

Parameters for Performance Review of Commodity

TURMERIC

1. Background

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

Turmeric is one of the most important spices as well as medicinal agent and is grown during the Kharif season in India. The commercial part of Turmeric is the rhizome, or underground stem. Its active ingredient is curcumin. It is used as a spice in curries and other South Asian and Middle Eastern cuisine, for dyeing, and to impart color to mustard condiments. Turmeric oleoresin, which is obtained by solvent extraction of the ground spice, is used in brine pickles and to some extent in mayonnaise and relish formulations, non-alcoholic beverages, gelatins, butter and cheese etc. Indian Ayurvedic and Chinese medicines are found to be using turmeric for the treatment of inflammatory and digestive disorders since ages. Turmeric has been considered as an excellent natural cosmetic.



It requires a hot and moist climate and hence can be grown on different types of soil under irrigated and rainfall conditions and has crop duration of 7-9 months. Sowing period varies from June to August while harvesting takes place between Dec-March. Important producing states are Telangana, Andhra Pradesh, Tamil Nadu, and Maharashtra.

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
<pre> graph TD A[Turmeric Farmers] --> B[Wholesaler/ Retailer] B --> C[Consumer] A --> D[Village Traders] D --> E[Commission Agents] D --> F[Processor Powder manufacture/Oleo resin/ Volatile Oils] F --> G[Traders] E --> G </pre>	Major Varieties Alleppey Finger (cultivated in Kerala) and Erode and Salem turmeric (in Tamil Nadu), Rajapore turmeric(in Maharashtra) and Nizamabad Bulb (in Telangana). NCDEX: Quality Parameters (Farmer Polished Turmeric Fingers) Inferior quality Turmeric* should not be more than 2.25% - Length: Fingers that are broken/those less than 15mm should not be more than 3.0%; Fingers less than or equal to 3 cm in length should not be more than 15% - Damage due to moisture (i.e., Lokhandi) or over boiling (i.e. Kadh) should not be more than 1.2% - Unboiled or less boiled (Gajarthod) Turmeric should not be more than 0.5% - Bhusa, chaff dirt, earth clods and stones should not be more than 0.75% - Bulbs should not be more than 3% - Moisture: 12% max - Turmeric should be free from fungus

	• Turmeric should not be artificially colored with dyes or chemicals * Chora/atthu finger, khota gatha, markha
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Table: Reference Years for Commodities

Sl. No.	A	B	C
Crop Season	Kharif	Kharif (Long Duration Crop)	Rabi
Crops	Bajra, Groundnut, Guar seed, Kapas, Maize, Sesame Seed,	Castor seed and Turmeric	Barley, Coriander, Jeera, Isabgol Seed and Yellow Peas
Relevant Processed commodities	Guar gum, 29 mm Cotton, Cotton seed Oil cake, Cotton Wash Oil and Crude Sunflower Oil	Castor Oil	-
Sowing Time	July onwards	July onwards	October onwards
Harvesting Time	October onwards	January onwards	March onwards
Reference Year Financial Year 2025-26 (Apr-Mar)			
Corresponding Years			
Production Year (PY)	2025-26 (July-Sept)	2024-25 (July-June)	2024-25 (July-June)
Marketing Year (MY)	2025-26 (Oct-Sept)	2025-26 (Jan/Feb-Dec/Jan)	2025-26 (Mar/Apr - Feb/Mar)
Calendar Year (CY)	2025 (Jan-Dec)	2025 (Jan-Dec)	2025 (Jan-Dec)
Relationship b/w Various Years	Current Financial Year = Current Production Year = Current Marketing Year = Current 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 2025-26 = PY 2025-26 = MY 2025-26 = CY 2025	FY 2025-26 = PY 2024-25 = MY 2025-26 = CY 2025	FY 2025-26 = PY 2024-25 = MY 2025-26 = CY 2025

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 (2024-25)	Current FY (2025-26)*(P)
Beginning Stocks	NA	NA
Production	NA	NA
Imports	1.68	1.06
Total Supply	NA	NA
Exports	2.60	1.75
Domestic Consumption	NA	NA
Ending Stocks	NA	NA

Source: UN Comtrade; HS code used is 091030;NA: Data is not available in the public domain; P: Provisional

*Data is not available as per financial year. It is provided as per Calendar Year (CY) (Jan-Dec);

Indian Scenario	Previous FY (2024-25)	Current FY (2025-26) (P)
Beginning Stocks	NA	NA
Production	10.63	11.16
Imports	0.21	0.12
Total Supply	NA	NA
Exports	1.76	1.66
Domestic Consumption	NA	NA
Ending Stocks	NA	NA

Source: Production data is from Spices Board of India. (P = Provisional)

Import data is from Ministry of Commerce.

Import and Export data for current year is available for April 2025 to Feb 2026.

(In Lakh Tonnes)

Rank	Top 10 Major Producing Countries			Top 10 Major Consuming Countries		
	Country	Previous FY	Current FY	Country	Previous FY	Current FY
	NA			NA		

Data is not available in public domain. As per market feedback, India is considered as the largest producer, consumer and exporter of Turmeric in the globe contributing over 80% of the world production. Other major producers of Turmeric in Asia are China, Myanmar, Bangladesh, Pakistan, SriLanka, Taiwan, Burma and Indonesia, etc. Turmeric is also produced in the Caribbean and Latin American countries like Jamaica, Haiti, Costa Rica, Peru and Brazil.

India holds key position in world trade of Turmeric. India is the largest exporter of Turmeric in the world. It also accounts for considerable share in world Turmeric imports.

Rank	Top 10 Major Exporting Countries			Top 10 Major Importing Countries		
	Country	Previous FY(2024-25)	Current FY (2025-26)*(P)	Country	Previous FY(2024-25)	Current FY (2025-26)*(P)
1	India	1.78	1.51	USA	0.14	0.12
2	Fiji	0.04	0.04	India	0.24	0.11
3	Netherlands	0.04	0.04	Malaysia	0.10	0.10
4	Germany	0.02	0.02	Netherlands	0.05	0.08
5	Spain	0.01	0.01	United Kingdom	0.04	0.06
6	Malaysia	0.01	0.01	Germany	0.06	0.06
7	USA	0.01	0.01	Japan	0.05	0.03
8	United Kingdom	0.004	0.003	Spain	0.00	0.03
9	Belgium	0.003	0.003	Canada	0.02	0.03
10	Pakistan	0.001	0.002	Australia	0.01	0.02
	Others	0.69	0.11	Others	0.97	0.43
	World	2.60	1.75	World	1.68	1.06

Source: UN Comtrade; HS code used is 091030; P: Provisional;

*Data is not available as per financial year. It is provided as per Calendar Year (CY) (Jan-Dec);

Countries are arranged in descending order based on the data in the Current Financial Year;

(In Lakh Tonnes)

Top 10 Major producing states in India		
States	Previous FY (2024-25)	Current FY (2025-26)*
Maharashtra	3.10	2.90
Tamil Nadu	1.39	1.45
Telangana	1.14	1.33
Karnataka	0.67	1.07
Madhya Pradesh	0.93	0.96
Andhra Pradesh	0.38	0.66
Orissa	0.74	0.60
Assam	0.57	0.58
West Bengal	0.53	0.50
Mizoram	0.30	0.30
Gujarat	0.25	0.20
Others	0.63	0.61

Source: Spices Board of India;

States are arranged in descending order based on the data in the Current Year.

Note: *Provisional

a. Major changes in the policies governing trade in the spot markets of the commodity (FY 2025-26)

Date	Major Policies Governing Trade and related Changes
	No Turmeric specific policy change is seen during FY 2025-26

b. Geo political issues in the commodity and its impact on Indian scenario (FY 2025-26)

No major issue was noted internationally

2. Trading related Parameters

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

Monthly Traded Volume		
Month	Year	Traded Volume (MT)
April	2025	107,960
May	2025	98,745
June	2025	93,185
July	2025	51,655
August	2025	86,960
September	2025	53,885
October	2025	126,720
November	2025	62,745
December	2025	85,850
January	2026	86,650
February	2026	91,590
March	2026	76,990
Yearly Traded Volume		1,022,935

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

Traded volume (MT)	Deliverable supply(MT)	Proportion
1,022,935	1,128,000	0.91

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

Traded volume (MT)	Production(MT)	Proportion
1,022,935	1,116,000	0.92

d. Annual average Open interest as proportion of total production

Avg Open Int (MT)	Production(MT)	Proportion
19,263.87	1,116,000	0.02

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

Avg Open Int (MT)	Deliverable supply (MT)	Proportion
19,263.87	1,128,000	0.02

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

Monthly Traded Value		
Month	Year	Traded Value (in Cr.)
April	2025	1581.49
May	2025	1392.19
June	2025	1345.72
July	2025	692.25

August	2025	1145.80
September	2025	672.44
October	2025	1674.56
November	2025	887.81
December	2025	1357.30
January	2026	1534.00
February	2026	1448.52
March	2026	1130.65
Yearly Value of Trade		14,862.72

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

Monthly Delivery Quantity		
Month	Year	Total Delivery (MT)
April	2025	490
May	2025	2,445
June	2025	2,255
July	2025	-
August	2025	1,260
September	2025	-
October	2025	835
November	2025	-
December	2025	3,745
January	2026	-
February	2026	-
March	2026	-
Yearly Delivery Quantity		11,030

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

Monthly Delivery Value		
Month	Year	Delivery Value (in Cr.)
April	2025	7.15
May	2025	35.63
June	2025	32.38
July	2025	-
August	2025	17.25
September	2025	-
October	2025	11.55
November	2025	-
December	2025	57.89
January	2026	-
February	2026	-
March	2026	-
Yearly Delivery Value		161.86

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

Month	Year	Avg Open Int (MT)
April	2025	16,373
May	2025	18,081
June	2025	18,862
July	2025	20,822
August	2025	19,986
September	2025	19,753
October	2025	19,612
November	2025	19,419
December	2025	16,828
January	2026	18,109
February	2026	20,165
March	2026	23,232
Yearly Average OI		19,263.87

j. Annual average volume to open interest ratio

Volume to OI Ratio
21.50%

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

Member Count	Client Count
84	1,939

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

	VCPs/ Hedger
Annual Average	12.33%
Maximum Daily value*	9.04%

****It is calculated on the day when commodity has highest open interest during the year.
Commodity wise client categorization is as per category details as provided by the members.***

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

Commodity	Count
TMCFGRNZM	74

Commodity wise client categorization is as per category details as provided by the members.

n. Algorithmic trading as percentage of total trading

Commodity	%
TMCFGRNZM	8.03%

o. Delivery defaults

Number of instances	2
Quantity involved	80
Value involved	1.21

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).

NA

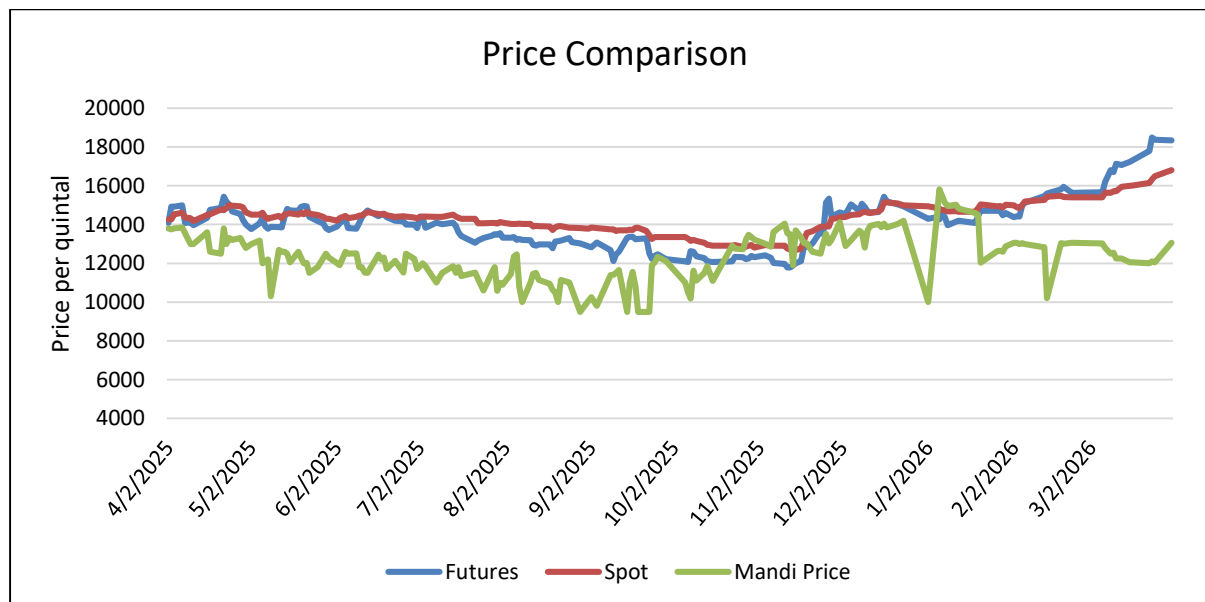
- b. Comparison, correlation and ratio of standard deviation of Exchange futures price vis-à-vis international spot price (wherever relevant comparable are available) and domestic spot price (exchange polled price).

NA

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

Correlation			
	<i>Futures</i>	<i>Spot</i>	<i>Mandi</i>
<i>Futures</i>	1	-	-
<i>Spot</i>	0.330908	1	-
<i>Mandi</i>	0.053877	0.178187	1

Standard Deviation			
	<i>Futures</i>	<i>Spot</i>	<i>Mandi</i>
<i>Futures</i>	1	0.415864	3.620457
<i>Spot</i>	2.404631	1	8.705865
<i>Mandi</i>	0.276208	0.114865	1



- d. Correlation between international futures & international spot prices along with ratio of standard deviation (wherever relevant comparable are available).

NA

- 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.

Correlation			
	<i>Futures</i>	<i>Spot</i>	<i>Mandi</i>
<i>Futures</i>	1	-	-
<i>Spot</i>	0.330908	1	-
<i>Mandi</i>	0.053877	0.178187	1

Standard Deviation			
	<i>Futures</i>	<i>Spot</i>	<i>Mandi</i>
<i>Futures</i>	1	0.415864	3.620457
<i>Spot</i>	2.404631	1	8.705865
<i>Mandi</i>	0.276208	0.114865	1

- 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 Standard Deviation of daily returns for the period from 1 April 2025 to 31 March 2026)

Volatility	Futures		Spot	
	Month	Value	Month	Value
Max	Oct	0.036301	Mar	0.012863
Min	Jul	0.010938	Jun	0.004428

- 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	17
Backwardation	26

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 Standard Deviation of daily returns for the period from 1 April 2025 to 31 March 2026)

Basis Volatility	11.2939
Hedge Efficiency	64.65%

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

State	Major Physical Markets	Availability of NCDEX Delivery center
Telangana	Nizamabad	Basis
	Warangal	-
	Kesamudram	-
	Vikarabad	-
Maharashtra	Sangli	ADC
	Hingoli	-
	Basmat	ADC
	Nanded	-
	Jalgaon	-
Tamil Nadu	Erode	ADC
	Salem	-
	Coimbatore	-
Andhra Pradesh	Cuddapah	-
	Duggirala	-

- 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	Maharashtra (in MT)	Gujarat (in MT)	Rajasthan (in MT)	Chhattisgarh (in MT)
Apr-25	11,768	2,863	4,179	2,681
May-25	11,921	6,199	3,698	2,975
Jun-25	14,695	5,055	4,069	2,322
Jul-25	14,921	5,521	6,351	2,947
Aug-25	13,573	5,739	6,691	3,011
Sep-25	11,295	5,825	7,894	3,196
Oct-25	11,650	5,902	9,198	3,194
Nov-25	10,842	4,744	7,511	3,229
Dec-25	10,653	2,935	4,798	3,083

Jan-26	11,594	3,513	6,179	2,404
Feb-26	14,713	3,245	7,475	540
Mar-26	18,315	4,801	7,899	643

"Note - The OI for CP is not mapped to any State/ location and hence not considered in the above data."

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

Following is the list of Awareness programmes, Stakeholder engagement programmes conducted by the Exchange in FY 2025-26:

Sr. No.	Programme	Location	Number of participants
1.	IEP	Mumbai	20
2.	IEP	Noida	31
3.	IEP	Delhi	31
4.	IEP	Mahanandi	50
5.	IEP	Veldurthi	55
6.	IEP	Bodhan	65
7.	IEP	Korutla	65
8.	IEP	Nadikuda	55
9.	IEP	Thalassery	60
10.	IEP	Hingoli	50
11.	IEP	Buldhana	52
12.	IEP	Roorkee	35
13.	IEP	Karanja Lad	48
14.	IEP	Noida	42
15.	IEP	Hisar	55
16.	IEP	Delhi	45
17.	IEP	Hubbali	110
18.	IEP	Delhi	42
19.	IEP	Ghaziabad	34
20.	IEP	Ghaziabad	36
21.	IEP	Ambala	48
22.	IEP	Chandigarh	60
23.	IEP	Noida	36
24.	IEP	Noida	30
25.	IEP	Aligarh	45
26.	IEP	Vishakhapatnam	81
27.	IEP	Surendranagar	90
28.	IEP	Agra	100

29.	IEP	Varni	80
30.	IEP	Amravati	65
31.	IEP	Velpur	55
32.	IEP	Warangal	55
33.	IEP	Delhi	43
34.	IEP	Chennai	63
35.	IEP	Ghaziabad	53
36.	IEP	Mumbai	65
37.	IEP	Vijayawada	66
38.	IEP	Delhi	41
39.	IEP	Ghaziabad	42
40.	IEP	Agra	50
41.	IEP	Andheri	45
42.	IEP	Noida	35
43.	IEP	Mussoorie	50
44.	IEP	Noida	35
45.	IEP	Yamunanagar	45
46.	IEP	Ghaziabad	39
47.	IEP	Gopalpur	60
48.	IEP	Noida	37
49.	IEP	Karnal	32
50.	IEP	Singotam	45
51.	IEP	Ghaziabad	36
52.	IEP	Ludhiana	61
53.	IEP	Hasanparthy	70
54.	IEP	Zaffergadh	70
55.	IEP	Ramavaram	60
56.	IEP	Noida	40
57.	IEP	Visakhapatnam	55
58.	IEP	Ghaziabad	37
59.	IEP	Noida	36
60.	IEP	Theni	50
61.	IEP	Ghaziabad	39
62.	IEP	Ghaziabad	40
63.	IEP	Nizamabad	20
64.	IEP	Coimbatore	70
65.	IEP	Varanasi	250
66.	IEP	Basmat	320
67.	IEP	Delhi	39

68.	IEP	Delhi	36
69.	IEP	Kotputli	50
70.	IEP	Nadendla	40
71.	IEP	Kamargoan	53
72.	IEP	Ponnuru	45
73.	IEP	Ballikurava	50
74.	IEP	Kaushambi	48
75.	IEP	Prayagraj	40
76.	IEP	Indore	69
77.	IEP	Yamunanagar	35
78.	IEP	Sriganganagar	50
79.	IEP	Navapeta	70
80.	IEP	RC Thanda	45
81.	IEP	Junagadh	26
82.	IEP	Akola	55
83.	IEP	Nizamabad	60
84.	IEP	KATTAPPANA	55
85.	IEP	Ludhiana	35
86.	IEP	Jetpur	38
87.	IEP	Warangal	60
88.	IEP	Nagpur	57
89.	IEP	Mahabubabad	55
90.	IEP	Khammam	60
91.	IEP	THIRUVANAMTHAPURAM	55
92.	IEP	Delhi	53
93.	IEP	Lucknow	55
94.	IEP	Salem	45
95.	IEP	Gorakhpur	35
96.	IEP	Trichy	55
97.	IEP	Belgaum	69
98.	IEP	Geesugonda	70
99.	IEP	Nekkonda	45
100.	IEP	Nandigama	80
101.	IEP	Mangalore	50
102.	IEP	Kanaparru	80
103.	IEP	Chebrolu	70
104.	IEP	Mukteswaram	60
105.	IEP	Puducherry	40
106.	IEP	Tenali	50

107.	IEP	Bangalore	69
108.	IEP	Bhilai	53
109.	IEP	Hyderabad	73
110.	IEP	Online	32
111.	IEP	Latur	34
112.	IEP	Pune	27
113.	IEP	Mumbai	41
114.	IEP	Ahmedabad	136
115.	IEP	Ahmedabad	90
116.	IEP	Ahmedabad	107
117.	IEP	Jamshedpur	100
118.	IEP	Dehradun	100
119.	IEP	Chandigarh	400
120.	IEP	Sambhaji Nagar	750
121.	IEP	Webinar	40
122.	IEP	Webinar	31
123.	IEP	Webinar	40
124.	IEP	Webinar	29
125.	IEP	Webinar	38
126.	IEP	Webinar	38
127.	IEP	Webinar	35
128.	IEP	Webinar	41
129.	IEP	Webinar	40
130.	IEP	Webinar	38
131.	IEP	Webinar	39
132.	IEP	Webinar	55
133.	IEP	Webinar	100
134.	IEP	Webinar	70
135.	IEP	Webinar	45
136.	IEP	Webinar	40
137.	IEP	Webinar	32
138.	IEP	Webinar	62
139.	IEP	Webinar	36
140.	IEP	Webinar	39
141.	IEP	Webinar	39
142.	IEP	Webinar	35
143.	IEP	Webinar	32
144.	IEP	Greater Noida	40
145.	IEP	Ghaziabad	31

146.	IEP	Greater Noida	40
147.	IEP	Greater Noida	40
148.	IEP	Agra	30
149.	IEP	Agra	30
150.	IEP	Hathras	40
151.	IEP	Moradabad	60
152.	IEP	Moradabad	61

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 Masala processors/ Traders/ Stockists.
- Awareness Programme in major trading centres as well as remote location.
- One to one meeting with market participants and hedgers.

5. Any other information to be disclosed as deemed important by the exchange or as suggested by the PAC is missing

N.A

ANNEXURE I

Qualitative and quantitative measure for Hedge effectiveness ratio

Hedging Efficiency Methodology

Regression analysis is carried out between near month futures returns and NCDEX polled spot prices returns of the FY2025-26.

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.