Parameters for Performance Review of Commodity for the Financial Year 2019-20

Castorseed

1. **Background**

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

Castor (Ricinus communis Linn.) is an important non-edible oilseed crop grown almost entirely in the arid and semi-arid regions in the country. The crop, an important cash crop is grown for its beans from which oil is extracted.

India is the world's largest producer of castor seed. Brazil and China are the other major producers of castor beans and castor oil in the world.

The castor oil is mainly used in manufacture of paints, lubricants, soaps, hydraulic brake fluids, polymers, perfumery products, etc. There are several derivatives of castor oil, which are used in a variety of industries.

Value Chain for Castor seed

Supply chain is typically thought to be linear - a simple string of value chain actors that transform a raw material into a final product. For castor seed, this involves

1) Farmers

2) Oil Extractors

3) Derivatives Producer

4) Marketing Agencies

5) End Users of the products.

Varieties of Castor seed Produced in India

As per certain studies, the quality of Castor Seed produced is different in different states or regions.

Major Castor Seed varieties produced are as below:

Andhra Pradesh: Aruna, Bhagya, Saubhagya, dwarf mutant, Short Mutant

Karnataka: H.C 6, Rosy, GCH-4

Gujarat: GCH-3, GCH-2, J-44, GC-2

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

Global Castor seed Scenario		
In Lakh Tonnes	2018-19	2019-20
Opening Stock	NA	NA
Production	12.92	21.87
Imports	NA	NA
Exports	NA	NA
Consumption (Crush)	NA	NA
Closing Stocks	NA	NA
Source: Global castor conference 2020		

India Castor seed Scenario		
In Lakh tonnes	2018-19	2019-20
Opening Stocks	NA	NA
Production	10.82	19.52
Import	NA	NA
Total Supply	NA	NA
Exports	NA	NA
Domestic Consumption	NA	NA
Closing Stocks	NA	NA
Source: SEA		

Top 10 Major producing countries

Top 10 Major producing countries (in lakh Tonnes)		
Country	2018-19	2019-20
India	11.30	20.00
China	0.26	0.36
Brazil	0.20	0.31
Africa	0.19	0.20
Thailand	0.12	0.12
Others	0.85	0.88
Source: Global castor conference 2020		

Top 10 Major consuming countries

Not Available

Top 10 Major Exporting countries

Not Available

Top 10 Major Importing countries

Not Available

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Top 10 Major producing States In India

Major Producing States in India (In lakh tonnes)		
State	2018-19	2019-20
Gujarat	8.89	16.58
Rajasthan	1.47	2.37
Southern India	0.24	0.33
Others	0.22	0.24
Source: SEA		

c) Major changes in the polices governing trade in the spot markets of the commodity

Direct procurement by the government agencies and storage in warehouses change in tariff and base prices of externally traded goods has a direct impact on the soybean prices.

As Soybean oil is an edible oil it comes under list of essential commodities, hence it is governed by Central Government under the Essential Commodities Act.

d) Geopolitical issues in the commodity and its impact on Indian scenario

2. Trading related parameter

a) Monthly and Annual traded volume

Month	Traded Volume (In MT)
Apr-19	-
May-19	-
Jun-19	-
Jul-19	-
Aug-19	-
Sep-19	-
Oct-19	3,460
Nov-19	20,150
Dec-19	59,690
Jan-20	1,000
Feb-20	-
Mar-20	-
Total	**84,300**

b) Annual traded volume as proportion of total deliverable supply: 7.04%

- Annual Traded Volume = 84,300 MT
- Deliverable Supply = 11,98,000 MT

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c) Annual traded volume as proportion of total annual production: 7.04%

- Annual Traded Volume = 84,300 MT
- Annual Production 19-20 = 11,98,000 MT

d) Annual average Open interest as proportion of total production: Nil

- Annual Average OI = Nil
- Annual Production 19-20 = 11,98,000 MT

e) Annual average Open interest as proportion of total deliverable supply: Nil

- Annual Average OI = Nil
- Deliverable Supply = 11,98,000 MT

f) Monthly and Annual value of traded

Month	Value Of trade (in crores)
Apr-19	-
May-19	-
Jun-19	-
Jul-19	-
Aug-19	-
Sep-19	-
Oct-19	15.53
Nov-19	86.39
Dec-19	253.29
Jan-20	4.20
Feb-20	-
Mar-20	-
Total	**359.40**

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

- **Nil**

h) Monthly and Annual value of delivery

- **Nil**

i) Monthly and Annual Average Open Interest (OI)

- **Nil**

j) Annual average volume to open interest ratio: Nil

- Average of Traded Volume: 1,280 MT
- Average of Open Interest: Nil

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

- Unique Members = 4
- Unique Clients = 4

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

Not Available

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

Not Available

n) **Algorithmic trading as percentage of total trading**

Nil

o) **Delivery defaults**

Number of instances = Nil

Quantity involved = Nil

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).**

Not Available

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

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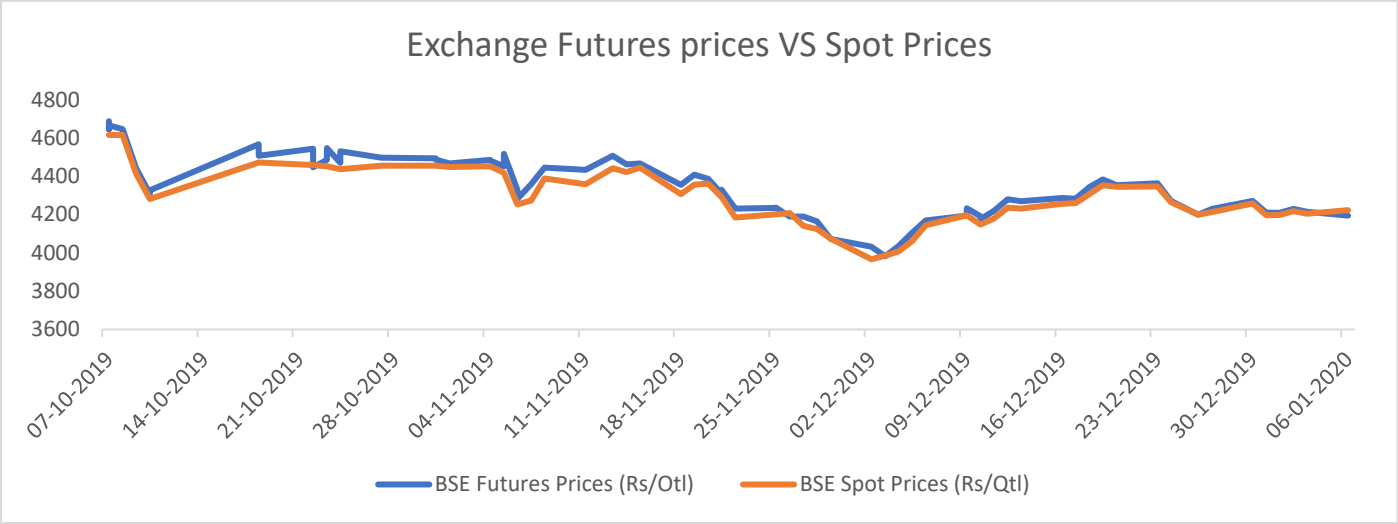
c) Correlation between exchange futures & domestic spot prices along with ratio of standard deviation.



The correlation between exchange futures and exchange Spot Prices is 0.9873.

The standard deviation of Exchange Futures prices was 1.53% for period October 7,2019 to January 6, 2020

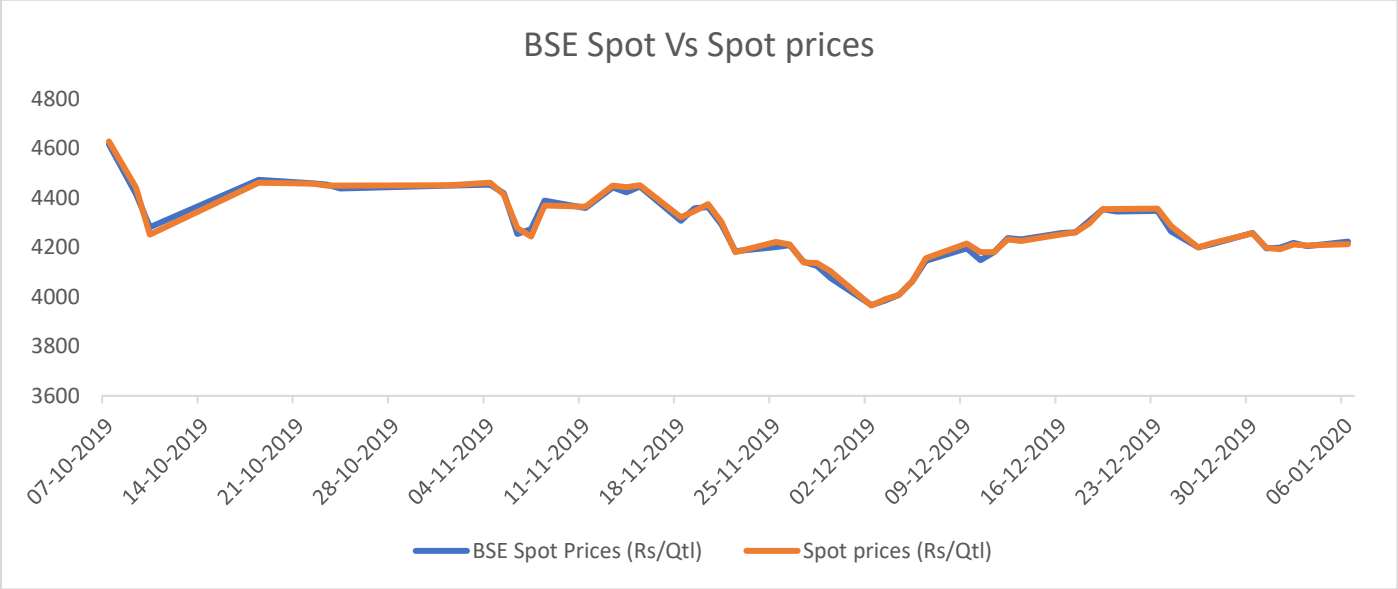
The standard deviation of Exchange Spot prices was 1.38% for period October 7,2019 to January 6, 2020

The ratio of Standard Deviation for the same period was 1.10

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



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f) Maximum & Minimum value of daily futures price volatility and spot price volatility along with disclosure of methodology adopted for computing the volatility

Commodity	Max of Daily Futures Price Volatility %	Min Daily Futures Price Volatility %	Max of Daily Spot Price Volatility %	Min Daily Spot Price Volatility %
Castor seed	5.59%	-4.39%	4.47%	-4.37%

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

BSE Castorseed futures contract was never in Backwardation or contango by more than 4% in the period under review

4. Other's 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

Hedge Effectiveness for FY 2019-20

Commodity	Hedge Efficiency
Castor seed	99.92%

Note: Hedging efficiency is the 'R Square' value of the regression equation between BSE futures prices and BSE polled spot prices during the financial year.

Basis Risk for FY 2019-20

Commodity	Unit	Average Return of Basis (Unit)	Standard deviation
Castor seed	Rs/Qtl	-0.28	6.94
Note: Period 7/10/2019 to 06/01/2020			

Note: Basis Risk is computed as the Standard deviation of daily normal return in Basis, which is excess of Spot over Futures price.

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)

Name of State	**Name of the physical markets**	**Market Reach of Exchange delivery Centers**
Gujarat	Patan ,Harij , Palanpur , Deesa ,Bhabhar , Thara, Kutch , Kadi , Mehsana , Sabarkatha ,Deesa, Visnagar , Vadodara ,Radhanpur Mandal	Patan-Basis Centre Deesa, Kadi -Additional Delivery Centre
Rajasthan	Barmer , Jalore , Jodhpur , Sirohi Sumerpur	No Delivery Centre
Andhra Pradesh	Gadwal , Kurnool Mahaboobnagar Wanaparthy	No Delivery Centre

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

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Details about physical markets are given above. Region-wise open interest is not available.

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

Sr. No.	Program Type	Location	Participants
1	Product Meeting for Castor	Ahmedabad	50

The contract was discontinued w.e.f Jan 6th 2020

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

Not Applicable

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