Parameters for Performance Review of Commodity

SOYBEAN MEAL

1. Background

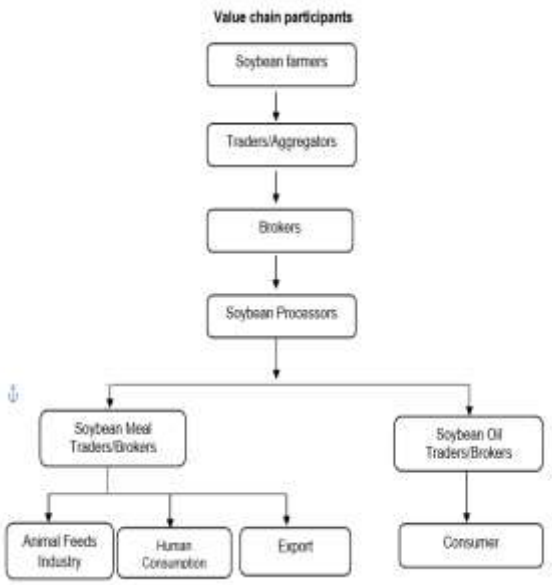
a. Brief about the commodity such as sample picture, lifecycle and various varieties/grade of the commodity found in India

Soybean Meal is one of the by-products during Soybean processing. Soybean Meal is generally irregularly shaped flakes, pale-yellow or light brown coloured and smells like roasted Soybeans. Soybean produced in country get processed into Soy oil and Soybean Meal. Crushing of Soybean results in production of Soybean meal (around 82%) and Soy oil (18%) is produced. Soybean meal is not only a very good source of protein for livestock and poultry, but it is also used in health foods for humans, cosmetics as well as in making antibiotics. With advancement of science and technology, Soybean meal can also be put to a wide number of other uses.

Soybean meal is usually classified for marketing by its crude protein content. High-protein types are obtained from dehulled seeds and contain 47-50% protein and 3% crude fibre (as fed basis). Other types of soybean meal include the hulls or part of the hulls and contain less than 47% protein and more than 6% crude fibre. In solvent-extracted soybean meals, the oil content is typically lower than 2% while it exceeds 3% in mechanically extracted meals.

Crop cycle: As Soybean meal is a processed commodity and Soybean processing takes place throughout the year, crop cycle is not applicable for Soybean Meal.

Life Cycle:
Value Chain of the Commodity



NCDEX: Quality Parameters

Major Varieties: Not Applicable as it is a processed commodity.

NCDEX: Quality Parameters

Moisture	11%Max
Protein	50% Max
Oil	1.5% Max
Fiber	4% Max
Sand/Silica	1% Max
Urease (by EEC method)	Min 0.05 mgN/g/Min, Max 0.30 mgN/g/Min Units (By EEC Method)

Indian solvent extracted toasted with pure yellow Soybean meal.
No Red / Black / Over toasted / Sweepage / Admixtured / Contaminated or water damaged Soybean Meal will be accepted.
Free from pesticide (especially organochlorine compound group e.g., DDT, dieldrin including aldrin and heptachlor)
Free from poisonous seeds and/or foreign seeds, free from castor seeds and/or husk, free from lumps, free from weevils, free from urea and/or other chemical substance.

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)
Beginning Stocks	154	148
Production	2477	2456
Imports	639	634
Total Supply	3270	3238
Exports	687	678
Domestic Consumption	2436	2428
Ending Stocks	148	132

Source: USDA (May 2021); 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)
Beginning Stocks	5.66	3.82
Production	76.00	81.60
Imports	2.36	5.00
Total Supply	84.02	90.42
Exports	20.25	21.00
Domestic Consumption	59.95	63.15
Ending Stocks	3.82	6.27

Source: USDA (Apr 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 Producing Countries			Top 10 Consuming Countries		
	Country	Previous FY (2020-21)	Current FY (2021-22) (P)	Country	Previous FY (2020-21)	Current FY (2021-22) (P)
1	China	737	705	China	727	698
2	United States	459	470	United States	341	346
3	Brazil	362	366	European Union	284	283
4	Argentina	313	312	Brazil	192	197
5	European Union	125	125	Mexico	68	70
6	India	76	82	India	60	63
7	Mexico	49	51	Vietnam	61	62
8	Russia	36	37	Indonesia	53	53
9	Egypt	31	29	Thailand	49	49
10	Thailand	22	23	Japan	36	36
	Others	269	257	Others	567	570
	World Total	2479	2457	World Total	2438	2427

Source: USDA (Apr 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 Exporting Countries			Top 10 Importing Countries		
	Country	Previous FY (2020-21)	Current FY (2021-22) (P)	Country	Previous FY (2020-21)	Current FY (2021-22) (P)
1	Argentina	283	280	European Union	165	166
2	Brazil	166	173	Indonesia	53	53
3	United States	125	129	Vietnam	51	52
4	India	20	21	Philippines	27	27
5	Bolivia	19	18	Thailand	27	27
6	Paraguay	19	9	United Kingdom	22	22
7	China	11	7	Mexico	19	19
8	European Union	8	7	Korea, South	17	18
9	Russia	6	6	Japan	18	18
10	Turkey	6	6	Iran	20	18
	Others	23	23	Others	219	215
	World Total	687	678	World Total	639	634

Source: USDA (Apr 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.

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)
	NA	NA	NA

NA: Data is not available in the public domain. P= Provisional,
It is a processed commodity. Thus, no such categorization is applicable for this commodity. Madhya Pradesh is the major Soybean producing state in the country contributing to nearly 46% percent of the total production, followed by Maharashtra 39% and Rajasthan 8% [Triennium Avg. (Crop Year 2018-19 to 2020-21)].

c. Major changes in the polices 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/qtl. from 3880 Rs/qtl. 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

Date	Major Policies governing trade and related changes
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	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	Supply Chain bottleneck with container shortage and port congestion. Freight rate hike.

Date	Event	Key Details	Key Implications/Impact
	March caused by stuck ship	through it bringing traffic on the busy trade route to a halt.	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	Nil
May	2021	Nil
Jun	2021	Nil
Jul	2021	Nil
Aug	2021	Nil

Sep	2021	Nil
Oct	2021	Nil
Nov	2021	Nil
Dec	2021	Nil
Jan	2022	Nil
Feb	2022	Nil
Mar	2022	Nil

Annual Traded Quantity

Symbol	Traded volume (MT)
SBMEALIDR	Nil

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

Symbol	Traded volume (MT)	Deliverable supply(MT)	Proportion
SBMEALIDR	-	90,42,000	0.00

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

Symbol	Traded volume (MT)	Production(MT)	Proportion
SBMEALIDR	-	81,60,000	0.00

d.Annual average Open interest as proportion of total production

Symbol	Avg Open Int (MT)	Production(MT)	Proportion
SBMEALIDR	-	-	0.00

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

Symbol	Avg Open Int (MT)	Deliverable supply (MT)	Proportion
SBMEALIDR	-	-	0.00

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

Month	Years	Traded Value (in Cr.)
Apr	2021	Nil
May	2021	Nil
Jun	2021	Nil

Jul	2021	Nil
Aug	2021	Nil
Sep	2021	Nil
Oct	2021	Nil
Nov	2021	Nil
Dec	2021	Nil
Jan	2022	Nil
Feb	2022	Nil
Mar	2022	Nil

Yearly

Symbol	Traded Value (in Cr.)
SBMEALIDR	Nil

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

NIL

h.Monthly and Annual value of delivery (in Rs. Crores)

NIL

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

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

Yearly

Symbol	Avg Open Int (MT)

SBMEALIDR	Nil

j. Annual average volume to open interest ratio

Symbol	Avg of traded volume(MT)	Average Open Int (MT)	traded to Open interest
SBMEALIDR	Nil	Nil	Nil

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

Member Count	Client Count
Nil	Nil

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
SBMEALIDR	Nil

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

Symbol	VCPs/ Hedger
SBMEALIDR	Nil

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

Nil

n. Algorithmic trading as percentage of total trading

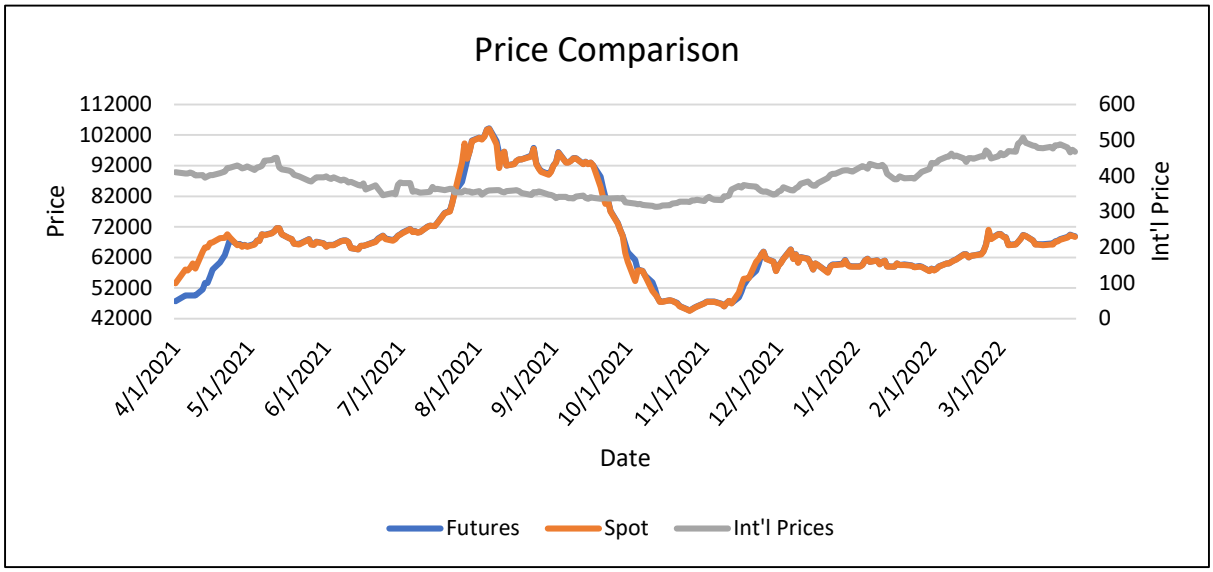
NIL

0. Delivery defaults
   i. Number of instances
      Nil
   ii. Quantity involved
      Nil
   iii. Value involved
      Nil

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- 0.08
Standard Deviation- 1.39
Comparison

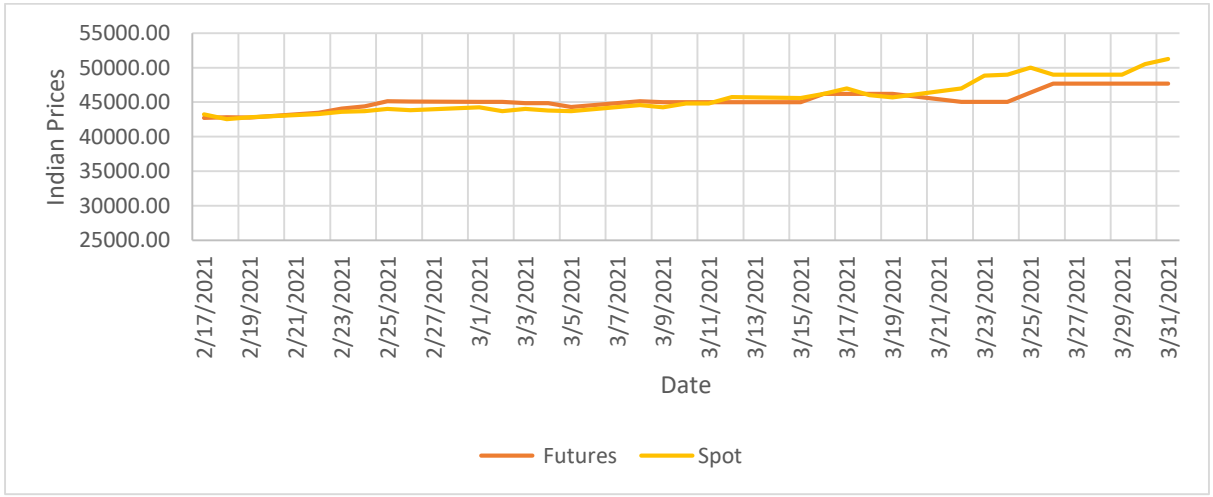


b. Comparison, correlation and ratio of standard deviation of Exchange futures price vis-à-vis international spot price (wherever relevant comparable are available) and domestic spot price (exchange polled price).
Not Available

c. Correlation between exchange futures & domestic spot prices along with ratio of standard deviation.
Correlation- -0.81
Standard Deviation- 0.82

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**)
NA

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	0
Backwardation	0

4. Others 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	9.37

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
	Ujjain	
	Dewas	
Maharashtra	Latur	Latur as ADC
	Nanded	

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

There were no trades during the FY 2021-22

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 2021-22.

Sr. Number	Programme	Location	Mode of Conduct	Number of Participants
1	Trade Dynamics of Soy Complex	Central	Virtual	56
2	Investors Education Programme	Central	Virtual	17
3	Investors Education Programme	Central	Virtual	15
4	Investors Education Programme	Central	Virtual	5
5	Investors Education Programme	Central	Virtual	3
6	Investors Education Programme	Central	Virtual	6
7	Investors Education Programme	Central	Virtual	29

8	Investors Education Programme	Central	Virtual	25
9	Investors Education Programme	Central	Virtual	37
10	Investors Education Programme	Central	Virtual	19
11	Investors Education Programme	Central	Virtual	87
12	Investors Education Programme	Central	Virtual	13
13	Investors Education Programme	Central	Virtual	35
14	Investors Education Programme	Central	Virtual	46
15	Investors Education Programme	Central	Virtual	28
16	Investors Education Programme	Central	Virtual	39
17	Investors Education Programme	Central	Virtual	10
18	Investors Education Programme	Central	Virtual	11
19	Investors Education Programme	Central	Virtual	6
20	Investors Education Programme	Central	Physical	35
21	Investors Education Programme	Central	Physical	23
22	Investors Education Programme	Central	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.s

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.