

Parameters for Performance Review of Commodity

JEERA

1. Background

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

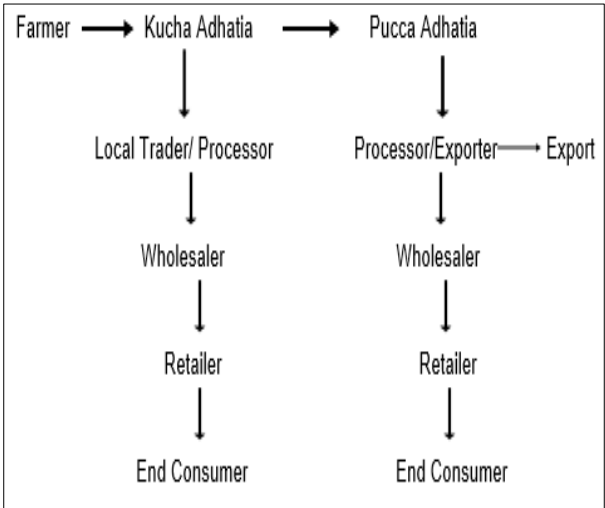
Cumin seed commonly known as Jeera is the dried, white fruit with greyish brown colour of a small slender annual herb. It had a major role as a flavoring, spice and medicinal uses throughout history. In the western countries, it is used mainly in veterinary medicine, as a carminative, but it remains a traditional herbal remedy in the East. Besides being used in Ayurvedic medicines, cumin is also used as a stimulant, carminative, stomachic and astringent. Cumin seed oil is used in perfumery and for flavouring liqueurs and cordials.



Generally, raw Jeera is being processed by machine and then the Machine cleaned material is generally sold to spices processing units (Masala Manufacturers) and retail customers.

In India, Jeera is grown as a Rabi crop. Sowing is done during October to December while harvesting starts from February onwards. It requires less water and more cold for its better growth with ideal temperature of 25 to 30 degree. Jeera crop is highly sensitive to rain/ high humidity and if rain occurs during harvesting time, quality of the Jeera gets badly affected (it turns black). The major producing states are Gujarat and Rajasthan in India.

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

| Life Cycle: Value Chain of the Commodity | Major Varieties /Grade | | | | | | | | | | | | |
|---|---|-----------------|-----------|-------------------|-----------|---|----------|-----------------------|----------------------|------------------------------|----------------------|----------|--------------------|
|  | <p>Major Varieties</p> <p>Besides the two main types of cumin seeds, i.e., white and black cumin seeds, many improved varieties like S-404, MC-43 Gujarat Cumin-1(GC-1), GC-2, GC-3, RS-1, UC-198, RZ-19, etc. are available in India.</p> <p>NCDEX: Quality Parameters</p> <table> <tr> <td>Foreign Matter*</td><td>1.0 % Max</td></tr> <tr> <td>Seeds with Stalks</td><td>8.0 % Max</td></tr> <tr> <td>Damaged, Discolored, Shriveled and Immature seeds</td><td>4.5% Max</td></tr> <tr> <td>Insect damaged matter</td><td>Should not be > 0.5%</td></tr> <tr> <td>Test Weight (on count basis)</td><td>Max 300 seeds / gram</td></tr> <tr> <td>Moisture</td><td>8% Basis, 9.5% Max</td></tr> </table> | Foreign Matter* | 1.0 % Max | Seeds with Stalks | 8.0 % Max | Damaged, Discolored, Shriveled and Immature seeds | 4.5% Max | Insect damaged matter | Should not be > 0.5% | Test Weight (on count basis) | Max 300 seeds / gram | Moisture | 8% Basis, 9.5% Max |
| Foreign Matter* | 1.0 % Max | | | | | | | | | | | | |
| Seeds with Stalks | 8.0 % Max | | | | | | | | | | | | |
| Damaged, Discolored, Shriveled and Immature seeds | 4.5% Max | | | | | | | | | | | | |
| Insect damaged matter | Should not be > 0.5% | | | | | | | | | | | | |
| Test Weight (on count basis) | Max 300 seeds / gram | | | | | | | | | | | | |
| Moisture | 8% Basis, 9.5% Max | | | | | | | | | | | | |

| | |
|--|--|
| | *Foreign matter includes anything other than Jeera seeds e.g. sand, silica, pebbles and other edible/non edible seeds. |
|--|--|

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 seed 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 2022-23 (Apr-Mar) | | | |
| Corresponding Years | | | |
| Production Year (PY) | 2022-23 (July-Sept) | 2021-22 (July-June) | 2021-22 (July-June) |
| Marketing Year (MY) | 2022-23(Oct-Sept) | 2022-23 (Jan/Feb-Dec/Jan) | 2022-23 (Mar/Apr - Feb/Mar) |
| Calendar Year (CY) | 2022 (Jan-Dec) | 2022 (Jan-Dec) | 2022 (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 2022-23= PY 2022-23= MY 2022-23= CY 2022 | FY 2022-23= PY 2021-22 = MY 2022-23= CY 2022 | FY 2022-23= PY 2021-22 = MY 2022-23= CY 2022 |

Note: Coffee is a plantation crop; hence, it is not classified under either Kharif or Rabi season in the above table.

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 (2021-22)* | Current FY (2022-23)* (P) |
| Opening Stocks | NA | NA |
| Production | NA | NA |
| Imports | 2.35 | 0.84 |
| Total Supply | NA | NA |
| Exports | 2.80 | 1.97 |
| Domestic Consumption | NA | NA |
| Closing Stocks | NA | NA |

Source: UN Comtrade; HS codes used are 090931 and 090932;

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);

| (In Lakh Tonnes) | | |
|----------------------|-----------------------|----------------------|
| Indian Scenario | Previous FY (2021-22) | Current FY (2022-23) |
| Opening Stocks | 0.78 | 1.26 |
| Production | 4.50 | 3.25* |
| Imports | 0.05 | 0.02 |
| Total Supply | 5.33 | 4.53 |
| Exports | 2.17 | 1.67 |
| Domestic Consumption | 1.90 | 1.90 |
| Closing Stocks | 1.26 | 0.86 |

Source:

Production: Market Estimates

*AS per Spice Board of India the Jeera Production is 7.26 Lakh tonnes.

Import/Export: Ministry of Commerce (HS codes 090931 and 090932);

For FY 2022-23, import and export data is available only for period of Apr 2022 to Feb 2023;

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 | Current FY | Country | Previous FY | Current FY |
| | NA | | | NA | | |

Data is not available in public domain. India is the largest producer of Jeera in the world, which accounts for 80-85% of the world production. The other major producers are Syria and Turkey, which together accounts for rest of the production.

(In Lakh Tonnes)

| Rank | Top 10 Major Exporting Countries | | | Top 10 Major Importing Countries | | |
|------|----------------------------------|------------------------|---------------------------|----------------------------------|------------------------|---------------------------|
| | Country | Previous FY (2021-22)* | Current FY (2022-23)* (P) | Country | Previous FY (2021-22)* | Current FY (2022-23)* (P) |
| 1 | India | 2.42 | 1.77 | China | 0.74 | 0.02 |
| 2 | Turkey | 0.10 | 0.07 | USA | 0.19 | 0.15 |
| 3 | Egypt | 0.02 | 0.02 | Turkey | 0.12 | 0.08 |
| 4 | Spain | 0.02 | 0.02 | Egypt | 0.08 | 0.03 |
| 5 | Netherlands | 0.02 | 0.02 | United Kingdom | 0.06 | 0.05 |
| 6 | Germany | 0.01 | 0.01 | Pakistan | 0.05 | 0.03 |
| 7 | USA | 0.01 | 0.01 | India | 0.05 | 0.02 |
| 8 | Czech Rep. | 0.01 | 0.02 | Malaysia | 0.04 | NA |
| 9 | Lithuania | 0.01 | 0.01 | Germany | 0.03 | 0.01 |
| 10 | United Kingdom | 0.00 | 0.00 | Japan | 0.03 | 0.03 |
| | Others | 0.19 | 0.03 | Others | 1.64 | 0.38 |
| | World | 2.80 | 1.97 | World | 2.35 | 0.84 |

Source: UN Comtrade; HS codes used are 090931 and 090932; 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 Year;

(In Lakh Tonnes)

| Top 10 Major producing states in India | | | |
|--|-----------|-----------------------|----------------------|
| Rank | States | Previous FY (2021-22) | Current FY (2022-23) |
| 1 | Gujarat | 4.75 | 4.20 |
| 2 | Rajasthan | 3.19 | 3.04 |
| | Others** | 0.02 | 0.02 |
| | Total | 7.95 | 7.26 |

Source: Spices Board of India;

**: The share of other states (except for top 2 states) in total domestic production is negligible. Gujarat and Rajasthan together accounts for more than 90% of the domestic production.

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

c. Major changes in the policies governing trade in the spot markets of the commodity (FY 2022-23)

| Date | Major Policies Governing Trade and related Changes |
|------|--|
| NA | NA |

d. Geo political issues in the commodity and its impact on Indian scenario (FY 2022-23)

| Date | Event | Key Details | Key Implications/Impact |
|-----------|------------------------|--|---|
| 05-Nov-22 | China imposed lockdown | China indicated no relaxation of restrictions to 'zero-Covid' policy. Scattered outbreaks across the country continued | Agriculture commodity export to China slowed down due to prevailing lockdowns |

| | | | |
|--|--|---|--|
| | | to prompt travel restrictions and lockdowns | |
|--|--|---|--|

2. Trading related Parameters

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

| Monthly Traded Volume | | |
|-----------------------|------|--------------------|
| Month | Year | Traded Volume (MT) |
| April | 2022 | 125,334 |
| May | 2022 | 97,401 |
| June | 2022 | 77,409 |
| July | 2022 | 113,373 |
| August | 2022 | 101,493 |
| September | 2022 | 80,244 |
| October | 2022 | 65,817 |
| November | 2022 | 80,133 |
| December | 2022 | 110,061 |
| January | 2023 | 106,752 |
| February | 2023 | 59,109 |
| March | 2023 | 82,362 |
| Yearly Traded Volume | | 1,099,488 |

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

| Traded volume (MT) | Deliverable supply(MT) | Proportion |
|--------------------|-------------------------|------------|
| 1,099,488.00 | 727,367 | 1.51 |

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

| Traded volume (MT) | Production(MT) | Proportion |
|--------------------|-----------------|------------|
| 1,099,488 | 725,651 | 1.52 |

d. Annual average Open interest as proportion of total production

| Avg Open Int (MT) | Production(MT) | Proportion |
|-------------------|-----------------|------------|
| 11,291.04 | 725,651 | 0.02 |

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

| Avg Open Int (MT) | Deliverable supply(MT) | Proportion |
|-------------------|-------------------------|------------|
| 11,291.04 | 727,367 | 0.02 |

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

| Monthly Traded Value | | |
|-----------------------|------|----------------------|
| Month | Year | Traded Value(in Cr.) |
| April | 2022 | 2,826.40 |
| May | 2022 | 2,089.97 |
| June | 2022 | 1,641.94 |
| July | 2022 | 2,592.76 |
| August | 2022 | 2,500.35 |
| September | 2022 | 2,002.52 |
| October | 2022 | 1,588.21 |
| November | 2022 | 1,971.03 |
| December | 2022 | 3,082.16 |
| January | 2023 | 3,665.22 |
| February | 2023 | 1,881.62 |
| March | 2023 | 2,712.64 |
| Yearly Value of Trade | | 28,554.52 |

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

| Monthly Delivery Quantity | | |
|---------------------------|------|---------------------|
| Month | Year | Total Delivery (MT) |
| April | 2022 | 1,140 |
| May | 2022 | 441 |
| June | 2022 | 1,044 |
| July | 2022 | 1,344 |
| August | 2022 | 2,610 |
| September | 2022 | 1,512 |
| October | 2022 | 1,428 |

| | | |
|---------------------------------|------|---------------|
| November | 2022 | 1,722 |
| December | 2022 | 579 |
| January | 2023 | 2,463 |
| March | 2023 | 753 |
| Yearly Delivery Quantity | | 15,036 |

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

| Monthly Delivery Value | | |
|-------------------------------|-------------|--------------------|
| Month | Year | Value in Cr |
| April | 2022 | 25.25 |
| May | 2022 | 9.63 |
| June | 2022 | 22.46 |
| July | 2022 | 30.49 |
| August | 2022 | 62.44 |
| September | 2022 | 37.47 |
| October | 2022 | 34.16 |
| November | 2022 | 42.01 |
| December | 2022 | 15.61 |
| January | 2023 | 85.73 |
| March | 2023 | 23.72 |
| Yearly Delivery Value | | 388.98 |

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

| Month | Year | Avg Open Int (MT) |
|--------------|-------------|--------------------------|
| April | 2022 | 17,706.63 |
| May | 2022 | 17,199.14 |
| June | 2022 | 15,390.95 |
| July | 2022 | 14,255.71 |
| August | 2022 | 12,250.65 |
| September | 2022 | 9,652.77 |

| | | |
|--------------------------|------|------------------|
| October | 2022 | 9,559.67 |
| November | 2022 | 9,170.43 |
| December | 2022 | 10,105.64 |
| January | 2023 | 7,627.00 |
| February | 2023 | 6,430.65 |
| March | 2023 | 7,873.43 |
| Yearly Average OI | | 11,291.04 |

j. Annual average volume to open interest ratio

| |
|--------------------|
| Volume to OI Ratio |
| 38.80% |

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

| | |
|--------------|--------------|
| Member Count | Client Count |
| 122 | 2,471 |

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 | 7.51% |
| Maximum Daily value* | 8.97% |

****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 |
| JEERAUNJHA | 30 |

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

n. Algorithmic trading as percentage of total trading

| | |
|------------|-------|
| Commodity | % |
| JEERAUNJHA | 12.15 |

o. Delivery defaults

| | |
|------------------------|---|
| No. of Instances | 0 |
| Quantity Involved (MT) | 0 |
| Value Involved (Cr) | 0 |

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> | 0.681532 | 1 | |
| <i>Mandi</i> | 0.25401 | 0.521938 | 1 |

| Standard Deviation | | | |
|---------------------------|----------------|-------------|--------------|
| | <i>Futures</i> | <i>Spot</i> | <i>Mandi</i> |
| <i>Futures</i> | 1 | 0.754429 | 0.825423 |
| <i>Spot</i> | 1.325506 | 1 | 1.094103 |
| <i>Mandi</i> | 1.211501 | 0.913991 | 1 |

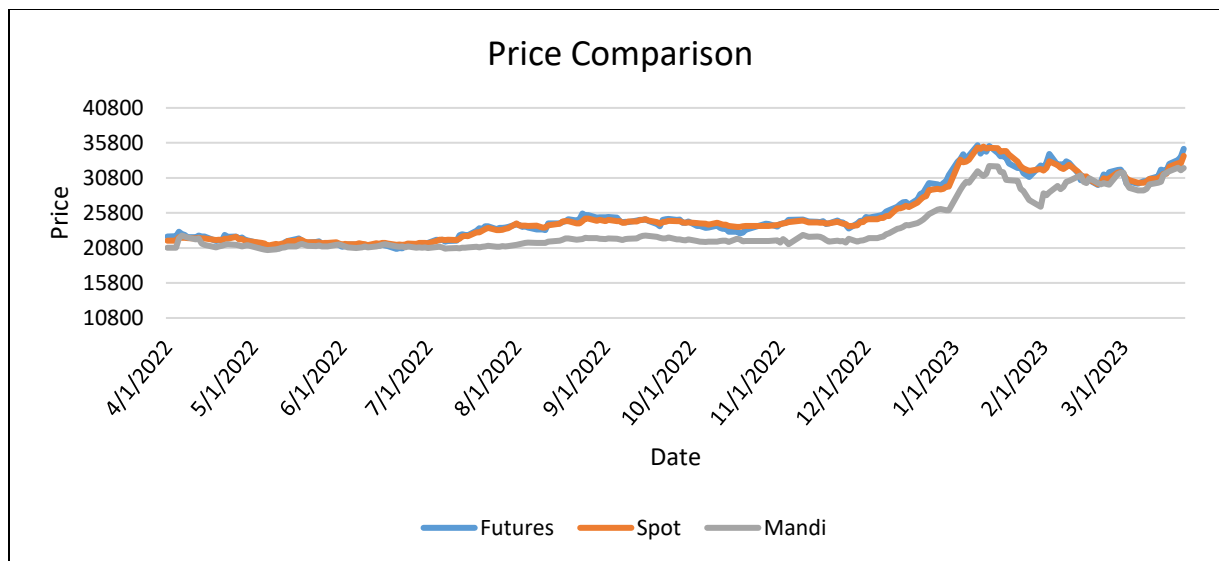
- d. Correlation between international futures & international spot prices along with ratio of standard deviation (wherever relevant comparable are available).

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> | 0.681532 | 1 | |
| <i>Mandi</i> | 0.25401 | 0.521938 | 1 |

| Standard Deviation | | | |
|---------------------------|----------------|-------------|--------------|
| | <i>Futures</i> | <i>Spot</i> | <i>Mandi</i> |
| <i>Futures</i> | 1 | 0.754429 | 0.825423 |
| <i>Spot</i> | 1.325506 | 1 | 1.094103 |
| <i>Mandi</i> | 1.211501 | 0.913991 | 1 |



Source: Spot and Future Prices: NCDEX, Mandi Prices: Agmarknet

- 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 2022 to 31 March 2023**)

| | Futures Price | | Spot Price | |
|------------|---------------|----------|------------|----------|
| Volatility | Month | Value | Month | Value |
| Max | Jan | 0.028932 | Jan | 0.027604 |
| Min | Jun | 0.008238 | Oct | 0.004647 |

- 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 | 12 |
| backwardation | 0 |

4. Other Parameters

a. Qualitative and quantitative measure for Hedge effectiveness ratio and basis Risk (Volatility of Basis) along with disclosure of methodology adopted for such calculations

| | |
|-------------------------|-------------|
| Basis Volatility | 27.63538189 |
| Hedge Efficiency | 78.93% |

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 centres (information to be provided state-wise and UT-wise).

| State | Major Physical Markets | Availability of NCDEX Delivery center |
|-----------|------------------------|---------------------------------------|
| Gujarat | Unjha | Basis |
| | Rajkot | |
| | Radhanpur | |
| | Tharad | |
| | Jamjodhpur | |
| | Morbi | |
| Rajasthan | Jodhpur | ADC |
| | Merta City (Nagaur) | |
| | Nagaur | |
| | AnandpurKalu | |

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)

| Month | GUJARAT (in MT) | RAJASTHAN (in MT) |
|--------|-----------------|-------------------|
| Apr-22 | 9,131 | 8,192 |
| May-22 | 12,272 | 7,986 |
| Jun-22 | 13,916 | 6,987 |
| Jul-22 | 9,103 | 7,604 |
| Aug-22 | 6,551 | 7,451 |
| Sep-22 | 6,140 | 6,724 |
| Oct-22 | 5,256 | 6,577 |
| Nov-22 | 5,059 | 5,499 |
| Dec-22 | 4,884 | 6,217 |
| Jan-23 | 5,094 | 3,807 |
| Feb-23 | 5,582 | 3,515 |
| Mar-23 | 6,831 | 3,059 |

"Note - The OI for CP (Custodian Participant) 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 program, Stakeholder engagement program exchange has conducted for FY 2022-23.

| Sr. No. | Program Type | Location | Participants |
|----------------|----------------------------|-----------------------------------|---------------------|
| 1 | Investor Awareness Program | Bhiloda | 51 |
| 2 | Investor Awareness Program | Dhangadhra, Surendranagar Gujarat | 60 |
| 3 | Investor Awareness Program | Radhanpur, Gujarat | 52 |
| 4 | Investor Awareness Program | Motipur, Himmatnagar Gujarat | 30 |
| 5 | Investor Awareness Program | Motipur, Himmatnagar Gujarat | 26 |
| 6 | Investor Awareness Program | Unjha | 15 |
| 7 | Investor Awareness Program | Dantiwara, Rajasthan | 85 |
| 8 | Investor Awareness Program | Pali, Rajasthan | 58 |
| 9 | Investor Awareness Program | Unjha, Gujarat | 33 |
| 10 | Investor Awareness Program | Ahmedabad, Gujarat | 32 |
| 11 | Investor Awareness Program | Rajkot, Gujarat | 55 |
| 12 | Investor Awareness Program | Unjha | 60 |
| 13 | Investor Awareness Program | Ambaji, Gujarat | 50 |
| 14 | Investor Awareness Program | Patan, Gujarat | 35 |
| 15 | Investor Awareness Program | Patan, Gujarat | 40 |
| 16 | Investor Awareness Program | Botad, Gujarat | 40 |
| 17 | Investor Awareness Program | Bhuj, Gujarat | 49 |
| 18 | Investor Awareness Program | Bhiloda, Khalwad | 100 |
| 19 | Investor Awareness Program | Shamla Ji, Village- Abhapur | 100 |
| 20 | Investor Awareness Program | Gandhinagar | 50 |
| 21 | Investor Awareness Program | Sami, Patan | 29 |
| 22 | Investor Awareness Program | Dasada, Surendranagar | 50 |
| 23 | Investor Awareness Program | Vadodara | 50 |
| 24 | Investor Awareness Program | Surendranagar | 49 |
| 25 | Investor Awareness Program | Ahmedabad | 15 |
| 26 | Investor Awareness Program | Kolkata | 35 |
| 27 | Investor Awareness Program | Surat | 18 |

| | | | |
|----|----------------------------|-------------------------|-----|
| 28 | Investor Awareness Program | Guna, Madhya Pradesh | 30 |
| 29 | Investor Awareness Program | Anjar, Lutch, Gujarat | 38 |
| 30 | Investor Awareness Program | Raipur, Chhattisgarh | 112 |
| 31 | Investor Awareness Program | Patan, Gujarat | 104 |
| 32 | Investor Awareness Program | Nashik | 200 |
| 33 | Investor Awareness Program | Udaipur | 150 |
| 34 | Investor Awareness Program | Rajkot | 100 |
| 35 | Investor Awareness Program | Hissar | 100 |
| 36 | Investor Awareness Program | Nagpur, Maharashtra | 120 |
| 37 | Investor Awareness Program | Raipur | 100 |
| 38 | Investor Awareness Program | Gwalior, Madhya Pradesh | 78 |
| 39 | Investor Awareness Program | Bhopal , MP | 54 |
| 40 | Investor Awareness Program | Indore, Madhya Pradesh | 47 |
| 41 | Investor Awareness Program | Siliguri, West Bengal | 39 |
| 42 | Investor Awareness Program | Alipurduar, West Bengal | 31 |
| 43 | Investor Awareness Program | Meerut, Uttar Pradesh | 30 |
| 44 | Investor Awareness Program | Bhopal, Madhya Pradesh | 44 |
| 45 | Investor Awareness Program | Indore, Madhya Pradesh | 80 |
| 46 | Investor Awareness Program | Chennai, Tamil Nadu | 24 |
| 47 | Investor Awareness Program | Kanpur, Uttar Pradesh | 60 |
| 48 | Investor Awareness Program | Chindwara, MP | 50 |
| 49 | Investor Awareness Program | Seoni , MP | 40 |
| 50 | Investor Awareness Program | Kolkata | 25 |
| 51 | Investor Awareness Program | Raipur, Chattisgarh | 136 |
| 52 | Investor Awareness Program | Lucknow | 177 |
| 53 | Investor Awareness Program | Rourkela | 65 |
| 54 | Investor Awareness Program | Muzaffarnagar | 70 |
| 55 | Investor Awareness Program | Kochi | 86 |
| 56 | Investor Awareness Program | Bhilai | 70 |
| 57 | Investor Awareness Program | Thalamadla | 80 |
| 58 | Investor Awareness Program | Kolkata | 45 |
| 59 | Investor Awareness Program | Online | 30 |
| 60 | Investor Awareness Program | Online | 18 |
| 61 | Investor Awareness Program | Online | 23 |

| | | | |
|-----|----------------------------|----------------|----|
| 62 | Investor Awareness Program | Odisha | 9 |
| 63 | Investor Awareness Program | Odisha | 15 |
| 64 | Investor Awareness Program | Karnataka | 5 |
| 65 | Investor Awareness Program | Bihar | 18 |
| 66 | Investor Awareness Program | West Bengal | 6 |
| 67 | Investor Awareness Program | Andhra Pradesh | 29 |
| 68 | Investor Awareness Program | Online | 11 |
| 69 | Investor Awareness Program | Online | 7 |
| 70 | Investor Awareness Program | Online | 21 |
| 71 | Investor Awareness Program | Online | 6 |
| 72 | Investor Awareness Program | Online | 9 |
| 73 | Investor Awareness Program | Online | 14 |
| 74 | Investor Awareness Program | Online | 82 |
| 75 | Investor Awareness Program | Online | 28 |
| 76 | Investor Awareness Program | Online | 25 |
| 77 | Investor Awareness Program | Online | 50 |
| 78 | Investor Awareness Program | Online | 30 |
| 79 | Investor Awareness Program | Online | 25 |
| 80 | Investor Awareness Program | Online | 5 |
| 81 | Investor Awareness Program | Online | 10 |
| 82 | Investor Awareness Program | Online | 7 |
| 83 | Investor Awareness Program | Online | 13 |
| 84 | Investor Awareness Program | Online | 16 |
| 85 | Investor Awareness Program | Online | 23 |
| 86 | Investor Awareness Program | Online | 53 |
| 87 | Investor Awareness Program | Online | 17 |
| 88 | Investor Awareness Program | Online | 30 |
| 89 | Investor Awareness Program | Online | 15 |
| 90 | Investor Awareness Program | Online | 25 |
| 91 | Investor Awareness Program | Online | 35 |
| 92 | Investor Awareness Program | Online | 10 |
| 93 | Investor Awareness Program | Online | 30 |
| 94 | Investor Awareness Program | Online | 12 |
| 95 | Investor Awareness Program | Online | 6 |
| 96 | Investor Awareness Program | Online | 7 |
| 97 | Investor Awareness Program | Online | 20 |
| 98 | Investor Awareness Program | Online | 50 |
| 99 | Investor Awareness Program | Online | 30 |
| 100 | Investor Awareness Program | Online | 13 |
| 101 | Investor Awareness Program | Online | 10 |
| 102 | Investor Awareness Program | Online | 6 |
| 103 | Investor Awareness Program | Online | 6 |
| 104 | Investor Awareness Program | Online | 8 |

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|-----|----------------------------|--------|----|
| 105 | Investor Awareness Program | Online | 13 |
| 106 | Investor Awareness Program | Online | 6 |
| 107 | Investor Awareness Program | Online | 25 |
| 108 | Investor Awareness Program | Online | 8 |
| 109 | Investor Awareness Program | Online | 14 |
| 110 | Investor Awareness Program | Online | 11 |
| 111 | Investor Awareness Program | Online | 10 |
| 112 | Investor Awareness Program | Online | 6 |
| 113 | Investor Awareness Program | Online | 9 |
| 114 | Investor Awareness Program | Online | 14 |
| 115 | Investor Awareness Program | Online | 16 |
| 116 | Investor Awareness Program | Online | 11 |
| 117 | Investor Awareness Program | Online | 8 |
| 118 | Investor Awareness Program | Online | 8 |
| 119 | Investor Awareness Program | Online | 13 |
| 120 | Investor Awareness Program | Online | 15 |
| 121 | Investor Awareness Program | Online | 25 |
| 122 | Investor Awareness Program | Online | 25 |
| 123 | Investor Awareness Program | Online | 26 |
| 124 | Investor Awareness Program | Online | 18 |
| 125 | Investor Awareness Program | Online | 52 |
| 126 | Investor Awareness Program | Online | 16 |

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/ Stockiest
- 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.

NA

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 FY2022-23.

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:

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