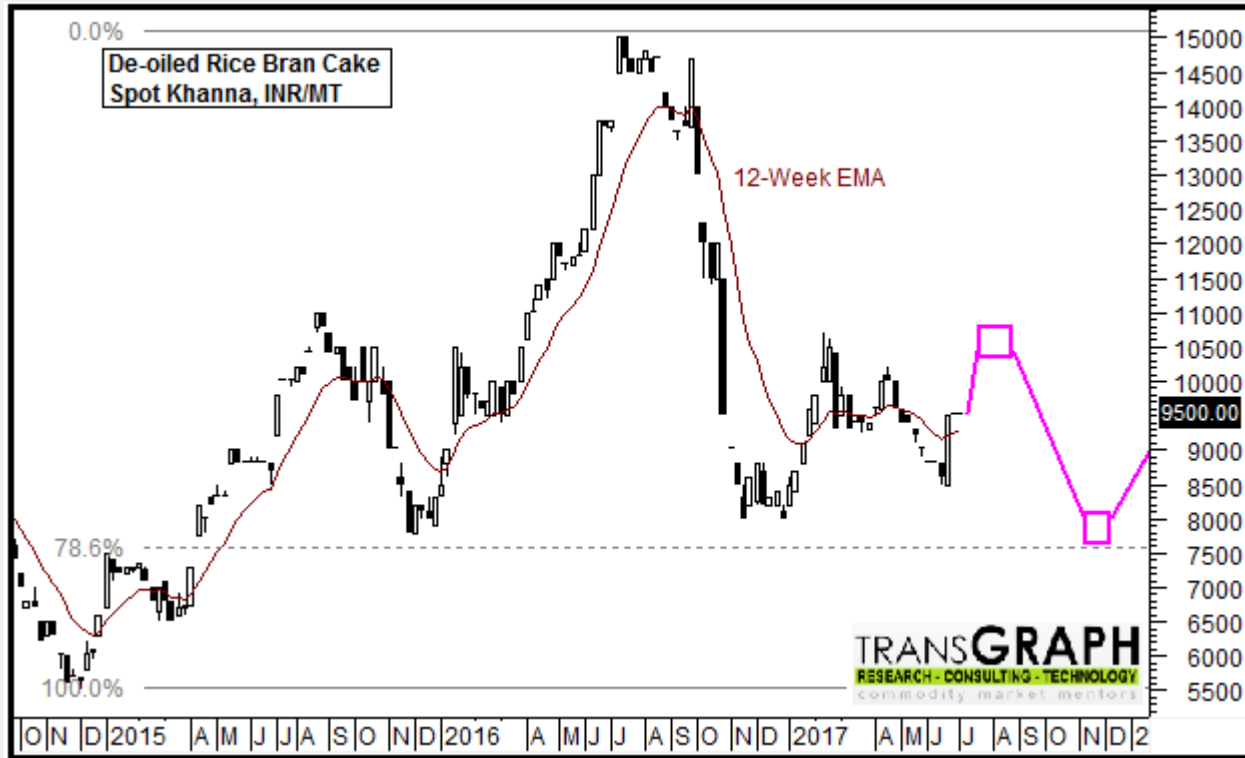
All India : DORB Production estimate 16/17

All India DORB Production Estimate For 17/18					
Basis of	GOI	TG Estimate	TG Estimate	TG Project	over last yr
Year	2014-15	2015-16	2016-17 (E)	2017-18 (P)	Diff (+/-)
Quantity in (Mln Ton)	Mn T	Mn T	Mn T	Mn T	Mn T
Paddy produced (Mln Ton)	154	155	162	165	3.00
Rice Produced (Mln Ton)	103.4	104	108.54	110.55	2.01
Paddy retention @6% of Total paddy # for seed, flake, puffed etc	9.2	9.3	9.7	9.9	0.18
Net Paddy Remaining for Milling	144.8	145.7	152.3	155.1	2.82
Share of FCI (Paddy Procurement)~ 35%	47.0	56.6	57.0	57.0	0.00
Pvt. Millers purchase Paddy	97.8	89.1	95.3	98.1	2.82
Bran Production @7% Paddy (wt)	10.14	10.20	10.66	10.86	0.20
Bran retention @32.5% (All India),huller etc	3.55	3.36	3.46	3.53	0.06
Remaining bran used for crude RBO extraction @ 67.5% (Domestic produced)	6.59	6.83	7.20	7.33	0.13
Import of Bran	0.15	0.25	0.25	0.2	-0.05
Total Bran used for cru RBO/DORB extraction	6.74	7.08	7.45	7.53	0.08
Crude RBO Prod @ 17.5% of bran (Sol ext)	1.15	1.20	1.30	1.32	0.01
DORB Produced @ 80% of Bran Production	5.39	5.67	5.96	6.02	0.07

✓ DORB Production for 17/18 is projected to be 6.02 mln ton, 0.07 mln ton higher than 5.96 mln ton in 16/17 on account of better Monsoon progress in 17/18 so far and 4.54 lakh ha higher sowing progress than last year. (79.8 lakh ha against 75.28 lakh ha up to July 7th 2017)

✓ Total Bran produced projected is 10.86 mln ton marginally (0.2 mln ton) higher previous year of 10.66 mln ton.

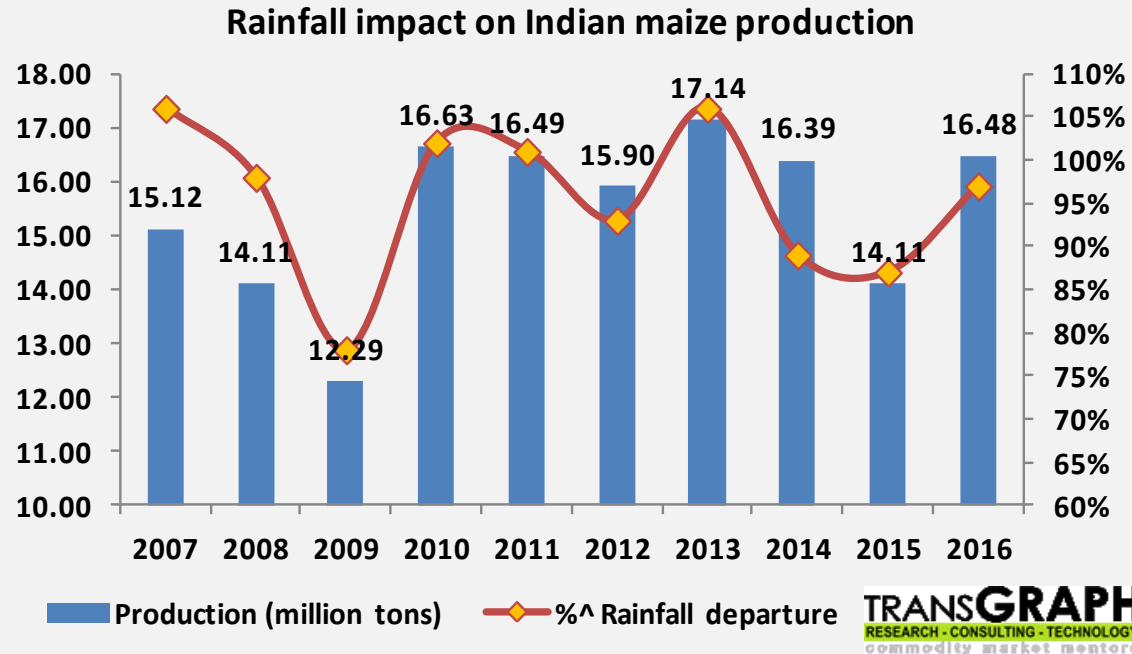
De-Oiled Rice Bran Cake Khanna Spot, INR/MT



DORB Khanna Spot prices are likely to retest INR 10500 and turn lower towards INR 8000 to INR 7500 ahead of a recovery attempt in the coming 5-6 months.

Maize





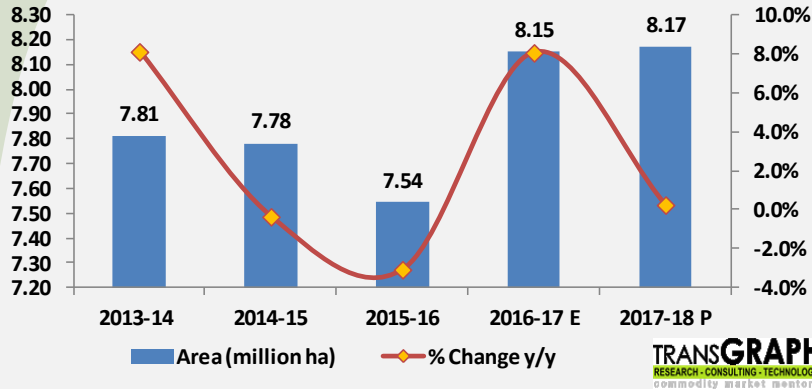
- ❖ During 2010, 2013 and 2016 normal rainfall led to better yield recovery and supported rise in production for Maize. Where as deficit rainfall during 2009 and 2015 affected crop yield and productivity resulting in lower overall production.

Indian Kharif Maize Area (Projected)

Source: TG & Indian Agri ministry

TransGraph

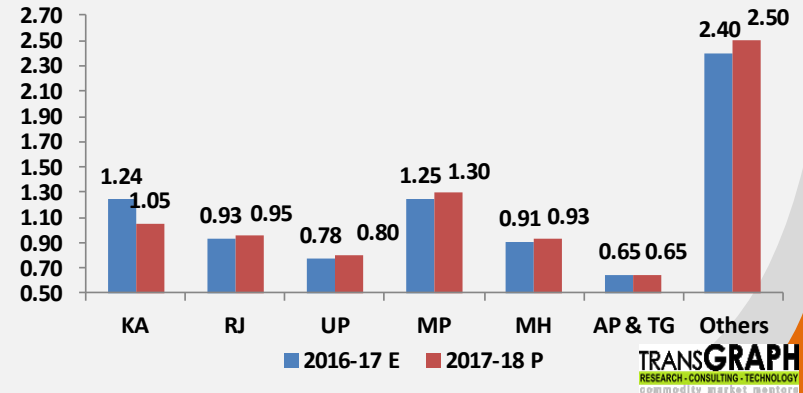
Indian Kharif Maize Area



❖ Expected normal monsoon amid good price realization from last year might lead to enhanced kharif maize sowing area prospects during Kharif 2017 season.

❖ Maize acreage is likely to increase marginally in Madhya Pradesh, Rajasthan and Maharashtra from last year on the back of better price realization and normal rainfall forecast. Whereas, maize area is likely to drop in major growing region of Karnataka as state has received deficit rainfall as on date.

Indian Kharif Maize Area State Wise Breakup (million ha)

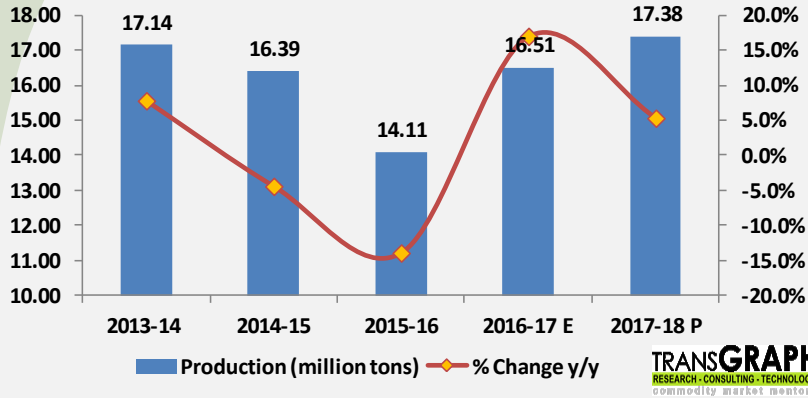


Indian Kharif Maize Production (Projected)

Source: TG & Indian Agri ministry

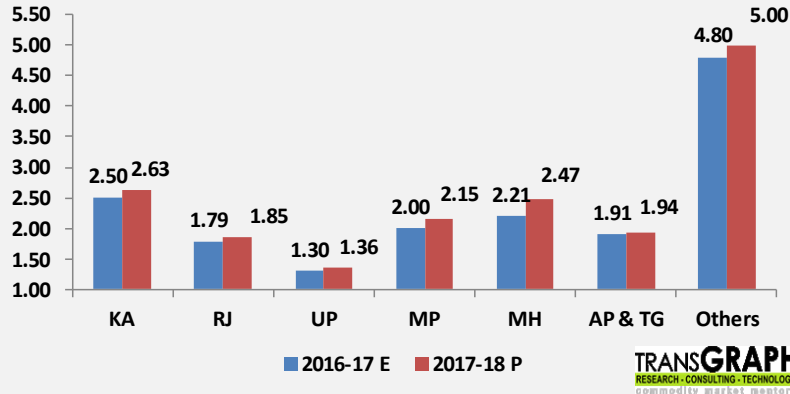
TransGraph

Indian Kharif Maize Production



- ❖ Normal rainfall led to yield enhancement in key producing regions mainly in MH, MP and Telangana. This overall resulted in kharif production higher by 4.5% - 5% on y-o-y basis.

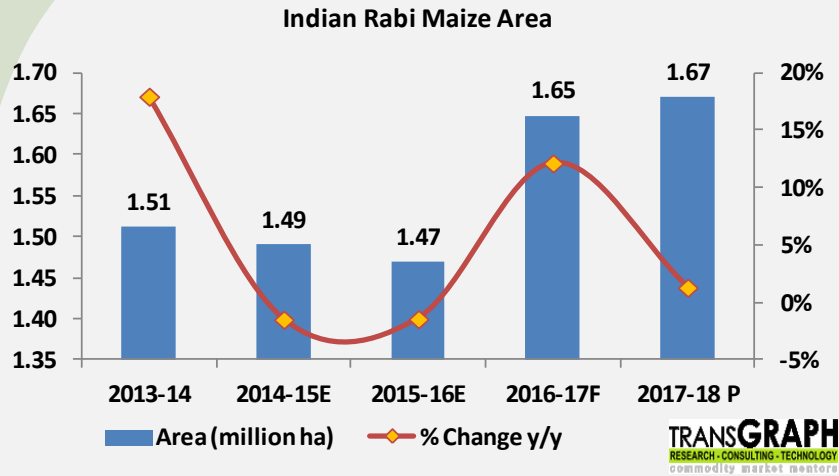
Indian Kharif Maize Production State Wise Breakup (million tons)



Indian Rabi Maize Scenario (Projected)

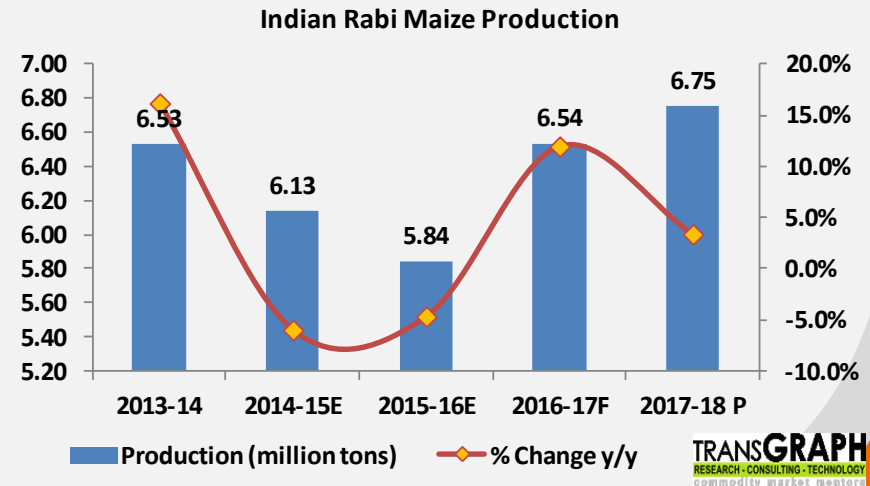
Source: TG & Indian Agri ministry

TransGraph



- ❖ Area increment amid better yield recovery from rabi crops likely to result in higher production prospects in 17/18

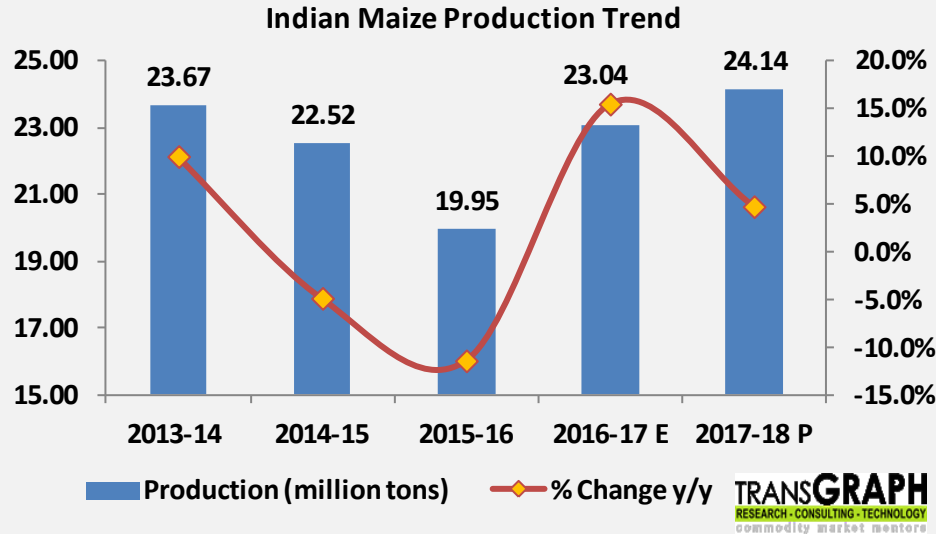
- ❖ The normal rainfall will be improving ground water reserves level in key rabi maize growing areas amid better price realization might attract the farmers for sowing higher area during rabi 2017-18 season.
- ❖ According to Transgraph, rabi maize area likely to stand at 1.67 million ha in 17/18



Indian Overall Maize Production Trend (Kharif and Rabi)

Source: TG & Indian Agri ministry

TransGraph



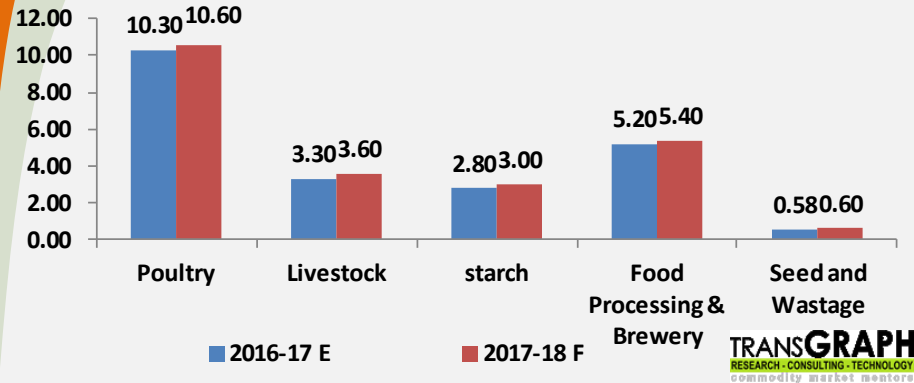
- ❖ Indian maize Production for 2017-18 crop year is anticipated to stay near 24.14 million tons against 23.04 million tons during 2016-17. Production is likely to rise by 4.7% Y-o-Y basis on account of area and yield enhancement in both kharif and rabi season.

Maize Domestic Demand

Source: TG, FMCG, CLFMA & NDDB

TransGraph

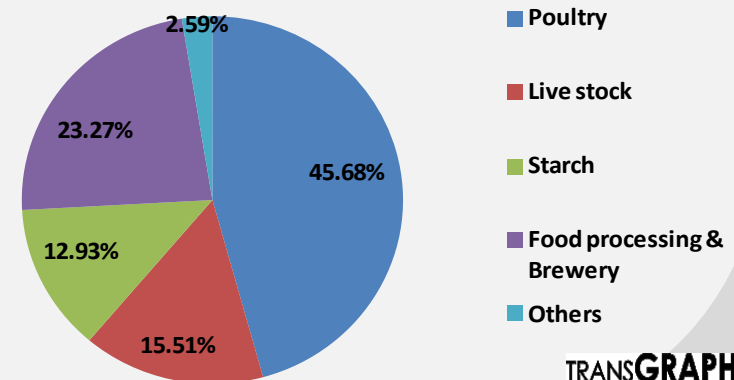
Sector wise Maize Consumption(million tons)



- ❖ In total Maize consumption, Poultry feed segment demand shall continue to command Lion's share of 45.68% followed by Food processing and live stock industry.

- ❖ In 2017-18 the maize consumption is likely to increase by 4.63% y-o-y basis owing to anticipation of good demand from poultry and cattle feed industry amid comfortable prices during peak arrival season.
- ❖ The domestic maize consuming industry viz poultry, dairy and food processing industry is growing @ CAGR 2.28%, 6.4% and 4.26% respectively during the last 5 years.
- ❖ The modest growth have seen in dairy sector that reinforce growth of Maharashtra, Gujarat and Karnataka cooperative dairy. One might witness higher diversion of maize in cattle feed as demand from Cooperative dairy is increasing under National Dairy Plan-1.

Indian Maize Demand Segments % Share



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Indian Maize Balance Sheet

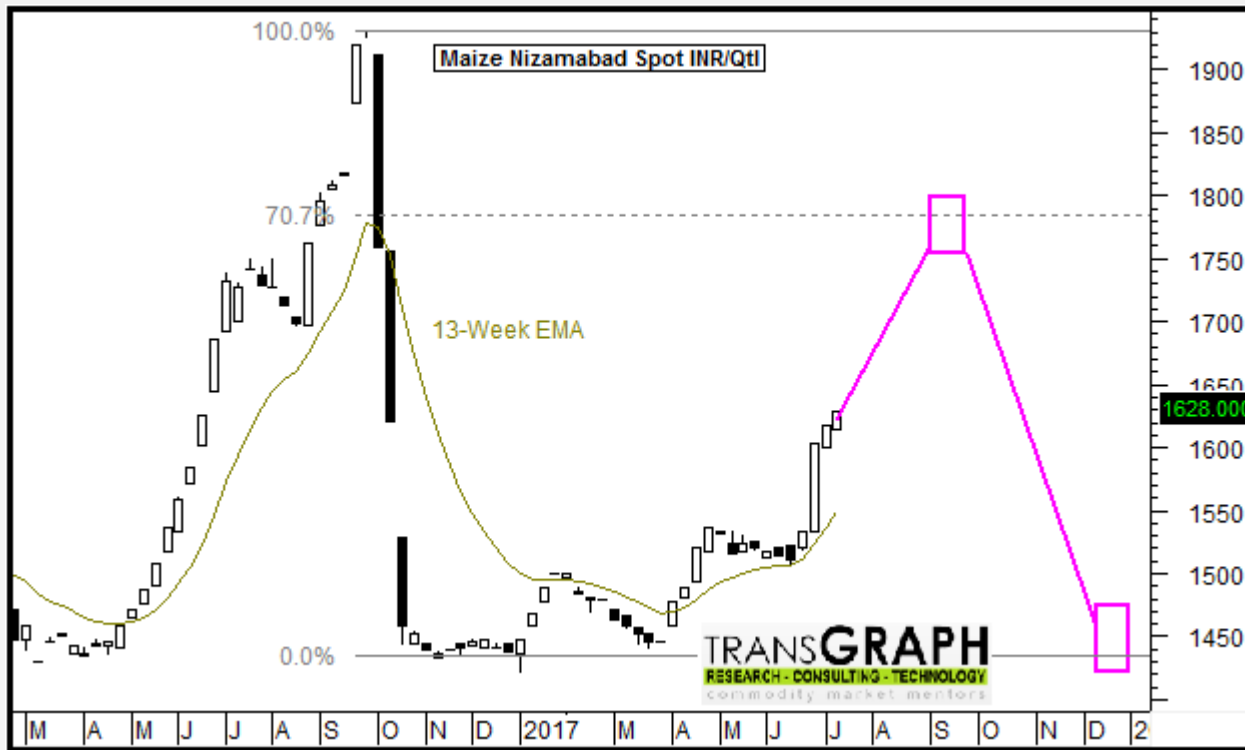
Source: TG & Ind Agrimini, Crop yr Oct-Sep

TransGraph

Units in millions ton	2013-14	2014-15	2015-16	2016-17 E	2017-18 P	Change y-o-y
Beginning stocks	0.05	0.15	0.10	0.10	0.51	414.21%
Production	24.30	22.99	19.95	23.04	24.14	4.77%
Imports	0.00	0.00	0.26	0.00	0.00	0.00%
Total supply	24.35	23.14	20.31	23.14	24.65	6.54%
Exports	2.80	2.20	0.30	0.45	0.80	77.78%
Domestic Demand	21.40	20.84	19.91	22.18	23.20	4.63%
Total Demand	24.20	23.04	20.21	22.63	24.00	6.09%
Ending Stocks	0.15	0.10	0.10	0.51	0.65	26.56%
Stock to Use ratio	0.63%	0.42%	0.49%	2.27%	2.71%	
Crop year : Oct- Sep						

- ❖ In 2017-18, Indian maize exports are expected to hover around 0.8 million tons (in terms of Maize by Products ie. Starch LG around~ 0.5 mmt and remaining 0.3 mmt of Maize direct export)

Maize Nizamabad Spot, INR/Qtl



Maize Nizamabad Spot prices are likely to trade firm towards INR 1750 to 1800 by Sept'2017 and subsequently turn lower towards INR 1500 and lower in the coming 4-5 months.



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