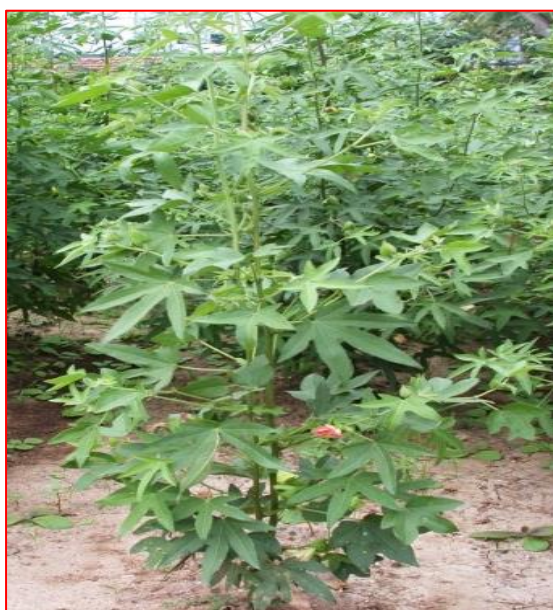


**NODAL CROP COTTON AND ITS DEVELOPMENT PROGRAMME.**

As on today, 50 species of cotton have been identified in the World, out of which four species are commercially grown by more than 80 countries. India is the only country in the world, which grows all the four species of cultivated cotton i.e. *Gossypium arboreum* and *G. herbaceum*, *G. hirsutum* and *G. barbadense*, besides intra & interspecific hybrids / Bt hybrid cotton. The salient features of these species are as follows:

**A. Deshi Cotton:****Picture 1****Picture 2**

1. **Botanical Name:** *Gossypium arboreum*
2. Area under cultivation: About 1.40 % of total cultivated area.
3. States cultivating this cotton: Punjab, Haryana, Rajasthan, Uttar Pradesh, Madhya Pradesh, Maharashtra, Gujarat & Karnataka (Kharif Season).

1. **Botanical Name:** *Gossypium herbaceum*
2. Area under cultivation: About 0.60 % of total cultivated area.
3. States cultivating this cotton: Gujarat (Kharif) & Karnataka (Rabi).
4. Species is also called medical cotton or surgical cotton.

- Both species i.e. *G. arboreum* & *G. herbaceum* are also called Natural Bt cotton / Diploid cotton / Oldworld cotton / Asiatic cotton.
- Cotton seeds of both the species contain oil in the range of 14-20 %.

## NODAL CROP COTTON AND ITS DEVELOPMENT PROGRAMME.

## B. American Cotton

Picture 3



## C) Egyptian cotton

Picture 4



1. **Botanical Name:** *Gossypium hirsutum*
2. This cotton is also called American cotton / Tetraploid cotton / Upland cotton / New world cotton.
3. Area under cultivation: About 97.75 % of total cultivated area.
4. States cultivating: All major cotton producing states.
5. This species attracts more pests as compared to Deshi cottons.

1. **Botanical Name:** *Gossypium barbadense*
2. This cotton is also called Giza cotton / Quality cotton / Tetraploid cotton / Egyptian cotton / Sealand cotton / Peruvian cotton / Tanguish cotton / New world cotton.
3. Area under cultivation: About 0.25 % of total cultivated area.
4. States cultivating: Some area in Tamil Nadu.
5. Highly susceptible to insect pests & diseases and yield is also very low compared to other cultivated species.

- Seeds of both the species contain oil in the range of 18-20 %.

**Why cotton is important?**

<ul style="list-style-type: none"> <li>Provides raw material to Textile Industry</li> </ul>		
<ul style="list-style-type: none"> <li>Provides employment to: i) 6-6.5 Million farmers involved in cultivation, ii) About 60 Million people dependent in Textile Industry for their livelihood.</li> </ul>		
<ul style="list-style-type: none"> <li>Earns huge foreign exchange by exports of Textiles and clothing products</li> </ul>		
<ul style="list-style-type: none"> <li>Multifaceted use: Different kind of Cloths, Cottonoil, Cottonseed Cake, Particle Boards from Cotton Stalk, Pulp sheet made from Bleached Linters, Pellets from Cotton Stalk, Biogas from Willow Dust, Mushrooms on Cotton Stalks, Ceiling and Wall panel, Greeting Cards from Cotton Linter Pulp, Corrugated Boxes for Fruit Packaging, Cotton Stalk Briquettes, Bio-enriched hulls for use in livestock feed.</li> </ul>		
<ul style="list-style-type: none"> <li>Cotton and its by products are bio degradable</li> </ul>		

The details of area, production & yield in India vis a vis World, are given in the table below: Area: Lakh Ha, Production: Lakh bales and Productivity: Kg / Ha

Year	India			World		
	Area	Production	Yield	Area	Production	Yield
2006-07	91.44	280.00	521	346.6	1575.9	773
2007-08	94.14	307.00	<b>554</b>	328.5	1532.3	793
2008-09	94.06	290.00	524	304.5	1377.2	769
2009-10	101.20	300.00	504	303.0	1297.6	728
2010-11	105.75	323.47	520	326.2	1458.6	760
2011-12	121.8	367.00	512	361.6	<b>1637.5</b>	770
2012-13	119.8	370.00	525	343.5	1577.0	781
2013-14	119.6	<b>398.00</b>	566	328.4	1542.8	<b>799</b>
2014-15	<b>128.2</b>	380.00	504	<b>441.0</b>	1536.7	766
2015-16	118.81	345.82	495	311.6	1293.0	705
2016-17	109.57	339.17	526	297.32	1321.24	755
<b>Average</b>	<b>109.48</b>	<b>336.40</b>	<b>522</b>	<b>335.65</b>	<b>1468.16</b>	<b>743</b>

In India, cotton is grown across the country by more than 20 states. Most of the cotton production is contributed by 10 states i.e. Punjab, Haryana & Rajasthan in North zone, Madhya Pradesh, Maharashtra & Gujarat in Central zone and Telangana, Andhra Pradesh, Tamil Nadu and Karnataka in southern zone.

To supplement the efforts of the state Governments towards accelerating the production and productivity of cotton in the past, the Union Ministry of Agriculture and Farmers Welfare implemented the Intensive Cotton District Programme (ICDP) from 1971-72 to 1978-79, Intensive Cotton Development Programme (ICDP) from 1979-80 to 1998-99 and Technology Mission on Cotton (TMC): Mini Mission II from 1999-2000 to 2013-14. Mini Mission II of TMC was merged with Centrally Sponsored National Food Security (NFSM). The Centrally Sponsored National Food Security Mission: Commercial Crops: Cotton is under implementation from 2014-15 in 15 states i.e. Punjab, Haryana, Rajasthan, Uttar Pradesh, Madhya Pradesh, Gujarat, Maharashtra, Orissa, Tamil Nadu, Telangana, Andhra Pradesh, Karnataka, West Bengal, Tripura & Assam. Under the Scheme, thrust has been given on transfer of technology through Frontline demonstrations in order to extend benefits to the farmers. From 2015-16, the cost of implementation of NFSM: CC: Cotton is being shared between Government of India & State Governments on 60:40 basis for general category states and 90:10 basis for North East & hilly states, but the Central Agencies are funded 100% by GOI. The component wise pattern of Assistance under NFSM: CC: Cotton is given in the table:

Component	Unit cost (Rs.)	Implementing agency
1. Insecticide Resistant Management (IRM)	Rs.4.5 lakh / district + Administrative cost	CICR, Nagpur
2. Online Pest Monitoring and Advisory Services (OPMAS)	Rs.4.5 lakh / district + Administrative cost	NCIPM, New Delhi
<b>3. Frontline Demonstrations on</b>		
i) Integrated Crop Management (ICM)	Rs.7000/ha (Rs.6000 for inputs & Rs.1000 for Contingency)	SDA / ICAR / SAUs / KVKs / NGOs / Cooperatives
ii) Deshi and ELS cotton / ELS Cotton Seed Production.	Rs.8000 / ha (Rs.7000 for inputs & Rs.1000 for Contingency)	ICAR / SAUs / KVKs / NGOs / Cooperatives / State Departments of Agriculture
iii) Intercropping.	Rs.7000/ha (Rs.6000 for inputs & Rs.1000 for Contingency)	ICAR / SAUs / KVKs / NGOs / Cooperatives / State Department of Agriculture
4. Trials on High Density Planting System (HDPS).	Rs.9000/ha (Rs.8000 for inputs & Rs.1000 for Contingency)	ICAR / SAUs / KVKs / NGOs / Cooperatives / State Department of Agriculture
5. Contingencies & Electronic Print Media.	Need based	DCD, Nagpur

To disseminate the newly developed production and protection technologies, the frontline demonstrations are conducted by the ICAR- CICR, Nagpur, CICR, RS, Sirsa, CICR, RS, Coimbatore, State Agricultural Universities, including extension personnel of 15 cotton producing states. This apart, Directorate of Cotton Development, Nagpur organises farmers training to refresh the knowledge of farmers on production and protection technologies.

The average area, production & yield of cotton (Lint) in recent past years is presented in the table below:

Area: Lakh Ha, Production: Lakh bales and Productivity: Kg. / Ha

<b>State</b>	<b>Average area (2011-12 to 15- 16)</b>	<b>Average prod.(2011-12 to 15-16)</b>	<b>Average yield (2011-12 to 15- 16)</b>
Andhra Pradesh	16.31	48.89	510
Gujarat	26.94	102.40	646
Haryana	6.08	22.20	620
Karnataka	6.42	16.48	437
Madhya Pradesh	5.84	19.56	569
Maharashtra	40.96	74.38	309
Orissa	1.19	3.65	519
Punjab	4.49	16.64	630
Rajasthan	4.5	13.74	519
Tamil Nadu	1.48	4.83	553
Telangana	17.46	38.30	373
<b>All India</b>	<b>121.62</b>	<b>340.55</b>	<b>476</b>

A statement indicating area under Bt & Non Bt cottons is given at next page.

## State wise Bt &amp; Non Bt Cotton Area coverage in India from 2002-03 to 2016-17

State	Area in lakh hectare																										
	02-03			03-04			04-05			05-06			06-07			07-08			08-09			09-10			10-11		
	Bt	Non Bt	Total	Bt	Non Bt	Total	Bt	Non Bt	Total	Bt	Non Bt	Total	Bt	Non Bt	Total	Bt	Non Bt	Total	Bt	Non Bt	Total	Bt	Non Bt	Total	Bt	Non Bt	Total
Andhra Pradesh	0.038	7.99	8.028	0.05	8.32	8.37	0.71	11.07	11.78	0.90	9.43	10.33	6.57	3.15	9.72	10.00	1.34	11.34	11.43	2.56	13.99	12.53	2.14	14.67	17.01	1.78	18.79
Gujarat	0.091	16.26	16.351	0.42	15.99	16.41	1.26	17.80	19.06	1.49	17.57	19.06	4.07	19.83	23.90	13.00	11.22	24.22	14.50	9.04	23.54	15.39	9.25	24.64	20.88	5.45	26.33
Haryana		5.18	5.18		5.26	5.26		6.21	6.21	0.11	5.72	5.83	0.42	4.88	5.30	2.79	2.04	4.83	3.46	1.09	4.55	4.90	0.17	5.07	4.18	0.74	4.92
Karnataka	0.021	3.91	3.931	0.03	3.13	3.16	0.34	4.87	5.21	0.29	3.84	4.13	0.80	2.96	3.76	1.46	2.57	4.03	1.57	2.52	4.09	3.16	1.41	4.57	3.73	1.72	5.45
Madhya Pradesh	0.014	5.58	5.594	0.13	5.51	5.64	0.86	4.90	5.76	1.36	4.84	6.20	3.02	3.37	6.39	4.71	1.59	6.30	5.14	1.10	6.24	6.06	0.04	6.10	6.00	0.50	6.50
Maharashtra	0.120	27.88	28	0.22	27.40	27.62	1.62	26.78	28.40	5.09	23.66	28.75	16.55	14.52	31.07	25.62	6.33	31.95	25.72	5.74	31.46	30.48	4.47	34.95	35.43	3.99	39.42
Odisha		0.29	0.29		0.37	0.37		0.46	0.46		0.57	0.57		0.51	0.51		0.50	0.50		0.58	0.58		0.54	0.54		0.74	0.74
Punjab		4.49	4.49		4.52	4.52		5.09	5.09	0.70	4.87	5.57	2.81	3.26	6.07	5.57	0.47	6.04	4.76	0.51	5.27	4.90	0.21	5.11	5.10	0.20	5.30
Rajasthan		3.86	3.86		3.44	3.44		4.38	4.38	0.02	4.70	4.72	0.05	3.44	3.49	0.38	3.31	3.69	1.48	1.55	3.03	2.80	1.64	4.44	2.60	0.75	3.35
Tamil Nadu	0.003	0.75	0.753	0.08	0.90	0.98	0.12	1.17	1.29	0.17	1.24	1.41	0.32	0.68	1.00	0.60	0.39	0.99	0.12	1.03	1.15	0.09	0.95	1.04	0.62	0.60	1.22
Telangana						0.00			0.00			0.00			0.00			0.00			0.00			0.00			0.00
Others		0.22	0.22		0.21	0.21		0.23	0.23		0.20	0.20		0.24	0.24		0.24	0.24		0.17	0.17		0.19	0.19		0.33	0.33
All India	0.29	76.41	76.70	0.93	75.05	75.98	4.91	82.96	87.87	10.13	76.64	86.77	34.61	56.84	91.45	64.13	30.00	94.13	68.18	25.89	94.07	80.31	21.01	101.32	95.55	16.80	112.35

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State	Area in lakh hectare																	
	11-12			12-13			13-14			14-15			15-16			16-17		
	Bt	Non Bt	Total	Bt	Non Bt	Total	Bt	Non Bt	Total	Bt	Non Bt	Total	Bt	Non Bt	Total	Bt	Non Bt	Total
Andhra Pradesh	18.26	0.53	18.79	19.41	4.59	24.00	23.65	0.24	23.89	8.00	0.21	8.21	6.50	0.16	6.66	4.38	0.30	4.68
Gujarat	26.78	2.84	29.62	23.00	1.97	24.97	21.25	3.94	25.19	27.13	0.60	27.73	26.23	0.99	27.22	19.24	6.07	25.31
Haryana	5.88	0.53	6.41	5.56	0.58	6.14	4.67	0.69	5.36	6.31	0.17	6.48	5.27	0.88	6.15	3.77	1.21	4.98
Karnataka	4.60	0.94	5.54	4.50	0.35	4.85	5.63	0.99	6.62	6.97	1.78	8.75	4.87	1.55	6.42	2.95	1.71	4.66
Madhya Pradesh	6.35	0.71	7.06	5.75	0.33	6.08	4.40	0.74	5.14	5.20	0.27	5.47	5.20	0.43	5.63	5.39	0.60	5.99
Maharashtra	38.95	2.30	41.25	38.47	2.99	41.46	37.72	4.20	41.92	40.10	1.80	41.90	34.40	7.67	42.07	32.30	5.76	38.06
Odisha	0.00	1.02	1.02	0.00	1.19	1.19	0.00	1.24	1.24	0.00	1.27	1.27	0.00	1.25	1.25	0.00	1.36	1.36
Punjab	5.46	0.14	5.60	4.70	0.10	4.80	4.24	0.22	4.46	4.08	0.12	4.20	3.29	0.10	3.39	2.43	0.14	2.57
Rajasthan	4.00	0.70	4.70	2.93	1.57	4.50	2.50	1.43	3.93	3.95	0.92	4.87	3.56	0.92	4.48	2.87	1.55	4.42
Tamil Nadu	1.06	0.27	1.33	1.23	0.05	1.28	1.30	0.22	1.52	1.58	0.29	1.87	0.90	0.52	1.42	0.79	0.71	1.50
Telangana	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.08	1.05	17.13	16.61	1.12	17.73	12.27	1.81	14.08
Others	0.00	0.46	0.46	0.00	0.50	0.50	0.00	0.33	0.33	0.00	0.31	0.31	0.00	0.50	0.50	0.00	0.50	0.50
All India	111.34	10.44	121.78	105.55	14.22	119.77	105.36	14.24	119.60	119.40	8.79	128.19	106.83	16.09	122.92	86.40	21.72	108.11

**Minimum Support Prices (MSP) for varieties of kapas of fair average (FAQ)**

Variety	Staple Length in mm	Miconnaire value	Prices in Rs. Per Quintal								
			04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13
<b>A: Short Staple (20mm &amp; below):</b>											
Assam Comilla	-	7.0-8.0	310	1310	1410	1440	2000	2000	2000	2300	3100
Bengal Desi	-	6.8-7.2	1400	1410	1320	1350	2000	2000	2000	2300	3100
<b>B: Medium staple (20.5mm to 24.5mm):</b>											
V-797/G-Cot-13/G-Cot-21	21.5-23.5	4.2-6.0	1560	1560	1665	1700	2300	2300	2300	2600	3400
Jayadhar	21.5-22.5	4.8-5.8	1640	1640	1650	1680	2250	2250	2250	2550	3350
AK/Y-1(MAH/MP)	23.5-24.5	3.4-5.5	1675	1675	1685	1735	2350	2350	2350	2650	3450
PCO-2 AP/KAR/k-11(TN)	23.5-24.5		1650	1650	1660	1690	2350				
Mcu-7(TN)	23.5-24.5		1675	1675	1685	1735	2350				
SYPR-2(TN)	23.5-24.5		1700	1700	1710	1760	2350				
<b>C: Medium long staple (25.0mm to 27.0mm):</b>											
F-414/H-777/J-34 Raj	24.5-25.5	4.3-5.1	1760	1760	1770	1800	2500	2500	2500	2800	3600
LRA-5166/KC-2(TN)	26.0-26.5	3.4-4.9	1835	1835	1835	1900	2600	2600	2600	2900	3700
F-414/H-777/J-34 Hyb Rajasthan	26.5-27.0	3.8-4.8	-	-	-	1850	2600	2750	2750	3050	3750
F414/H-777/J-34 Hybrid (Haryana)	26.5-27.0	3.8-4.8	1785	1800	1850	1900	2700				
<b>D: Long Staple (27.5 to 32.0mm):</b>											
F414/H-777/J-34 Hybrid (Punjab)	27.5-28.5	4.0-4.8	1815	1835	1890	1950	2800	2800	2800	3100	3800
H-4/H-6/MECH	27.5-28.5	3.5-4.7	1960	1980	1990	2030	2850	2850	2850	3150	3800
RCH-2	27.5-28.5	3.5-4.7	-	1990	2000	2040	2850	2850	2850	3150	3800
SANKAR-6 Gujarat/10	27.5-29.0	3.6-4.8	1960	1985	2005	2055	2850	2850	2850	3150	3850
Bunny	29.5-30.5	3.5-4.3	2010	2010	2020	2070	3000	3000	3000	3300	3900
Brahma	29.5-30.5	3.5-4.3	-	-	2010	2050	3000	3000	3000	3300	3900
<b>E: Extra Long staple (32.5mm &amp; above):</b>											
MCU-5/Surabhi	32.5-33.5	3.2-4.3	2035	2055	2150	2300	3200	3200	3200	3500	4100
DCH-32(South)	34.0-36.0	3.0-3.5	2065		2430	2700	3400	3400	3400	3700	4300
DCH-32(MP)	34.0-36.0	3.0-3.5	2200	2100	2350	2600	3400	3400	3400	3700	4300
Suvin	37.0-39.0	3.2-3.6	3135	3135	3400	3800	4200	4200	4200	4500	5100

**Note:** In addition to the aforesaid MSP, the Government of India has approved the payment of Special Drought Relief Prices (SDRP) in respect of cotton (kapas) 2002-03. The SDRP would not become part of MSP and this would be provided by way of special relief and not by way of any bonus. The approved SDRP is of Rs.20/- per quintal and would be payable in all cotton growing States and for all varieties of cotton irrespective of their quality and grade. The SDRP would be payable whenever price support operations are undertaken by Cotton Corporation of India (CCI).

Source: Office of the Textile Commissioner, Mumbai

(Continued)

## MSP for varieties of kapas of fair average (FAQ)

Variety	Staple Length in mm	Miconnaire value	Prices in Rs. Per Quintal			
			13-14	14-15	15-16	16-17
<b>A: Short Staple (20mm &amp; below):</b>						
Assam Comilla	-	7.0-8.0	3200	3250	3300	3360
Bengal Deshi	-	6.8-7.2	3200	3250	3300	3360
<b>B: Medium staple (20.5mm to 24.5mm):</b>						
Jayadhar	21.5-22.5	4.8-5.8	3450	3500	3550	3610
V-797/G-Cot-13/G-Cot-21	21.5-23.5	4.2-6.0	3500	3550	3600	3610
AK/Y-1(MAH/MP),MCU-7(TN)/SVPR 2(TN)/PCO 2(AP & Kar)/K11 (TN)	23.5-24.5	3.4-5.5	3550	3600	3650	3710
<b>C: Medium long staple (25.0mm to 27.0mm):</b>						
J-34 (Raj)	24.5-25.5	4.3-5.1	3700	3750	3800	3860
LRA 5166/KC 2 (TN)	26.0-26.5	3.4-4.9	3800	3850	3900	3960
F 414/H 777/J 34 Hybrid	26.5-27.0	3.8-4.8	3850	3900	3950	4010
<b>D: Long Staple (27.5 to 32.0mm):</b>						
F-41/h-777/J-34 Hybrid	27.5-28.5	4.0-4.8	3900	3950	4000	4060
H-4/H-6/MECH/RCH-2	27.5-28.5	3.5-4.7	3900	3950	4000	4060
Shankar-6/10	27.5-29.0	3.6-4.8	3950	4000	4050	4110
Bunny/Brahma	29.5-30.5	3.5-4.3	4000	4050	4100	4160
<b>E: Extra Long staple (32.5mm &amp; above):</b>						
MCU-5/Surabhi	32.5-33.5	3.2-4.3	4200	4250	4300	4360
DCH-32	34.0-36.0	3.0-3.5	4400	4450	4500	4560
Suvin	37.0-39.0	3.2-3.6	5200	5250	5300	5360

**Source:** Office of the Textile Commissioner, Mumbai



## State-wise purchases of cotton by CCI under MSP and Commercial purchase

(Qty: Bales)

State (1)	2004-05			2005-06			2006-07			2007-08			2008-09			2009-10		
	(2)			(3)			(4)			(5)			(6)			(7)		
	MSP	CP	Total	MSP	CP	Total	MSP	CP	Total	MSP	CP	Total	MSP	CP	Total	MSP	CP	Total
Punjab	143018	8472	151490	52389	5779	58168	0	43201	43201	0	78976	78976	1043814	1604	1045418	86597	9731	96328
Haryana	162917	3318	166235	4429	12549	16978	0	45010	45010	0	19441	19441	255342	3124	258466	21763	10009	31772
Rajasthan	259815	20917	280732	70159	1526	71685	0	60153	60153	0	69653	69653	155217	0	155217	4495	24397	28892
Gujarat	482556	6895	489451	293167	45400	338567	0	144764	144764	0	130058	130058	1236114	0	1236114	162	22912	23074
Maharashtra	234408	1896	236304	295206	29883	325089	539754	3990	543744	0	379320	379320	1997091	0	1997091	509	104062	104571
MP	86266	1868	88134	118267	2361	120628	89844	1209	91053	0	37935	37935	736526	0	736526	0	5221	5221
AP	1210635	63	1210698	350058	489	350547	527646		527646	218694	29882	248576	3275754	0	3275754	445589	0	445589
Karnataka	146533	150	146683	62564	1879	64443	4954	7271	12225	0	17854	17854	163123	202	163325	4763	2448	7211
Tamil Nadu	478	0	478	0	0	0	0	0	0	0	119	119		0				
West Bengal	228	0	228	248	0	248	0	238	238	4611	6288	10899	132	0	132	137	0	137
Orissa	23611	0	23611	6064	0	6064	16257	489	16746	0	0	0	71717	0	71717	16581	0	16581
<b>Total</b>	<b>2750465</b>	<b>43579</b>	<b>2794044</b>	<b>1252551</b>	<b>99866</b>	<b>1352417</b>	<b>1178455</b>	<b>276325</b>	<b>1454780</b>	<b>223305</b>	<b>769526</b>	<b>992831</b>	<b>8934830</b>	<b>4930</b>	<b>8939760</b>	<b>580596</b>	<b>178780</b>	<b>759376</b>

## State-wise purchases of cotton by CCI under MSP and Commercial purchase

(Qty: Bales)

State	2010-11			2011-12			2012-13			2013-14			2014-15			2015-16			2016-17		
	(8)			(9)			(10)			(11)			(12)			(13)			(14)		
	MSP	CP	Total	MSP	CP	Total	MSP	CP	Total	MSP	CP	Total	MSP	CP	Total	MSP	CP	Total	MSP	CP	Total
Punjab	0	100784	100784	0	11755	11755	0	18436	18436	0	70267	70267	127722	0	127722	0	0	0			
Haryana	0	72601	72601	0	0	0	0	6824	6824	0	11842	11842	79903	0	79903	0	0	0			
Rajasthan	0	97626	97626	0	4882	4882	0	20797	20797	0	16690	16690	87870	0	87870	0	0	0			
Gujarat	0	234410	234410	0	217443	217443	0	1846	1846	0	75476	75476	666457	0	666457	51501	0	51501			
Maharashtra	0	427378	427378	0	54998	54998	41572	0	41572	0	85744	85744	1763192	0	1763192	116799	0	116799			
MP	0	51852	51852	0	885	885	3551	54	3605	0	1999	1999	281875	0	281875	29104	0	29104			
AP	0	0	0	0	0	0	0	0	0	0	0	0	1755559	0	1755559	39967	0	39967			
Telangana													3690948	0	3690948	595159	0	595159			
Karnataka	0	341406	341406	7570	49313	49313	2174886	0	2174886	40813	130389	171202	139280	0	139280	0	0	0			
Tamil Nadu	0	21331	21331	0	3956	3956	16363	0	16363	0	6685	6685	0	0	0	0	0	0			
West Bengal	152	0	152	124	124	124	262	0	262	0	185	185	0	0	0	368	0	368			
Orissa	0	18697	18697	0	4959	4959	50051	0	50051	0	4583	4583	102987	0	102987	11633	0	11633			
<b>Total</b>	<b>152</b>	<b>1365985</b>	<b>1365985</b>	<b>7704</b>	<b>348315</b>	<b>348315</b>	<b>2286685</b>	<b>47957</b>	<b>2334642</b>	<b>40813</b>	<b>402060</b>	<b>442873</b>	<b>8695793</b>	<b>0</b>	<b>8695793</b>	<b>844531</b>	<b>0</b>	<b>844531</b>			

Source: CCI, Mumbai

## Indian Cotton Balance Sheet (in Lakh Bales of 170 kg each)

Details	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	
Opening Stock	40.00	24.00	21.00	72.00	52.00	47.50	35.50	71.50	40.50	45.77	40.00	40.00	33.00	66.23	43.00
Production	136.00	179.00	243.00	241.00	280.00	307.00	290.00	305.00	339.00	367.00	370.00	398.00	386.00	338.00	351.00
Import	17.67	7.21	12.17	5.00	5.53	6.38	10.00	06.00	2.38	07.51	14.59	11.51	14.39	20.00	17.00
<b>Total Supply</b>	<b>193.67</b>	<b>210.21</b>	<b>276.17</b>	<b>318.00</b>	<b>337.53</b>	<b>360.88</b>	<b>335.5</b>	<b>382.50</b>	<b>381.88</b>	<b>420.28</b>	<b>424.59</b>	<b>449.51</b>	<b>433.39</b>	<b>424.0</b>	<b>411.00</b>
Mill Consumption	142.42	150.39	163.98	180.00	194.89	195.67	190.00	219.50	221.77	223.59	251.74	268.03	278.06	272.00	275.00
Consumption by SSI units	11.63	13.00	16.57	19.00	21.26	22.08	20.00	23.00	24.46	22.12	23.59	25.20	26.38	27.00	28.00
Non-Textile consumption	14.78	13.71	14.48	20.00	15.88	19.13	19.00	17.00	13.38	05.00	7.83	06.32	5.00	13.00	10.00
Exports	0.84	12.11	9.14	47.00	58.00	88.50	35.00	83.00	76.50	29.57	01.43	116.96	57.72	69.00	50.00
<b>Total Demand</b>	<b>169.67</b>	<b>189.21</b>	<b>204.17</b>	<b>266.00</b>	<b>290.03</b>	<b>325.38</b>	<b>264.0</b>	<b>342.00</b>	<b>336.11</b>	<b>380.28</b>	<b>384.59</b>	<b>416.51</b>	<b>367.16</b>	<b>381.00</b>	<b>363.00</b>
Closing Stock.	24.00	21.00	72.00	52.00	47.50	35.50	71.50	40.50	45.77	40.00	40.00	33.00	66.23	43.00	48.00

Source: Textile Commissioner, Ministry of Textiles, Mumbai.

**Researchable Issues:**

- i) Development of transgenic cotton varieties having multi- resistance to insect pests, diseases, weeds and drought with wide adaptability.
- ii) Development of varieties suitable for Machine picking or Design and development of economically viable picking Machine for picking of cultivated Bt. hybrids / non Bt. hybrids/ varieties.
- iii) Development of inter specific hybrids of Extra Long Staple (ELS) having fibre free from Neps and motes.
- iv) Development of area specific standard package of practices for cultivation of organic and Bt. cottons.
- v) Development of naturally coloured cotton varieties free of neps and motes having high yield and good fibre quality as per demand of Textile Industry.
- vi) Association of resistance / tolerance with plant Characters and undesirable traits like-Development of

<b>Character</b>	<b>Tolerance / Resistance observed</b>	<b>Undesirable traits association.</b>
Hairiness	Jassids	Susceptible to Bollworms and Mites.
Bud Gossypol	Bollworms, hoppers and fusarium.	-
Frego Bracts	Bollworms, Boll weevil, Bollrot	Fewer and smaller bolls.
Okra leaf	Boll worms, Jassids	Less productivity.
Glabrous	Aphids, Mites	Susceptible to Jassids
Red Plant body	Bollworms	General weakness in vigour, less production.
Nectariless.	Plant bug and Bollworms	-
Glandless	Bollworms, Budworm and Hoppers.	-