

Parameters for Performance Review of Commodity

SOYBEAN

1. Background

a. Brief about the commodity such as sample picture, lifecycle and various varieties/grade of the commodity found in India

Soybean is one of the largest oilseeds grown during kharif season during in India. Sowing usually starts from mid-June/July and harvesting commences from September, with Maharashtra reporting the earliest arrivals. October and November are the peak arrival months.



Soybean is processed to get oil and meal. Crushing bean results in 18 % oil and the balance is meal. In India, Soybean oil is mainly used as cooking medium. The soya milk consumption now-a-days has emerged as a healthy drink habit as it is a high protein and low calorie food especially to those, who are intolerant to lactose present in animal milk. Soybean cake is rich in nitrogen and mineral content and can be very well utilized as a manure for the soil and as cattle feed for the animals.

Crop Cycle (India)											
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Sowing			Harvesting								

Life Cycle: Value Chain of the Commodity	Major Varieties /Grade								
<p>Value chain participants</p> <pre> graph TD A[Soybean farmers] --> B[Traders] B --> C[Brokers] C --> D[Soybean Processors] D --> E[Soybean Meal Traders/Brokers] D --> F[Soybean Oil Traders/Brokers] E --> G[Animal Feeds Industry] E --> H[Human Consumption] E --> I[Export] F --> J[Consumer] </pre>	<p>Major Varieties</p> <p>PK-308, PK-416, PK-327, JS-335, JS-90-41, JS-71-05, JS-75-46, NRC-12(Ahilya-2), NRC-7(Ahilya-3), PUSA-22, PK-472</p> <p>NCDEX Quality Parameters</p> <table> <tr> <td>Moisture</td><td>9% Basis, 11% Maximum</td></tr> <tr> <td>Foreign Matter</td><td>2 % Basis, 5% Maximum</td></tr> <tr> <td>Damaged</td><td>2 % Basis, 10% Maximum</td></tr> <tr> <td>Green Seeds</td><td>7%</td></tr> </table>	Moisture	9% Basis, 11% Maximum	Foreign Matter	2 % Basis, 5% Maximum	Damaged	2 % Basis, 10% Maximum	Green Seeds	7%
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Foreign Matter	2 % Basis, 5% Maximum								
Damaged	2 % Basis, 10% Maximum								
Green Seeds	7%								

Table: Reference Years for Commodities

Sl. No.	A	B	C
Crop Season	Kharif	Kharif (Long Duration crop)	Rabi
Crops	Paddy, Maize, Bajra, Moong, Soybean, Guar seed, Kapas, Sesame Seed	Castor and Turmeric	Wheat, Barley, Chana, RM Seed, Coriander, Jeera
Relevant Processed commodities	Guar gum, Soybean meal, Soy oil, Cotton, Cotton seed Oil cake, Gur, CPO	Castor Oil	-
Sowing Time	July onwards	July onwards	October onwards
Harvesting Time	Oct onwards	Jan onwards	March onwards
Reference Year			
Financial Year 2021-22 (Apr-Mar)			
Corresponding Years			
Production Year (PY)	2021-22 (July-Sept)	2020-21 (July-June)	2020-21 (July-June)
Marketing Year (MY)	2021-22 (Oct-Sept)	2021-22 (Jan/Feb-Dec/Jan)	2021-22 (Mar/Apr - Feb/Mar)
Calendar Year (CY)	2021 (Jan-Dec)	2021 (Jan-Dec)	2021 (Jan-Dec)
Relationship b/w Various Years	Current Financial Year = Current Production Year = Current Marketing Year = Calendar Year	Current Financial Year = Previous Production Year = Current Marketing Year = Current Calendar Year	Current Financial Year = Previous Production Year = Current Marketing Year = Current Calendar Year
Example	FY 2021-22 = PY 2021-22 = MY 2021-22 = CY 2021	FY 2021-22 = PY 2020-21 = MY 2021-22 = CY 2021	FY 2021-22 = PY 2020-21 = MY 2021-22 = CY 2021

Explanatory Notes:

- India is a vast country and various crops are sown and harvested at different point of time. However, two major crop seasons, are there i.e. Kharif & Rabi. Apart from it, Zaid/Summer season is also there.
- Crop seasons are classified based upon sowing time. Normally Kharif season sowing starts from mid-June/July and new crop arrivals begin from Oct/Nov. However, early/late sowing/harvesting also takes place. Rabi season sowing usually takes place mainly from October/November and harvesting starts from March/April. Early/late sowing/harvesting also takes place. Summer crops/Zaid crops are short duration crops mainly sown during January-March and harvested during April-June.
- “Production Year” is considered as “July to June”. With the start of monsoon rains during June/July the sowing of Kharif season starts and they are harvested during Sept/Oct. From Oct onwards the sowing of Rabi season crops starts and harvesting usually takes place during March/April. Thus, a single production cycle completes between July-Sept period covering Kharif, Rabi and Zaid crops. Thus production year remains same for all season crops and the period corresponds to July-Sept.
- “Marketing Year” for each crops starts from beginning of the harvest time i.e. from start of new crop produce arrivals in the market. Thus, for Kharif crops Marketing Year is generally considered as “October to September”, while for Rabi crops Marketing Year is considered as “April to March”. However, Marketing Year may vary slightly for some of the crops depending upon early/late maturity/harvesting.
- For processed commodities, their production starts after the start of new season crop arrivals of their underlying crop.

b. Commodity fundamentals and balance sheet as per the following format (to be prepared based on publicly available information on best effort basis):

Table - Fundamentals & Balance sheet (quantity)

(In Lakh Tonnes)

Global Scenario	Previous FY (2020-21)	Current FY(2021-22) (P)
Opening Stocks	968	1031
Production	3678	3507
Imports	1654	1529
Total Supply	6300	6067
Exports	1645	1553
Domestic Consumption	3624	3619
Closing Stocks	1031	896

Source: USDA (April 2022); P= Provisional,

Please refer to Table entitled "Reference Years for Commodities" to know type of years corresponding to financial year.

(In Lakh Tonnes)

Indian Scenario	Previous FY (2020-21)	Current FY(2021-22) (P)
Opening Stocks	4.72	4.20
Production	104.50	119.00
Imports	5.48	4.00
Total Supply	114.70	127.20
Exports	0.32	2.00
Domestic Consumption	110.18	119.90
Closing Stocks	4.20	5.30

Source: USDA (April 2022); P= Provisional,

Please refer to Table entitled "Reference Years for Commodities" to know type of years corresponding to financial year.

(In Lakh Tonnes)

Rank	Top 10 Major Producing Countries			Top 10 Major Consuming Countries		
	Country	Previous FY (2020-21)	Current FY (2021-22) (P)	Country	Previous FY (2020-21)	Current FY (2021-22) (P)
1	Brazil	1395	1250	China	1116	1087
2	United States	1147	1207	United States	610	635
3	Argentina	462	435	Brazil	499	505
4	China	196	164	Argentina	474	472
5	India	105	119	European Union	174	174
6	Canada	64	63	India	110	120
7	Russia	43	48	Mexico	63	65
8	Paraguay	99	42	Russia	51	53
9	Ukraine	30	38	Thailand	40	42
10	Bolivia	30	30	Egypt	39	37
11	Others	107	112	Others	448	429
	World Total	3678	3507	World Total	3624	3619

Source: USDA (April 2022); P= Provisional,

Countries are arranged in descending order based on the figure in Current FY (2021-22)

Please refer to Table entitled "Reference Years for Commodities" to know type of years corresponding to financial year.

(In Lakh Tonnes)

Rank	Top 10 Major Exporting Countries			Top 10 Major Importing Countries		
	Country	Previous FY (2020-21)	Current FY (2021-22) (P)	Country	Previous FY (2020-21)	Current FY (2021-22) (P)
1	Brazil	817	828	China	998	910
2	United States	615	576	EU	148	146
3	Canada	45	44	Mexico	61	62
4	Paraguay	63	29	Thailand	42	40
5	Argentina	52	28	Egypt	37	36
6	Uruguay	16	20	Japan	31	33
7	Ukraine	15	13	Taiwan	26	27
8	Russia	14	8	Indonesia	26	27
9	European Union	2	2	Turkey	27	26
10	India	0	2	Bangladesh	23	26
11	Others	6	5	Others	235	198
	World Total	1645	1553	World Total	1654	1529

Source: USDA (April 2022); P= Provisional,

Countries are arranged in descending order based on the figure in Current FY Current FY (2021-22)

Please refer to Table entitled "Reference Years for Commodities" to know type of years corresponding to financial year.

Top 10 Major producing states in India

(In Lakh Tonnes)

Top 10 Major Producing States in India			
Rank	States	Previous FY (2020-21)	Current FY (2021-22) (P)
1	Madhya Pradesh	41.77	52.29
2	Maharashtra	45.45	48.33
3	Rajasthan	8.59	7.05
4	Karnataka	3.73	3.85
5	Telangana	-	3.54
6	Gujarat	1.45	2.27
7	Chhattisgarh	0.69	0.47
8	Andhra Pradesh	1.64	-
9	Others	1.24	1.10
	All India level	104.56	118.89

Source: SOPA, States are arranged in descending order based on the figure in Current FY (2021-22)

Please refer to Table entitled "Reference Years for Commodities" to know type of years corresponding to financial year.

c. Major changes in the policies governing trade in the spot markets of the commodity

Date	Major Policies governing trade and related changes
19-May-21	The central government directed states and UTs to monitor prices of 22 essential commodities, especially pulses, oilseeds, vegetables and milk in order to discourage hoarding activities and taking undue advantage of Covid-19 situation.
09-Jun-21	Government increased the MSP of Soybean for marketing season 2021-22 by 1.80% to 3950 Rs/ql. from 3880 Rs/ql. last year.
23-Jul-21	The Solvent Extractors' Association (SEA) of India has asked the government to allow the import of soyabean meal to help the domestic poultry industry to cool down the increased prices of Soy meal.
11-Aug-21	The Department of Animal Husbandry (DHAD) notified the Customs department that soymeal and oil cake from GM soy would be permitted for import.

16-Aug-21	The Ministry of Commerce in an Office Memorandum directed to facilitate import of 12 lakh tonnes of `GM Soya de-oiled cake with immediate effect.
24-Aug-21	The govt. relaxed the import policy rules to allow imports of 12 lakhs metric tonne of crushed and de-oiled GM soya cake (only non-living organism) from Nhava Sheva port and LCS Petrapole, till 31st October, 2021 or until further orders, whichever is earlier.
03-Sep-21	The Govt. allowed GM soya cake imports via Mumbai, Tuticorin and Vishakhapatnam Sea Ports in addition to Nhava Sheva Port.
13-Sep-21	The Govt. extended import window for Soymeal
08-Oct-21	The central govt. imposed stock limits on all Edible oils and oilseeds for the period Oct 08, 2021 till Mar 31, 2022. The stock limit will be decided by the respective States/UT on the basis of available stock and consumption pattern of the State/UT.
12-Oct-21	UP Govt. imposed stock limits on edible oil and oilseeds
25-Oct-21	The central govt. directed States and UTs to speed up the process of issuing stock limit notification before the festive season and ensure that the consumers get the benefit of the same.
23-Nov-21	Fisheries Ministry writes a letter to Commerce Minister to consider request of Poultry Breeder Association demand
24-Nov-21	Fisheries Ministry writes a letter to DGFT to consider request of Poultry breeder Association demand
26-Nov-21	The state govt. of Rajasthan imposed stock limits on Edible oils and oilseeds w.e.f. Nov 26, 2021 till Mar 31, 2022.
07-Dec-21	Maharashtra Deputy Chief Minister Mr. Ajit Pawar Letter to Mr. Piyush Goel-Commerce Minister regarding imposition of ban on import of soybean meal as it is hurting interest of the Maharashtra soybean farmers.
10-Dec-21	Ministry of consumer affairs held a meeting with Edible Oilseeds/Oil associations about passing the benefits of duty cut to the end consumers
19-Dec-21	Ministry of Finance, Department of Economic affair wrote to SEBI to suspend futures trading in Chana, mustard seed, crude palm oil, moong, paddy (Basmati), wheat and soybean and its derivatives with immediate effect.
20-Dec-21	SEBI in its press release (PR No 36/2021) directed suspension of futures and options trading for one year in a host of agricultural commodities including chana, mustard seed, crude palm oil, moong, paddy (Basmati), wheat and soybean and its derivatives. The suspension of trading in these commodities came into effect on Monday (20-Dec) following a communication from the Department of Economic Affairs. No fresh positions (including intra-day) will be allowed in respect of Futures and Options contracts of these commodities. No new Futures and Options contracts will be launched till further notice in any of the commodities.
23-Dec-21	Maximum stock of 90 days production of Soya Meal, as per daily input production capacity of Plant/Miller/Processor, defined in its IEM (The storage location should be declared). Trading company/Trader/Private Chaupals: Only Government registered enterprise, maximum stock of 160 MT with a defined and declared storage location.
23-Dec-21	Govt. released Gazette notification on incorporation of Soymeal under the Essential Commodities Act, 1955 with immediate effect and this shall remain in force for a period up to 30th June, 2022 from the date of its publication in the Official Gazette.
03-Feb-22	Department of Food and Public Distribution has issued a stock limit notification (S.O. 452(E)) on oilseed and edible oil. Govt. has imposed stock limit on edible oil and oil seed with specified quantity till 30th June22. However, six states, Uttar Pradesh, Karnataka, Himachal Pradesh, Telangana, Rajasthan and Bihar are exempted from the quantities specified, as they have already imposed stock limit.
30-Mar-22	Department of Food and Public Distribution has issued a stock limit notification (S.O. 1509(E)) on oilseed and edible oil. Govt. has extended stock limit period on edible oil and oil seed with specified quantity from June 30, 2022 to 31st Dec 2022. In the notification govt. has also directed that that Edible Oils and Edible Oilseeds stock to be regularly declared and updated on the portal of this Department i.e. Department of Food & Public Distribution by the participants. As per the notification stock limit will be applicable on all Edible Oils and Oilseeds put together for all States/Union Territories.

d. Geo political issues in the commodity and its impact on Indian scenario.

Date	Event	Key Details	Key Implications/Impact
23-Mar-21	Suez Canal traffic jam between 23 March to early hours of 29 March caused by stuck ship	The Suez Canal, a critical shipping artery that connects the Mediterranean and Red Seas through Egypt, was blocked after a large cargo ship ran aground while passing through it bringing traffic on the busy trade route to a halt.	Supply Chain bottleneck with container shortage and port congestion. Freight rate hike. The congestion of the Suez Canal may delay nearly 7% of seaborne U.S. major grain shipments, according to USDA and vessel data analysed by Bloomberg. More than 80% of the impacted grain shipments are corn, with close to 60% of it on six vessels headed to China. However, Moderate effect on prices were observed as this Jam was temporary in nature.
27-Jan-22	Indonesia imposed mandatory domestic sales for palm oil	In order to control the palm oil prices in the domestic market, Indonesian govt. made a policy that palm oil exporters have to sell 20% of their total export at lower prices in the domestic market. This also has affected the supply of palm oil in the market.	This Policy has affected the supply of palm oil in the global market. It was reported that sellers/exporters quoted higher rates for selling / exporting the 80% of the oil in order to compensate for the loss incurred while selling 20% of the Export quota at lower rates in the domestic market.
24-Feb-22	Russia's Invasion on Ukraine	Russian President Vladimir Putin on Feb 24, 2022 informed that he has launched a military operation in Ukraine.	Russia's invasion on Ukraine has raised supply concern for wheat, corn and edible oil supply in the Global market. Further. it is feared that it may lead to a food crisis on the global scale. Ukraine is the largest source for sunflower oil import in India. Further, Russia and Ukraine are key source of world wheat product and trade. Prices of edible oils and grains are feared to get impacted from it.
09-Mar-22	Indonesia revised quota for mandatory domestic sales for palm oil from their export obligations	In order to control palm oil prices in the local market, Indonesia revised quota from 20% to 30% for Indonesian companies to sell their planned exports of crude palm oil and olein at home under a scheme known as Domestic Market Obligation (DMO) at lower prices (fixed by Govt.).The new restriction will stay in place for at least six months.	This revised policy is expected to further squeeze the supply of palm oil in the global market adversely impacting the prices.
Ongoing since Mar 28, 2022	China imposed lockdown	China Imposes Lockdown In Largest City- Shanghai Amid Biggest Outbreak Of COVID In 2 Years	Agriculture commodity export to China has slowed down due to prevailing lockdowns

2. Trading related parameter

a. Monthly and Annual traded volume (quantity in appropriate units)

Monthly Traded Quantity

Month	year	Traded volume (MT)
Apr	2021	
May	2021	
Jun	2021	
Jul	2021	75
Aug	2021	30
Sep	2021	
Oct	2021	30
Nov	2021	
Dec	2021	
Jan	2022	
Feb	2022	
Mar	2022	

Annual Traded Quantity

Symbol	Traded volume (MT)
SYBEANIDR	135

b. Annual traded volume as proportion of total deliverable supply (quantity in appropriate units)

Symbol	Traded volume (MT)	Deliverable supply(MT)	Proportion
SYBEANIDR	135	1,27,20,000	0.00%

c. Annual traded volume as proportion of total annual production (quantity in appropriate units)

Symbol	Traded volume (MT)	Production(MT)	Proportion
SYBEANIDR	135	1,27,20,000	0.00%

d. Annual average Open interest as proportion of total production

Symbol	Avg Open Int (MT)	Production(MT)	Proportion
SYBEANIDR	55	1,19,00,000	0.00%

e. Annual average Open interest as proportion of total deliverable supply

Symbol	Avg Open Int (MT)	Deliverable supply (MT)	Proportion
SYBEANIDR	55	1,27,20,000	0.00%

f. Monthly and Annual value of trade (in Rs. Crores)

Month	Years	Traded Value (in Cr.)
Apr	2021	
May	2021	
Jun	2021	
Jul	2021	0.2
Aug	2021	0.1
Sep	2021	
Oct	2021	0.1
Nov	2021	
Dec	2021	
Jan	2022	
Feb	2022	
Mar	2022	

Yearly

Symbol	Traded Value (in Cr.)
SYBEANIDR	0.04

g. Monthly and Annual quantity of delivery (in appropriate units)

Expiry Month	Years	Total Delivery(mt)
Apr	2021	7,190
May	2021	195
Jun	2021	265

Jul	2021	375
Aug	2021	390
Sep	2021	10
Oct	2021	550
Nov	2021	3,615
Dec	2021	4,905
Jan	2022	7,635
Feb	2022	2,830
Mar	2022	485

Annual

SYBEANIDR	28,445
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h. Monthly and Annual value of delivery (in Rs. Crores)

Expiry Month	Years	Symbol	Value in Cr
Apr	2021	SYBEANIDR	52
May	2021	SYBEANIDR	1
Jun	2021	SYBEANIDR	2
Jul	2021	SYBEANIDR	3
Aug	2021	SYBEANIDR	4
Sep	2021	SYBEANIDR	0
Oct	2021	SYBEANIDR	3
Nov	2021	SYBEANIDR	22
Dec	2021	SYBEANIDR	32
Jan	2022	SYBEANIDR	49
Feb	2022	SYBEANIDR	20
Mar	2022	SYBEANIDR	4

Yearly

Symbol	Value in Cr
SYBEANIDR	190.69

i. Monthly and Annual Average Open Interest (OI) (in appropriate units)

Month	Years	Avg Open Int (MT)
Apr	2021	
May	2021	
Jun	2021	
Jul	2021	46
Aug	2021	67
Sep	2021	70
Oct	2021	45
Nov	2021	
Dec	2021	
Jan	2022	
Feb	2022	
Mar	2022	

Symbol	Avg Open Int (MT)
SYBEANIDR	55

j. Annual average volume to open interest ratio

Symbol	Avg of traded volume(MT)	Average Open Int (MT)	traded to Open interest
SYBEANIDR	1	55	0.02%

k. Total number of unique members and clients who have traded during the financial year

Member Count	Client Count
7	8

l. Ratio of open interest by FPOs/farmers/Hedge/VCP positions to total open interest (Annual average as well as maximum daily value)

Annual average of ratio of open interest by FPOs/farmers/Hedge/VCP positions to total open interest

Symbol	VCPs/ Hedger
SYBEANIDR	0.09%

Maximum daily value of ratio of open interest by FPOs/farmers/Hedge/VCP positions to total open interest

Symbol	VCPs/ Hedger
SYBEANIDR	

m. Number of unique FPOs / farmers and VCPs/hedgers who traded in the financial year

6

n. Algorithmic trading as percentage of total trading

0.00%

0. Delivery defaults

i. Number of instances

2

ii. Quantity involved

795 MT

iii. Value involved

6.02 Cr

(Delivery details and delivery defaults information is kept same as Soybean futures contract)

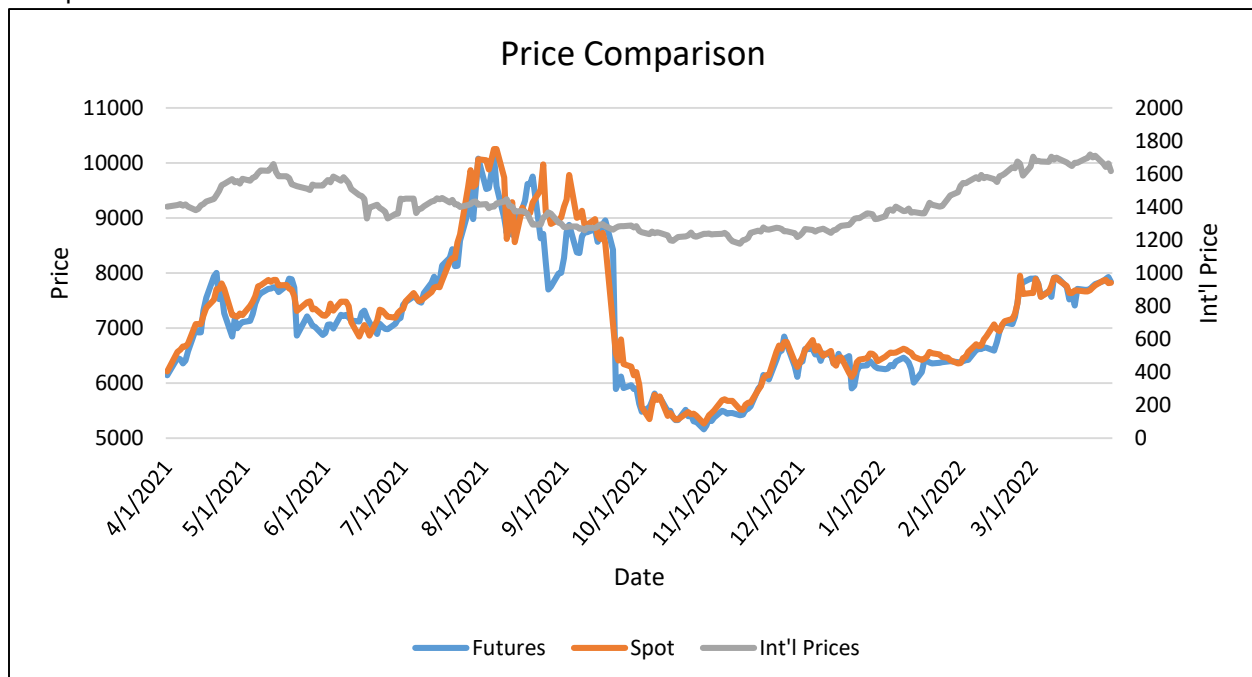
3. Price movements

a. Comparison, correlation and ratio of standard deviation of Exchange futures price vis-à-vis international futures price (wherever relevant comparable are available).

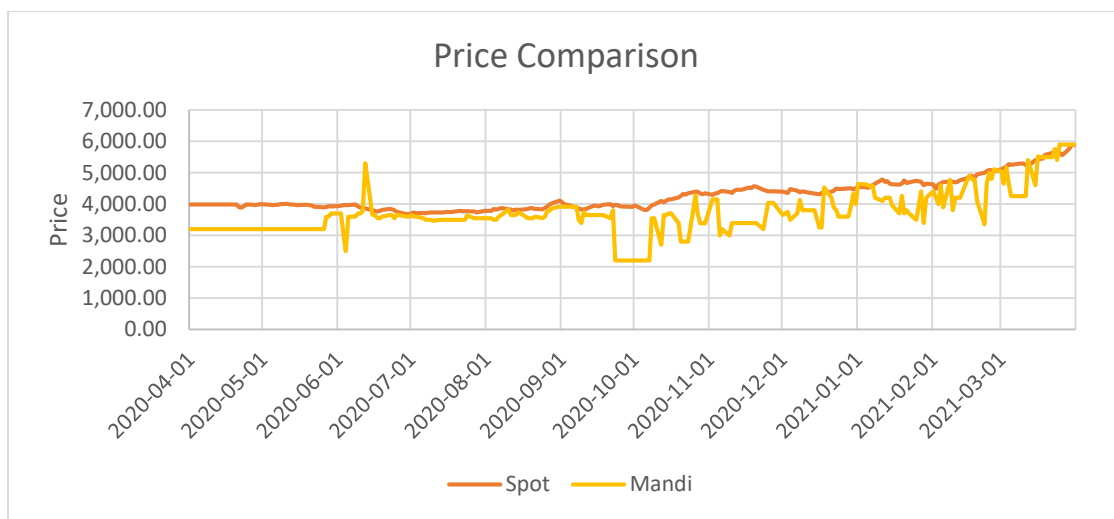
Correlation- 0.0018

Standard Deviation- 1.56

Comparison



- b. Comparison, correlation and ratio of standard deviation of Exchange futures price vis-à-vis international spot price (wherever relevant comparable are available) and domestic spot price (exchange polled price).
Not Available
- c. Correlation between exchange futures & domestic spot prices along with ratio of standard deviation.
Correlation- 0.62
Standard Deviation- 0.87
- d. Correlation between international futures & international spot prices along with ratio of standard deviation (wherever relevant comparable are available).
Not Available
- e. Comparison of Exchange polled price and mandi price (in case of agricultural commodities) / other relevant price (in case non-agricultural commodities) at basis centre.



- f. Maximum & Minimum value of daily futures price volatility and spot price volatility along with disclosure of methodology adopted for computing the volatility. (**Volatility calculated by Square root of Standard Deviation of daily returns for the period from 1 April 2021 to 31 March 2022**)

Volatility	Futures		Spot	
	Month	Value	Month	Value
Max	Aug	0.040219	Sep	0.049224
Min	Feb	0.013566	Jan	0.007423

- g. Number of times the futures contract was in backwardation/contango by more than 4% for the near month contract in the period under review

Contango	2
Backwardation	0

4. Other Parameters

- a. Qualitative and quantitative measure for Hedge effectiveness ratio (Methodology in Annexure I) and basis Risk (Volatility of Basis) along with disclosure of methodology adopted for such calculations. (**Volatility calculated by of Standard Deviation of daily returns for the period from 1 April 2021 to 31 March 2022**)

Basis Volatility	17.53
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Period	Hedge Efficiency (in Percentage)
FY 2021-22	68.48%

The methodology for hedge efficiency ratio calculation is appended as Annexure 1.

- b. Details about major physical markets of the commodity vis-à-vis market reach in terms of availability of delivery centers (information to be provided state-wise and UT-wise).

State	Major Trading Center	Availability of exchange delivery centers
Madhya Pradesh	Indore	Indore as Basis Center Mandsour as ADC
	Ujjain	
	Neemuch	
	Ratlam	
	Dewas	
	Sehore	
	Mandsaur	
	Shajapur	
	Sagar	
Maharashtra	Latur	Akola & Latur as ADC
	Buldhana	
	Amarawati	
	Akola	
	Yavatmal	
	Nagpur	
	Yavatmal	
Rajasthan	Kota	Kota as an ADC
	Jhalawar	
	Baran	

- c. Details about major physical markets of the commodity and average Open Interest for each month generated from those regions.

Note – The OI for each month is classified based on the Member level. The Average OI is on gross level (Long OI + Short OI)

State	MADHYA PRADESH	MAHARASHTRA	RAJASTHAN
Apr-21			
May-21			
Jun-21			
Jul-21	39	53	
Aug-21	55	77	5
Sep-21	55	80	5

Oct-21	30	55	5
Nov-21	30	55	5
Dec-21			
Jan-22			
Feb-22			
Mar-22			

- d. Details, such as number and target audience, of stakeholders' awareness programs carried out by the exchange.

Following list of Awareness programme, Stakeholder engagement programme has conducted for FY 2020-21.

Sr. Number	Programme	Location	Number of Participants
1	Trade Dynamics of Soy Complex	Virtual	56
2	Investors Education Programme	Virtual	17
3	Investors Education Programme	Virtual	15
4	Investors Education Programme	Virtual	5
5	Investors Education Programme	Virtual	3
6	Investors Education Programme	Virtual	6
7	Investors Education Programme	Virtual	29
8	Investors Education Programme	Virtual	25
9	Investors Education Programme	Virtual	37
10	Investors Education Programme	Virtual	19
11	Investors Education Programme	Virtual	87
12	Investors Education Programme	Virtual	13
13	Investors Education Programme	Virtual	35
14	Investors Education Programme	Virtual	46
15	Investors Education Programme	Virtual	28
16	Investors Education Programme	Virtual	39
17	Investors Education Programme	Virtual	10
18	Investors Education Programme	Virtual	11
19	Investors Education Programme	Virtual	6
20	Investors Education Programme	Physical	35
21	Investors Education Programme	Physical	23
22	Investors Education Programme	Physical	25

- e. Steps taken / to be undertaken to improve hedging effectiveness of the contracts as well as to improve the performance of illiquid contracts.

- Creating awareness about hedging and targeting the major Soybean processors
- Awareness Programme in major trading centres as well as remote location
- One to one meeting with market participants and hedgers

ANNEXURE I**Hedging Efficiency Methodology**

Regression analysis is carried out between near month futures returns and NCDEX polled spot prices returns of the FY2021-22.

The R-Square value of the Regression analysis represents the “**Hedging Efficiency**”.

Note: -

Date for which spot prices were not available is not used for analysis.

Weekly returns are used for performing Regression Analysis.

The method used to calculate Hedging Efficiency does not consider liquidity risk because of this reason illiquid commodities can have high hedging efficiency.

References:

Ghosh, Ph. D, Nilanjan & Dey, Debojyoti & Moulvi, Nazir & Jain, Niteen & Sinha, Neha & Rachuri, Sarika. (2013). Hedging Efficiency—Measures and Empirical Study.