MCX
METAL & ENERGY
Trade with Trust



COTTON

PERFORMANCE REVIEW

2021-2022

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

Brief about Cotton

Cotton is a natural fiber and one of the most important textile fibers. Cotton is classified based on staple, grade and character of each bale-staple refers to the fibre length; grade ranges from coarse to premium and is a function of colour, brightness, and purity; and character refers to the fibre's strength and uniformity.

It is a heavily traded agricultural commodity with a number of countries involved in exporting or importing cotton. India is the largest cotton producing and 3rd largest exporting country in the world.

Sample picture



Life cycle

Cotton is grown in India in three zones with different sowing and harvesting periods during the season from October-September.

North Zone	Central Zone	South Zone
Punjab, Haryana, Rajasthar	Gujarat, Maharashtra, Madhya Pradesh	Telangana, Andhra Pradesh, Tamil Nadu, Karnataka
	Sowing	
April, May	June, July	July, August, September
	Harvesting	
September, October	October, November, December	December, January, February
	Staple length	
Medium & Short Staple	Medium & Long Staple	Long & Extra Long Staple

Cotton in India is generally not stored for more than a year. This stored Cotton can be prone to deterioration in grade, colour and quality. The extent of deterioration depends on the condition and period of storage, the variety of Cotton, the atmospheric conditions like humidity, rainfall, etc., prevailing during this period, ventilation and incidence of pests in the godowns, etc.

Various varieties/grade

The Cotton is classified in five different groups of staple lengths of fibers. India has the advantage of growing all species of cotton i.e. from short staple 20 mm & below, medium staple (20.5 to 24.5 mm), medium long (25.0 to 27.0 mm), long (27.5 to 32.0 mm) and extra-long staple cottons (32.5 mm and above).

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

Cotton fundamentals

- Demand and supply scenario and inventory levels
- Weather, pests, diseases and other risk factors associated with agricultural crops
- Government policies on Imports- Exports, Kapas MSP, Tariff & Non-tariff barriers including taxes, quota
- Cotton yarn prices in different markets across the country
- Economic conditions e.g. recession, inflation
- Trend in other fast-growing economies
- Geo-political factors – Global and India
- Prices ruling in the international markets
- Forex rates

Table - Balance Sheet

Global Scenario (‘000 MT)	2020-21	2021-22
Opening Stocks	21260	19176
Production	24272	25789
Consumption	26494	26768
Closing Stocks	19176	17978
All figures are in ‘000 MT. Source – USDA, May 12, 2022 Estimates		

Cotton Balance Sheet Indian Scenario (‘000 MT)	2020-21	2021-22
Opening Stocks	2125	1275
Production	6001	5501.71
Imports	170	255
Total Supply	8296	7031.71
Exports	1326	765
Domestic Consumption	5695	5440
Closing Stocks	1275	911.71
Source- Cotton Association of India Ltd., 30th April 2022 Estimates. Crop Season October-September		

Top 10 Major producing countries (‘000 MT)	2020-21	2021-22
India	6009	5552
China	6423	5879
USA	3181	3815
Brazil	2356	2874
Pakistan	980	1306
Australia	610	1197
Turkey	631	827
All figures are in ‘000 MT. Source – USDA, May 12, 2022 Estimates		

Top 10 Major consuming countries (‘000 MT)	2020-21	2021-22
China	8709	8382
India	5661	5661
Pakistan	2330	2395
Bangladesh	1851	1916
Turkey	1676	1872
Vietnam	1589	1611
Brazil	675	697
All figures are in ‘000 MT. Source – USDA, May 12, 2022 Estimates		

Top 10 Major exporting countries ('000 MT)	2020-21	2021-22
USA	3564	3211
Brazil	2398	1720
India	1348	1023
Australia	341	958
Benin	305	327
Greece	355	305
Mali	131	283
All figures are in '000 MT. Source – USDA, May 12, 2022 Estimates		

Top 10 Major importing countries ('000 MT)	2020-21	2021-22
China	2800	1916
Bangladesh	1905	1807
Vietnam	1592	1611
Pakistan	1159	1045
Turkey	1160	1208
Indonesia	502	555
India	184	261
All figures are in '000 MT. Source – USDA, May 12, 2021 Estimates		

Top 10 Major producing states in India ('000 MT)	2020-21	2021-22
Punjab	178.50	154.19
Haryana	382.50	273.70
Rajasthan	552.50	444.89
Gujarat	1555.50	1427.83
Maharashtra	1377.00	1359.32
Madhya Pradesh	314.50	323.00
Telangana	748.00	644.47
Andhra Pradesh	272.00	226.10

Karnataka	408.00	357.85
Tamil Nadu	127.50	204.00
Others	85.00	86.36
All India	6001.00	5501.71

Source -Cotton Association of India, 30th April, 2022 Estimates. Crop season October-September

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

The Government of India has decided to exempt all customs duty on import of cotton to lower the price of cotton in the public interest. This exemption would benefit the textile chain- yarn, fabric, garments and made ups and provide relief to textile industry and consumers. Industry has been demanding for removal of 5% Basic Customs Duty (BCD) and 5% Agriculture Infrastructure and Development Cess (AIDC) on raw cotton. The Central Board of Indirect Taxes and Customs (CBIC) notified the exemption from Customs duty and Agriculture Infrastructure development Cess for import of cotton. his notification shall come into effect from 14th April 2022 and will remain in force upto and inclusive of the 30th September 2022. Removal of import duty on raw cotton should have salutary effect on cotton price in India. Source: https://pib.gov.in/PressRelease.

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

There is no major geo-political issues and its impact on Indian scenario of Cotton.

2. Trading related parameter

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

Month	Traded Quantity (MT)
APR'21	2,00,358
MAY'21	1,68,321
JUN'21	1,65,997
JUL'21	1,48,006
AUG'21	92,127
SEP'21	60,248
OCT'21	1,91,021
NOV'21	2,17,464
DEC'21	2,28,850
JAN'22	3,31,764
FEB'22	2,30,065
MAR'22	2,31,438
2021-22	22,65,658

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

	Annual traded volume (MT)	Deliverable Supply (MT)
2021-22	22,65,658	7031710
Annual traded volume as proportion of deliverable supply	32.22%	

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

	Annual traded volume (MT)	Production (MT)
2021-22	22,65,658	5501710
Annual traded volume as proportion of production	41.18%	

d. Annual average Open interest as proportion of total production

	Annual average OI (MT)	Production (MT)
2021-22	27302	5501710
Annual average OI as proportion of production	0.50%	

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

	Annual average OI (MT)	Deliverable Supply (MT)
2021-22	27302	7031710
Annual average OI as proportion of production	0.39%	

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

Month	Volume (Rs.cr)
APR'21	2554.80
MAY'21	2213.04
JUN'21	2360.94
JUL'21	2264.08
AUG'21	1427.34
SEP'21	940.87
OCT'21	3434.24
NOV'21	4122.30
DEC'21	4331.58
JAN'22	7016.62
FEB'22	5077.28
MAR'22	5417.64
2021-22	41160.72

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

Month	Delivery (MT)
APR'21	3055.75
MAY'21	6081.75
JUN'21	2575.50
JUL'21	2919.75
AUG'21	2456.50
SEP'21	No contract
OCT'21	1432.25
NOV'21	4003.50
DEC'21	5312.50
JAN'22	6659.75
FEB'22	8933.50
MAR'22	6268.75
2021-22	**49699.50**

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

Month	Delivery Settled Amount
APR'21	38.93
MAY'21	81.34
JUN'21	36.89
JUL'21	46.65
AUG'21	38.71
SEP'21	No contract
OCT'21	26.69
NOV'21	74.79
DEC'21	103.72
JAN'22	142.47
FEB'22	192.83
MAR'22	156.15
2021-22	**939.16**

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

Month	Average OI (MT)
APR'21	38297.96
MAY'21	37887.94
JUN'21	32557.51
JUL'21	28787.57
AUG'21	15656.61
SEP'2	9259.78
OCT'21	20854.95
NOV'21	22613.09
DEC'21	25893.40
JAN'22	31727.53
FEB'22	33778.58
MAR'22	31855.41
2021-22	**27302.87**

j. Annual Average volume to open interest ratio

	Average traded volume (MT)	Average OI (MT)
2021-22	188805	27302
Annual average volume to open interest ratio	6.92	

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

Unique Members	Unique Client
184	4368

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

Average based weekly data						Maximum Open Interest	
Average of Open Interest	Unit	Average of FPOs/ Farmers/ VCPs/ Hedgers		Average of Long & Short % FPOs/ Farmers/ VCPs/ Hedgers		FPOs/ Farmers/ VCPs/ Hedgers	
		Long	Short	Long	Short	Long	Short
160589.09	BALES	74706.18	81696.04	45.99	50.89	153800	123850

Note: Details are provided based on daily disclosure on the Exchange website for the period April 2021 to March 2022 in line with SEBI circular no SEBI/HO/CDMRD/DNPMP/CIR/P/2019/08 Dated January 04, 2019 Based on the data provided by the members from time to time pertaining to Farmers/ FPOs, VCPs/ Hedgers .

m. Number of unique FPOs/farmers and VCPs/hedgers who traded in the financial year. Based on the classification provided by the members as on March 31, 2022 for clients traded during FY 2021-22.

Farmers/FPOs	Value Chain Participants (VCPs)/Hedgers
5	188

n. Algorithmic trading as percentage of total trading

2021-22	Algorithmic trading as % of total trading
Cotton	10.30%

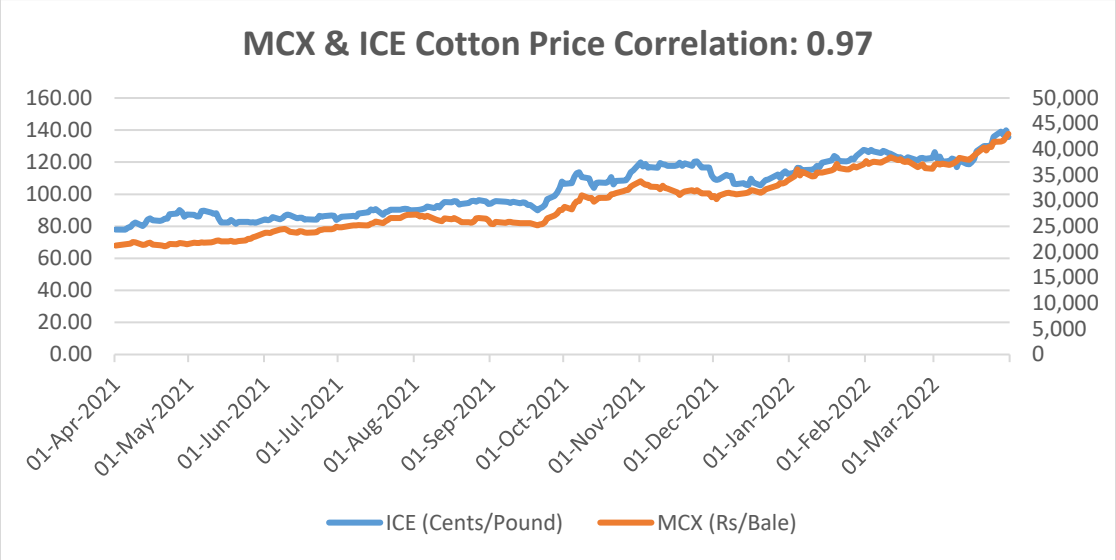
o. Delivery defaults

Number of instances	Quantity involved (MT)	Value involved (Rs. Crs)
3	1576.75	28.79

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).**

Comparison



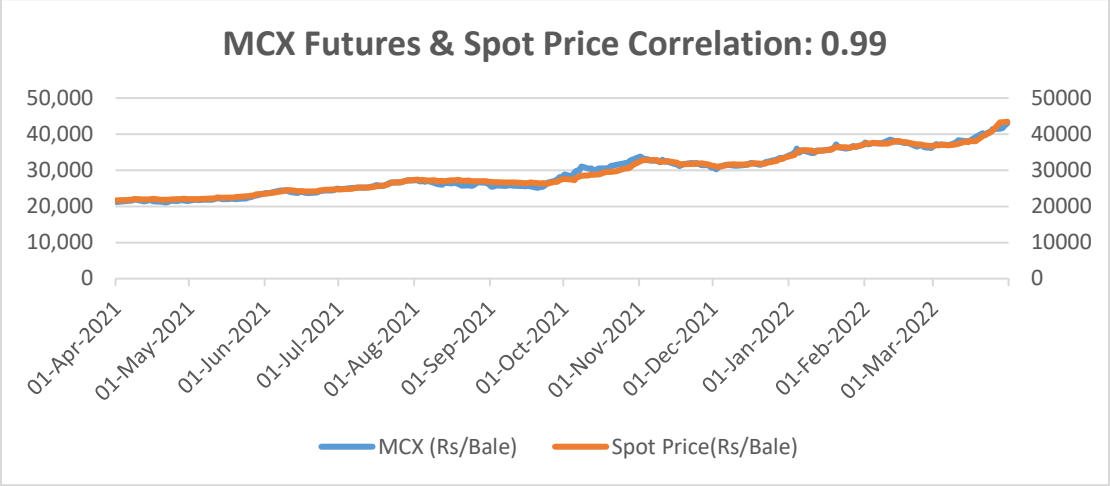
Correlation & Standard deviation of MCX & ICE futures price

Correlation between MCX Cotton futures prices and ICE futures prices in 2021-22	**0.97**
Standard Deviation of MCX Cotton futures prices in 2021-22	1.20
Standard Deviation of ICE Cotton futures prices in 2021-22	1.70
Ratio of Standard Deviation of MCX Cotton futures prices to ICE prices in 2021-22	0.71

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).**

The international spot prices (ICE) data for Cotton could not be obtained.

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

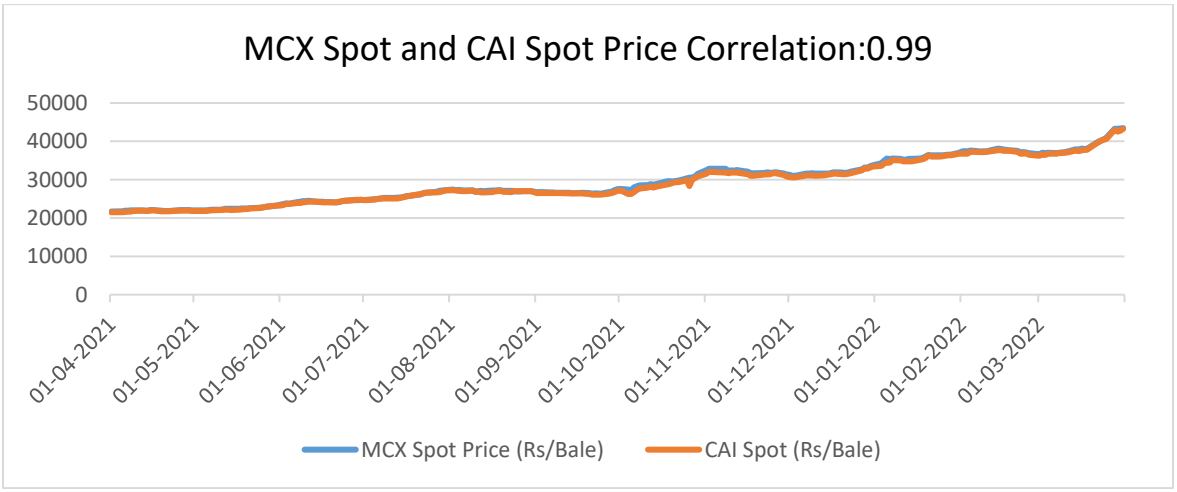


Correlation between MCX Cotton futures prices and spot prices in 2021-22	**0.99**
Standard deviation of MCX Cotton futures prices in 2021-22	1.20
Standard deviation of MCX Cotton spot prices in 2021-22	0.77
Ratio of Standard deviation of MCX Cotton futures prices to spot prices in 2021-22	1.56

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

The international spot prices (ICE) data for Cotton could not be obtained.

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.

	Maximum Daily Volatility	Minimum Daily Volatility
MCX Futures price	3.75%	0%
MCX Spot price	5.41%	0%

Methodology adopted for computing volatility -
Volatility in any particular trading day is calculated by the formula given below-
Volatility = LN (Price/Previous day's price)*100

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.

Nine (25) times the futures contract was in backwardation/contango by more than 4% for the near month contract in 2021-22.

4. **Others 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 Ratio for 2021-22	
Commodity	**Hedge Ratio**
Cotton	0.21
- Hedge ratio is the value of slope between returns of near-month futures and returns of MCX spot during the financial year.	

Basis Risk for 2021-22			
Commodity	**Unit of Basis**	**Avg Return of Basis**	**Basis Risk**
Cotton	Rs/bale	-0.16	5.20
- Basis Risk is computed as the Standard deviation of daily normal return in Basis, which is excess of Spot over Futures price.			
- In case Basis is zero for any day , next day's Basis return has been ignored for computing the standard deviation.			

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)

Name of State	Name of the physical markets	Market Reach of Exchange delivery centers
Gujarat	Keshod, Bardoli, Jetpur Pavi, Gondal, Balasienor, Rajkot, Babra, Amreli, Sabarkantha, Visnagar, Vijapur, Halvad, Unai, Manavadar, Bevla, Mansa, Mandvi, Kutch.	Rajkot, Kadi, Mundra
Maharashtra	Nagpur, Narkhed, Nanded, Yavatmal, Hinganghat, Wardha, Pulgaon,Akola, Amaravati, Murtizapur, Aurangabad, Jalna, Sillod, Dhule, Jalgaon	Yavatmal, Jalna
Punjab	Bhatinda, Ferojpur, Sangur, Muktsar, Faridkot, Mansa	No delivery centre
Haryana	Hisar, Fatehabad, Sirsa, Bhiwani, Rohtak, Panipat, Jind, Kaithal, Gurgoan	No delivery centre
Karnataka	Bailhogal, Bellary, Bijapur, Gadaj, Haliyal, Hubli, Kottur, Jamkhand, Raichur, Ranebennur, Savadatti, Shimoga, Yellapur	No delivery centre
Madhya Pradesh	Badwani, Betul, Chindwara, Dhar, Dewas, Harda, Jhabua, Khandwa, Khargone, Ratlam, Shajapur	No delivery centre
Telangana	Adilabad, Warangal, Nirmal,	Adilabad,Warangal
Andhra Pradesh	Guntur, Khammam	No delivery centre
Rajasthan	Hanumangarh, Pili Banga, Sriganga– nagar, Palampur, Sangriya,Suratgarh, Sri Vijayanagar, Shadulshakar, Rawatsar, Kherthal,Bijaynagar, Rajsighnagar.	No delivery centre
Tamil Nadu	Cuddallore, Villupuram, Vellore, Thiruvannamalai, Salem,Dharamapuri, Coimbatore, Erode, Tiruchilapalli, Thanjavur, Pudukottai, Dindigul, Madurai, Theni, Virudhanagar, Tirunelveli	No delivery centre
Orissa	Ganjam, Roygoda, Karaput, Kalahandi, Navaranpur, Bolangir, Dhenkenal,	No delivery centre

Source: Trade estimate.

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

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.

Overall, the PMT – Agri team conducted 111 programs in the Agri segment and the target participants were primarily the physical participants, especially, the Farmers and Farmer Producing Organisations (FPOs) associated with the commodities listed on the MCX platform.

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

The exchange strives to ensure that the contract remains a healthy replica of the physical market. We do one-on-one meetings and Product Advisory Committee (PAC) meetings with the physical market participants to make modifications in the contract to make it more lucrative for physical participants to participate in the contract.

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

No other information to be disclosed.

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