ANNUAL PERFORMANCE REVIEW – COTTON J34

2021-2022

BSE - INTERNAL

1. Background

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

Cotton is a natural, soft fiber that grows with the seeds of the cotton plant. (Fiber is long and thin, like hair.) After, the cotton fiber is gathered from the plant, it can be spun into cotton thread. The cotton thread can then be made into cloth. The cloth can be used to make clothes for people and many other things. There are different types of cotton plants. Some cotton plants grow wild in tropical and subtropical areas of the world. This is how cotton was discovered many years ago. Most of the cotton gathered to make cloth comes from crops grown on cotton plantations. Cotton is farmed in Africa, Asia, Europe, Australia, and the Americas.

Growth Stages of Cotton

The developmental phases for cotton can be divided into five main growth stages:

(1) Germination and emergence

(2) Seedling establishment

(3) Leaf area and canopy development

(4) Flowering and boll development

(5) Maturation

Growth Stage	Days	Heat Units – DD60s
Planting to Emergence	4 to 9	50 to 60
Emergence to First Square	27 to 38	425 to 475
Square to Flower	20 to 25	300 to 350
Planting to First Flower	60 to 70	775 to 850
Flower to Open Boll	45 to 65	850 to 950
Planting to Harvest Ready	130 to 160	2200 to 2600
Source: Cotton.org		

Value Chain for Cotton

Cotton is also one of the most important commercial crops cultivated in India. In the raw material consumption basket of the Indian textile industry, the proportion of cotton is around 59%. It plays a major role in sustaining the livelihood of an estimated 5.8 million cotton farmers and 40-50 million people engaged in related activity such as cotton processing & trade. The textile industry contributes significantly to the economy in terms of industrial output, employment generation and the export earnings of the country. It contributes about 4% to GDP, 14% to the industrial production and 17% to the country's export earnings. The Indian textile industry provides direct employment to over 35 million people. The textile sector is the second largest provider of employment after agriculture. India is one of the few countries in the world to have a well-established, complete value chain in the textile industry.

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 cotton, this involves

- Picking the cotton ball – which is Kapas
- Separating the lint from stems and other materials (ginning)
- Spinning the lint into yarn
- Knitting or weaving the yarn into fabric
- Converting the fabric into a final product
- Distributing and selling the product, and finally using the product. These activities occur within a global marketplace—an extensive physical infrastructure that connects buyers and sellers worldwide, all supported by an international financial market. Considering such a large value chain, there is possibility of high number of participants interested in derivatives trading of cotton.

BSE - INTERNAL

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

Global Cotton Scenario		
1000 MT (Season Beginning August 1)	**2020-21**	**2021-22**
Production	24,272	25,789
Imports	10,686	9,899
Exports	10,563	9,916
Consumption	26,494	26,768
Closing Stocks	19,176	18,212
Source: United States Department of Agriculture. May reports are considered for the years 2020-21 & 2021-22		

India Cotton Scenario		
In lakh bales of 170 kgs	**2020-21 (P)**	**2021-22 (P)**
Opening Stocks	120.79	71.84
Production	352.48	340.62
Import	11.03	18
Total Supply	363.5	358.6
Exports	77.59	40
Domestic Consumption	334.87	345
Closing Stocks	71.84	45.46
Source: Cotton Corporation of India		

BSE - INTERNAL

Top 10 Major producing countries

Top 10 Major producing countries (in 1000 MT)			
Country	**2020-21**	**Country**	**2021-22**
China	6,423	China	5,879
India	6,205	India	5,552
Uruguay	3,181	United States	3,815
Brazil	2,504	Brazil	2,874
Pakistan	980	Pakistan	1,306
Venezuela	762	Australia	1,197
Turkmenistan	631	Turkey	827
Australia	544	Uzbekistan	599
Greece	305	Argentina	327
Benin	294	Benin	327
Source: United States Department of Agriculture			

Top Major Consuming Countries

Top 10 Major Consuming countries (in 1000 MT)			
Country	**2020-21**	**Country**	**2021-22**
China	8,655	China	8,382
India	5,117	India	5,661
Pakistan	2,243	Pakistan	2,395
Bangladesh	1,698	Bangladesh	1,916
Turkmenistan	1,633	Turkey	1,872
Yemen	1,568	Vietnam	1,611
Venezuela	686	Brazil	697
Brazil	653	Uzbekistan	610
Indonesia	523	Indonesia	555
Uruguay	501	United States	555
Source: United States Department of Agriculture			

BSE - INTERNAL

Top 10 Major Exporting countries

Top 10 Major Exporting countries (in 1000 MT)			
Country	**2020-21**	**Country**	**2021-22**
United States	3,538	United States	3,211
Brazil	2,330	Brazil	1,720
India	1,197	India	1,023
Australia	305	Australia	958
Greece	294	Benin	327
Benin	283	Greece	305
Cote d'Ivoire	239	Cote d'Ivoire	299
Burkina Faso	180	Mali	283
Argentina	131	Burkina Faso	196
Mali	131	Argentina	158
Source: United States Department of Agriculture			

Top 10 Major Importing countries

Top 10 Major Importing countries (in 1000 MT)			
Country	**2020-21**	**Country**	**2021-22**
China	2,613	China	1,916
Bangladesh	1,633	Bangladesh	1,807
Yemen	1,568	Vietnam	1,611
Pakistan	1,154	Turkey	1,208
Turkmenistan	1,045	Pakistan	1,045
Indonesia	490	Indonesia	555
Mexico	185	India	261
India	174	Mexico	229
Malaysia	152	Thailand	158
Egypt	131	Egypt	131
Source: United States Department of Agriculture			

BSE - INTERNAL

Top 10 Major producing States in India

Top 10 Major producing states in India (in lakh bales of 170 kg)			
State	**2020-21***	**State**	**2021-22***
Maharashtra	101.05	Gujarat	85.16
Gujarat	72.18	Maharashtra	75.28
Telangana	57.97	Telangana	65.87
Rajasthan	32.07	Rajasthan	24.36
Karnataka	23.2	Haryana	18.94
Haryana	18.23	Karnataka	18.33
Andhra Pradesh	16	Andhra Pradesh	16.24
Madhya Pradesh	13.38	Madhya Pradesh	14.92
Punjab	10.23	Punjab	11.66
Orissa	5.51	Orissa	6.59
Source : Cotton Corporation of India **** = provisional***			

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

- There were no changes in policies related to cotton for the period FY 2021-22

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

Factors which affected Cotton prices in FY 2021-22

- Conflict Between Russia and Ukraine: - Russia and Ukraine cotton product imports are expected to fall, potentially lowering product exports and therefore consumption for major suppliers including Bangladesh, China, and Turkey
- Low imports by China as massive earlier imports that remained in bonded warehouses
- Lower than expected consumption in China
- Rising cost of production of yarn due to rise in crude prices

BSE - INTERNAL

2. TRADING RELATED PARAMETER

a) Monthly and Annual traded volume

Month	Traded Volume (in Bales)
Apr-21	-
May-21	-
Jun-21	6,900
Jul-21	10,575
Aug-21	20,325
Sep-21	24,475
Oct-21	32,575
Nov-21	54,575
Dec-21	51,000
Jan-22	31,975
Feb-22	23,725
Mar-22	41,825
Total	**2,97,950**

b) Annual traded volume as proportion of total deliverable supply: 0.83%

- Annual Traded Volume (Bales): 2,97,950
- Deliverable Supply (Bales): 3,58,62,000

c) Annual traded volume as proportion of total annual production: 0.87%

- Annual Traded Volume (Bales): 2,97,950
- Annual Production (Bales): 3,40,62,000

d) Annual average Open interest as proportion of total production: 0.0009%

- Annual Average OI (Bales): 300
- Annual Production (Bales): 3,40,62,000

e) Annual average Open interest as proportion of total deliverable supply: 0.00084%

- Annual Average OI (Bales): 300
- Deliverable Supply (Bales): 3,58,62,000

BSE - INTERNAL

f) Monthly and Annual value of trade

Month	Value of Trade (In Crores)
Apr-21	-
May-21	-
Jun-21	15.27
Jul-21	24.99
Aug-21	49.94
Sep-21	59.75
Oct-21	94.64
Nov-21	170.11
Dec-21	154.98
Jan-22	110.21
Feb-22	87.37
Mar-22	-
Total	**930.54**

g) Monthly and Annual quantity of delivery

Month	Quantity of delivery (Bales)
Apr-21	-
May-21	-
Jun-21	-
Jul-21	-
Aug-21	-
Sep-21	-
Oct-21	-
Nov-21	-
Dec-21	-
Jan-22	-
Feb-22	25
Mar-22	150
Total	**175**

BSE - INTERNAL

h) Monthly and Annual value of delivery

Month	Value of delivery (in Rs)
Apr-21	-
May-21	-
Jun-21	-
Jul-21	-
Aug-21	-
Sep-21	-
Oct-21	-
Nov-21	-
Dec-21	-
Jan-22	-
Feb-22	9,15,750
Mar-22	62,29,500
Total	**71,45,250**

i) Monthly and Annual Average Open Interest (OI)

Month	Average OI (In bales)
Apr-21	-
May-21	-
Jun-21	-
Jul-21	25
Aug-21	575
Sep-21	800
Oct-21	600
Nov-21	325
Dec-21	600
Jan-22	-
Feb-22	50
Mar-22	125
Total	-

Annual Average OI = 300

BSE - INTERNAL

j) Annual average volume to open interest ratio: 466.67

- Average of Traded Volume = 1,400 bales
- Average of Open Interest = 300 bales

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

- Unique members = 10
- Unique clients = 16

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

- 18.05

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)

- The correlation between Exchange futures and International futures Prices was 0.9621
- The ratio of Standard Deviation was 0.82

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 correlation between Exchange futures and International Spot Prices was 0.9675
- The ratio of Standard Deviation was 0.83

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

- The correlation between Exchange futures and Exchange Spot Prices was 0.9926
- The ratio of Standard Deviation was 1.22

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

- The correlation between international futures and International Spot Prices was 0.9925
- The ratio of Standard Deviation was 1.01

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.

Commodity	Max Daily Futures Price Volatility %	Min Daily Futures Price Volatility %	Max of Daily Spot Price Volatility %	Min of Daily Spot Price Volatility %
Cotton	4.69%	-3.19%	6.65%	-3.01%

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

Instances of Contango – 11

Instances of Backwardation - 36

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 21-22**

Commodity	Hedge Efficiency
Cotton J34	98.53%

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 2021-22**

Commodity	Unit	Average Return of Basis (Unit)	Standard deviation
Cotton J34	Rs/bales	-0.16	3.28

- ***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 centres
Rajasthan	Hanumangarh, Pili Banga, Sriganga– nagar, Palampur, Sangriya,Suratgarh, Sri Vijayanagar, Shadulshakar, Rawatsar, Kherthal,Bijaynagar & Rajsighnagar	Hanumangarh - Main Delivery Centre
Punjab	Bhatinda, Ferojpur, Sangur, Muktsar, Faridkot, Mansa, & Abohar	Bhatinda - Additional Delivery Centre
		Abohar - Additional Delivery Centre
Haryana	Hisar, Fatehabad, Sirsa, Bhiwani, Rohtak, Panipat, Jind, Kaithal & Gurgoan	Sirsa - Additional Delivery Centre
Madhya Pradesh	Badwani, Betul, Chindwara, Dhar, Dewas, Harda, Jhabua, Khandwa, Khargone, Ratlam & Shajapur	No delivery centre
Tamil Nadu	Cuddallore, Villupuram, Vellore, Thiruvannamalai, Salem & Dharamapuri,	No delivery centre
	Coimbatore, Erode, Tiruchilapalli & Thanjavur,	

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

BSE - INTERNAL

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

Sr. No.	Program Type	Location	Participants
1	Dattprayag Agro Producer Company Limited	Webinar	80
2	Marathwada Agro (India) Producer Company Limited	Webinar	82
3	Parivartan Farmer Producer Company Limited	Webinar	123
4	Wani Farmer Producer Company Limited	Webinar	82
5	Padali Kisan Agro Producer Company Limited	Webinar	90
6	Krushiraj Agro Producer Company Limited	Webinar	109
7	Poul Agro Producer Company Limited	Webinar	83
8	Ambar G5 Farmer Producer Company Limited	Webinar	84
9	T. N. Patil Agro Producer Company Limited	Webinar	71
10	Navi Udan Mahila Shetkari Utpadak Company	Webinar	80
11	Rani Hirai Shetkari Utpadak Company	Webinar	106
12	Dharasatva Farmer Producer Company Limited	Webinar	243
13	P3 Agro Solutions Farmer Producer Company Limited	Webinar	134
14	Deepankur Agro Producer Company Limited	Webinar	128
15	Navi Umed Shetkari Utpadak Company	Webinar	108
16	Krushikonntti Mahila Shetkari Utpadak Company	Webinar	67
17	Shashwat Mahila Shetkari Utpadak Company	Webinar	81
18	Prachiti Producer Company Limited	Webinar	94
19	Umed Khava Utpadak Producer Company Limited	Webinar	86
20	Agritouch Farmer Producer Company Limited	Webinar	156
21	Swapnapurti Producer Company	Webinar	126
22	Kalamb Mahila Shetkari Utpadak Company	Webinar	69
23	Krushi Upaj Mahila Shetkari Utpadak Company	Webinar	95
24	Jivanonnti Producer Company	Webinar	84
25	Ghatanji Mahila Shetkari Utpadak Company	Webinar	97
26	Navinya Producer Company	Webinar	78
27	Suryawan Livestock Producer Company Limited	Webinar	77
28	Agro Unnati Farmer Producer Company Limited	Webinar	98
29	Tulja Farmer Producer Company Limited	Webinar	99
30	Nagad Narayan Shetkari Utpadak Company Limited	Webinar	95
31	Navchaitnya Farmer Producer Company Limited	Webinar	91
32	Fresh Field Agro Cultivator Famrer Producer Company Limited swapnapurti Producer Company	Webinar	71
33	Ovi Innovation Farmer Producer Company Limited	Webinar	92
34	Vidul Farmer Producer Company Limited	Webinar	76
35	Late Sambhaji Chindu Patil Farmer Company Limited	Webinar	89
36	Procorn Agro Producer Co. Ltd	Webinar	58
37	Nicity Agro Farmers Producer Company Limited	Webinar	97
38	Krushidhan Agro Producer Company Limited	Webinar	78
39	Rainfed Farmer Producer Company Limited	Webinar	79
40	Janrajya Agro Producer Company Limited	Webinar	76
41	Wakodi Farmer Producer Company Limited	Webinar	79
42	Navrachana Agrotech Producer Company Limited	Webinar	72

BSE - INTERNAL

43	Kisan Sabha Farmer Producer Company Limited	Webinar	73
44	Vanrai Organic Farmer Producer Company Limited	Webinar	81
45	Sonpoul Agro Producer Company Limited	Webinar	53
46	Krushival Farmer Producer Company Limited	Webinar	69
47	Nandori Farmer Producer Company Limited	Webinar	100
48	Kayda Kisan Samrudhi Producer Company Limited	Webinar	68
49	Bhiru Kheda Kisan Samrudhi Producer Company Limited	Webinar	44
50	Kisan Samardeep Producer Company Limited	Webinar	86
51	Rain Kisan Samrudhi Producer Company Limited	Webinar	89
52	Swabhiman Kisan Wheat Samrudhi Producer Company Limited	Webinar	81
53	Anokha Santra Producer Company Limited	Webinar	56
54	Bhatner Wids Potato Producer Company Limited	Webinar	105
55	Charbhuja Producer Company Limited	Webinar	137
56	Chunav Bhahishkar Kisan Group	Webinar	78
57	New Bhadra Agro Producer Company Limited	Webinar	87
58	Mahi Kisan Producer Company Limited	Webinar	84
59	Sarv Kisan Agro Producer Company Limited	Webinar	116
60	Jogdiya Mata Krushak Utpadak Samiti	Webinar	63
61	Planet Earth Agro Farmer Producer Company Limited	Webinar	78
62	Spectra Adarsha Mahila Utpadak Company	Webinar	55
63	Khadeshwar Farmer Producer Company Limited	Webinar	85
64	Kushavart Farmer Producer Company Limited	Webinar	56
65	Burhanpur Farmer Producer Company Limited	Webinar	64
66	Bijasani Farmer Producer Company Limited	Webinar	76
67	Nature Of Earth Farmer Producer Company Limited	Webinar	52
68	Nimad Farmer Producer Company Limited	Webinar	76
69	Jay Shri Bhilatdev Farmer Producer Company Limited	Webinar	63
70	Nirgunji Maharaj Farmer Producer Company Limited	Webinar	56
71	Shramik Krushidhan Shetkari Producer Company Limited	Webinar	114
72	Vidarbha & Marathwada Farmer Producer Company Limited	Webinar	72
73	Shivshivar Shetkari Producer Company Limited	Webinar	86
74	Kashtalu Shetkari Utpadak Company Limited	Webinar	74
75	Harbysun Farmer Producer Company Limited	Webinar	70
76	Shiv Govind Agro Producer Company Limited	Webinar	60
77	Jijau Farmtech Producer Company Limited	Webinar	80
78	Maha Vidarbha Agro Producer Company Limited	Webinar	58
79	Jay Bhadra Farmatech Producer Company Limited	Webinar	57
80	Perfect Harvest Farmer Producer Co. Ltd	Webinar	88
81	Joyous Farmer Producer Company Limited	Webinar	93
82	Agrripath Farmer Producer Company Limited	Webinar	85
83	Sant Muktai Farmer Producer Company Limited	Webinar	89
84	Trimurti Farmer Producer Company Limited	Webinar	114
85	Umarkhed Taluka Aditya Farmer Producer Company Limited	Webinar	65
86	Chandagadh Farmer Producer Company Limited	Webinar	120
87	Veedarbha Samrudhi Krushi Farmer Producer Company Limited	Webinar	101
88	Shri Krushna Farmer Producer Company Limited	Webinar	74
89	Janrajya Agro Farmer Producer Company Limited	Webinar	61
90	Rajgarth Vegatable Producer Company Limited	Webinar	86

BSE - INTERNAL

91	Unattasheel Vegatable Producer	Webinar	119
92	Navrachana Agrotech Producer	Webinar	85
93	Teja Kisan Producer Company Limited	Webinar	67
94	Balaji Cotton Factory	Hanumangarh	Traders Meet
95	J R Cotton Industries	Hanumangarh	Traders Meet
96	Hisariya Industries	Hanumangarh	Traders Meet
97	D M Cotton Industries	Hanumangarh	Traders Meet
98	S L Industries	Hanumangarh	Traders Meet
99	Shree Cb Goyal Cotton Industries, Prem Cotton	Hanumangarh	Traders Meet
100	Vijay Cotton Industries	Hanumangarh	Traders Meet
101	Shiv Trading Company	Hanumangarh	Traders Meet
102	B M Agro Industries	Abohar	Traders Meet
103	Prem Cotton	Abohar	Traders Meet
104	Gherulal Bachand	Abohar	Traders Meet
105	Nandlal Purushottam Das	Abohar	Traders Meet
106	Bansal Industries	Abohar	Traders Meet
107	Bansal Agro Industries	Abohar	Traders Meet
108	Gcl Securities	Abohar	Traders Meet
109	Ganpati Securities	Shriganganagar	Traders Meet
110	Lekhraj Ashok Kumar	Shriganganagar	Traders Meet
111	Chittlangia Cotton Factory	Padampur	Traders Meet
112	Mahipal Foods	Shriganganagar	Traders Meet
113	Dhajaram Jaidev	Shriganganagar	Traders Meet
114	Chogmal Nagarmal	Shriganganagar	Traders Meet
115	Pawan Kumar Prem Kumar	Shriganganagar	Traders Meet

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

Exchange conducted 120 webinars for Commodity derivates Segment. The discussion for awareness program included the following:

- About BSE's trading platform for Commodity Derivatives Segment, commodities available for trading on Exchange platform, Hedging Opportunities.
- Benefits of trading in commodities and price risk mechanism.
- Newly launched Commodities.

Exchange organized 100 webinars in association with Investor Protection Fund and Cotton Guru for FPO's and farmers. All these webinars are also available on YouTube channel for the benefit of all. The webinars were arranged to create awareness amongst the FPO's and Farmers producing Cotton on how to utilize Exchange's platform to mitigate their price risk, better price discovery and to avail benefit of delivery in the Exchange platform`

BSE - INTERNAL