

# It is Time That We Promote Cotton Varieties for HDPS in India

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support systems, climate resilience and agricultural extension.

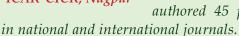
The world's first cotton hybrid was developed by Dr. C. T. Patel from cotton research station, Surat, Gujarat in 1971 which eventually led to the dominance of cotton hybrids over straight varieties for cultivation in the country. Subsequently, several hybrids were developed that became popular and widely adopted by farmers due to their vigor and heterosis for yield and other fibre quality traits. Initially, cotton hybrids contributed to an average yield gain of 42 kg lint/ha between 1970-80. When combined with other plant protection technologies such as use of pyrethroid insecticides and adoption of

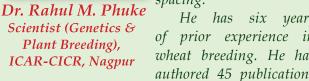
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His current research focuses on developing high-yielding Bt cotton varieties suitable for highdensity planting and closer spacing.

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IPM during 1980-2000, adoption of cotton hybrids added a further increase of 133 kg which enhanced cotton productivity in the country to cross 300 kg lint/ha. However, insecticide resistance in sucking pests and increased infestation of cotton bollworms on cotton hybrids led to increased crop protection cost.

In 2002, Bt cotton (cry1Ac) was approved for commercial cultivation in the country to combat major bollworm pests in cotton. The GM technology was incorporated in hybrids as a value capture mechanism by licensee seed firms. During 2 • 21st May, 2024 COTTON STATISTICS & NEWS

2002, only three Bt-cotton hybrids (MECH 12, MECH 162 and MECH 184) developed by private sector were released for commercial cultivation in the Central and South zones. In 2006, a two gene GM event (cry1Ac + cry2Ab) was introduced which led to the development and approval of 280 hybrids. With the adoption of an event-based approval mechanism by a standing committee constituted by the Genetic Engineering Approval Committee (GEAC), another 1191 locally adapted hybrids were approved for cultivation during 2009-2015 based on one year field testing by the State Agricultural Universities. Responsibility for testing and commercial release of the deregulated GM events was entrusted to the Indian Council of Agricultural Research (ICAR). The ICAR-All India Coordinated Research Project (AICRP) on Cotton developed guidelines for multi-location testing in specific agro-ecology and varietal identification for release. Since 2020, 125 Bt cotton hybrids from the private sector and 5 Bt cotton hybrids from the public sector were released and notified for commercial cultivation.

With wider adoption of Bt cotton by farmers, the area under cotton increased by more than 3.4 million ha by 2014-15 compared to 2007-08, production increased four-fold and productivity increased by >260 kg lint/ha compared to production and productivity in 2002 (Table 1). Area expansion under Bt cotton hybrids occurred mostly in the rainfed tracts in the central and southern cotton growing zones.

### Mounting Issues in Hybrid Seed Production

Hybrid cotton seed is produced and made available to farmers every year unlike straight varieties as reuse of F1 hybrid seed leads to segregation in F2 generation which does not meet the genetic purity standard as per the Seed Act.

Every year, more than 2.5 lakh quintal of de-linted Bt cotton F-1 hybrid seed is produced for cultivation in over 96% cotton area in the country. The seed rate in India adopted for Bt cotton hybrids is one of the lowest in the world at 2.0 to 2.75 kg seed/ha that results in a plant population of less than 20000 plants/ha. Higher seed rate of cotton varieties is used in other Asian countries like Bangladesh and Pakistan @6-10 kg/ha. Seed rate with varieties in Egypt, USA, Brazil, Argentina and Turkey is still higher because of high density planting to accommodate

Table 1. Cotton Area, Production and Productivity in India (2002-03 to 2022-23)

|         | (                 | ,  |                  |
|---------|-------------------|--|------------------|
| Year    | Area<br>(lakh Ha) | Production<br>(lakh bales,<br>each 170 kg) | Yield<br>(kg/ha) |
| 2002-03 | 76.7              | 86.2                                       | 191              |
| 2003-04 | 76.0              | 137.3                                      | 307              |
| 2004-05 | 87.9              | 164.3                                      | 318              |
| 2005-06 | 86.8              | 185.0                                      | 362              |
| 2006-07 | 91.4              | 226.3                                      | 421              |
| 2007-08 | 94.1              | 258.8                                      | 468              |
| 2008-09 | 94.1              | 222.8                                      | 403              |
| 2009-10 | 101.3             | 240.2                                      | 403              |
| 2010-11 | 112.4             | 330.0                                      | 499              |
| 2011-12 | 121.7             | 352.0                                      | 492              |
| 2012-13 | 119.7             | 342.2                                      | 486              |
| 2013-14 | 119.6             | 359.0                                      | 510              |
| 2014-15 | 128.2             | 348.1                                      | 462              |
| 2015-16 | 122.9             | 300.1                                      | 415              |
| 2016-17 | 108.3             | 325.8                                      | 512              |
| 2017-18 | 125.9             | 328.1                                      | 443              |
| 2018-19 | 126.1             | 280.4                                      | 378              |
| 2019-20 | 134.8             | 360.7                                      | 455              |
| 2020-21 | 132.9             | 352.5                                      | 451              |
| 2021-22 | 119.1             | 312.0                                      | 445              |
| 2022-23 | 129.2             | 343.5                                      | 452              |

Source: Directorate of Economics and Statistics, Ministry of Agriculture and Farmers Welfare.

between 1 to 2 lakh plants per ha. Seed rate in these countries ranges between 13 to 30 kg/ha.

In Africa, mostly fuzzy seed is used and the range of seed rate is still higher between 20 and 60 kg/ha. Unlike some cotton growing countries in Europe, almost all the cotton seed is locally produced in India and the requirement is mostly met for sowing. However, in recent years, hybrid seed production has become challenging due to inclement weather conditions and increasing cost of seed production. Cotton price is uniformly fixed which is applicable across all the cotton growing states in the country under the Cotton Price (Control) Order 2015. Hybrid seed production is mostly done by adopting the genetic male sterility (GMS) system to overcome the labour-intensive process of manual crossing of female lines with pollen from male parent. As a result, F1 seed is only harvested from the female parental lines. As a result, the number of seed packets produced from one ha is low and ranges between 500 to 1250 packets (450 g each) depending on the location of

COTTON ASSOCIATION OF INDIA 21st May, 2024 • 3



Cotton field

seed production. To fully meet the requirement of hybrid seed in all the cotton growing zones, every year seed production is taken up at ideal locations in Karnataka, Tamil Nadu, Telangana, Andhra Pradesh, Maharashtra and Gujarat in about 2.0 lakh acres. However, participatory seed production of truthfully labelled cotton hybrid seed has become quite challenging and less profitable in the face of climate variability and increasing frequency of extreme weather events.

# The Conundrum of Widespread Adoption of Hybrids and Low Productivity

Hybrids are generally robust in growth and input intensive. Most popular Bt-cotton hybrids are bushy in growth habit with more sympodial branches, higher boll number and bigger boll size. Many of the popular Bt-hybrids are late maturing and are prone to moisture stress during the boll development stage after cessation of monsoon rains and experience terminal moisture stress especially in shallow soils where their adoption has expanded significantly. These hybrids are grown adopting wider spacing (row to row and plant to plant spacing) using about 2.25 kg seed/ha leading to lower plant population (<20000 plants/ha).

Adoption of high-density planting system has shown to increase productivity in shallow to medium soils in Maharashtra, Telangana, Andhra Pradesh, Karnataka and light soil areas in Gujarat (Venugopalan et al., 2013). Under HDPS, a plant population of 74400 plants/ha is achieved using a seed rate of 6.75 kg/ha using compact Bt-cotton hybrids sown at 90 x 15 cm spacing is followed up with need-based canopy management foliar sprays with plant growth regulator applied at 45, 65 and 80 days after sowing. Cotton area amenable for HDPS is substantial (>30 lakh ha). In high productivity countries, even higher plant population is achieved (>1,11,111 plants/ha) using a still higher seed rate @ 15-20 kg/ha. At this

rate, the cost of hybrid seed will not only be higher (Rs 12960 to Rs 17280/ha @ Rs 864/packet (each packet of 450 g) but meeting the seed production requirement will be challenging.

Contrastingly, seed production method with cotton varieties is much easier as only a single line is used compared to cotton hybrids where two parents are crossed each season. In hybrids only the seed from female parent is harvested and therefore the output/ha is lower unlike in varieties



HDPS and varieties

where the entire harvest is suitable for use as seed. Constraints in hybrid seed production are growing every year. Development of early maturing and compact Bt cotton varieties (BG II) appear to be an option to pursue by the seed industry. Less cumbersome seed production with varieties and lower seed costs will propel greater usage of seed which will eventually lead to mechanisation of sowing operation with planters or seed drills. Adoption of HDPS in rainfed light soil areas will increase leading to enhanced cotton productivity to around 750 kg lint/ha compared to the current average of <375 kg lint/ha in such areas. Even in the North zone, varieties fit better in the cotton-wheat system as they mature early and facilitate timely sowing of wheat. In summer sown cotton, high seedling mortality due to heat/ high temperature stress is experienced. Adoption of higher seed rate with varieties can compensate seedling mortality and reduction in plant stand which is otherwise costlier with usage of hybrid seed.

(To be continued...) (The views expressed in this column are of the authors and not that of Cotton Association of India)

#### **Indian Cotton Value Differences**

 $Value\ Differences\ of\ Indian\ cotton\ arrived\ at\ the\ meeting\ of\ Value\ Difference\ Committee\ of\ Cotton\ Association\ of\ Indian\ held\ on\ 25th\ April\ 2024$ 

(Figures in Rs./ Candy)

| Sr. | Parameters                                     |               | Gra               | de         |                    |         | Sta               | No.       |                    |            |          |
|-----|--|---------------|-------------------|------------|--------------------|---------|-------------------|-----------|--------------------|------------|----------|
| No. |  | Premium       |                   | Disco      | ounts              | Premium |                   | Discounts |                    | Micronaire |          |
|     |  | Grade         | Premium<br>Amount | Grade      | Discount<br>Amount | Staple  | Premium<br>Amount | Staple    | Discount<br>Amount | Micronaire | Discount |
| 1   | P/H/R<br>ICS-101                               | Superfine     | +5000             | Fully Good | -4000              |         |                   |           |                    |            |          |
|     | (Staple length: Below 22mm)                    |               | (7.66)            |            | (6.12)             |         |                   |           |                    |            |          |
|     | Micronaire : 5.0 – 7.0                         | Extra S. Fine | +9000             | Good       | -5000              |         |                   |           |                    |            |          |
|     | (Grade : Fine) Trash - 4%<br>Strength/GPT - 15 |               | (13.78)           |            | (7.66)             |         |                   |           |                    |            |          |
| 2   | P/H/R  | Superfine     | LE000             | Eully Cood | -4000              |         |                   |           |                    |            |          |
|     | ICS-201 (SG)                                   | Supernne      | +5000             | Fully Good | -4000              |         |                   |           |                    |            |          |
|     | (Staple length: Below 22mm)                    |               | (7.66)            |            | (6.12)             |         |                   |           |                    |            |          |
|     | Micronaire : 5.0 – 7.0                         | Extra S. Fine | +9000             | Good       | -5000              |         |                   |           |                    |            |          |
|     | (Grade : Fine) Trash - 4.5%<br>Strength/GPT 15 |               | (13.78)           |            | (7.66)             |         |                   |           |                    |            |          |
| 3   | GUJ  | Superfine     | N.A.              | Fully Good | -900               | 23      | +1000             | 21        | -800               |            |          |
|     | ICS-102  | Supermie      |                   |            |                    |         |                   |           |                    |            |          |
|     | (Staple length: 22mm)                          |               |                   |            | (1.38)             |         | (1.53)            |           | (1.22)             |            |          |
|     | Micronaire 4.0 - 6.0                           |               |                   |            |                    |         |                   |           |                    |            |          |
|     | (Grade : Fine)                                 | Extra S. Fine | N.A.              | Good       | -1200              |         |                   |           |                    |            |          |
|     | Trash - 13% Strength/<br>GPT 20                |               |                   |            | (1.84)             |         |                   |           |                    |            |          |
| 4   | KAR  | Superfine     | N.A.              | Fully Good | -1200              | 23      | +800              | 21        | -800               |            |          |
|     | ICS-103  | Superince     | 1111              | Tany Good  | 1200               |         |                   |           |                    |            |          |
|     | (Staple length 22mm)                           |               |                   |            | (1.84)             |         | (1.22)            |           | (1.22)             |            |          |
|     | Micronaire 4.5 - 6.0                           |               |                   |            |                    |         |                   |           |                    |            |          |
|     | (Grade : Fine)                                 | Extra S. Fine | N.A.              | Good       | -1500              |         |                   |           |                    |            |          |
|     | Trash - 6% Strength/GPT 21                     |               |                   |            | (2.30)             |         |                   |           |                    |            |          |
| 5   | M/M(P)<br>ICS-104                              | Superfine     | +1000             | Fully Good | -1000              | 24      | +1000             | 22        | -1000              |            |          |
|     | (Staple length 23mm)                           |               | (1.53)            |            | (1.53)             |         | (1.53)            |           | (1.53)             |            |          |
|     | Micronaire 4.5 - 7.0                           | E . CE        | D.T. A            | 0 1        | 1200               |         |                   |           |                    |            |          |
|     | (Grade : Fine)                                 | Extra S. Fine | N.A.              | Good       | -1200              |         |                   |           |                    |            |          |
|     | Trash - 4% Strength/GPT 22                     |               |                   |            | (1.84)             |         |                   |           |                    |            |          |
| 6   | P/H/R (U)                                      | Superfine     | +1200             | Fully Good | -1200              | 28      | +700              | 26        | -700               | 3.0 - 3.2  | -800     |
|     | ICS-202 (SG)                                   | Superinie     | 1200              | runy Good  | -1200              | 20      | . 700             | 20        | -700               | 5.0 - 5.2  | -300     |
|     | (Staple length 27mm)                           |               | (1.84)            |            | (1.84)             |         | (1.07)            |           | (1.07)             |            | (1.22)   |
|     | Micronaire 3.5 - 4.9                           | Extra S. Fine | N.A.              | Good       | -1500              |         |                   |           |                    | 3.3 -3.4   | -400     |
|     | (Grade: Fine)                                  | u o. Thic     | 7 (12 15          | Jour       |                    |         |                   |           |                    |            | 100      |
|     | Trash - 4.5% Strength/GPT 26                   |               |                   |            | (2.30)             |         |                   |           |                    |            | (0.61)   |
| 7   | M/M(P)/SA/TL                                   | Superfine     | N.A.              | Fully Good | N.A.               |         |                   | 25        | N.A.               | 2.7 - 2.9  | N.A.     |
|     | ICS-105  | 1             |                   | , , , , ,  |                    |         |                   |           |                    |            |          |
|     | (Staple length 26mm)                           |               |                   |            |                    |         |                   |           |                    |            |          |
|     | Micronaire 3.0 - 3.4                           |               |                   |            |                    |         |                   |           |                    |            |          |
|     | (Grade: Fine)                                  | Extra S. Fine | N.A.              | Good       | N.A.               |         |                   |           |                    |            |          |
|     | Trash - 4% Strength/GPT 25                     |               |                   |            |                    |         |                   |           |                    |            |          |

| C.         |  |                |                   | Sta             |                    |            |                   |        |                    |            |                |           |       |
|------------|--|----------------|-------------------|-----------------|--------------------|------------|-------------------|--------|--------------------|------------|----------------|-----------|-------|
| Sr.<br>No. | Parameters                                   | Prem           | Pre               | mium            | counts             | Micronaire |                   |        |                    |            |                |           |       |
|            |  |                |                   | Disco           |                    |            |                   |        |                    |            |                |           |       |
|            |  | Grade          | Premium<br>Amount | Grade           | Discount<br>Amount | Staple     | Premium<br>Amount | Staple | Discount<br>Amount | Micronaire | Discount       |           |       |
| 8          | P/H/R (U)                                    | Superfine      | +1200             | Fully Good      | -1200              |            |                   | 26     | -700               | 3.0 - 3.2  | -800           |           |       |
|            | ICS-105                                      | Бирение        |                   | Tuny Good       |                    |            |                   | 20     | -700               | 3.0 - 3.2  |                |           |       |
|            | (Staple length 27mm)                         |                | (1.84)            |                 | (1.84)             |            |                   |        | (1.07)             |            | (1.22)         |           |       |
|            | Micronaire 3.5 - 4.9                         | Extra S. Fine  | N.A.              | Good            | -1500              |            |                   |        |                    | 3.3 -3.4   | -400           |           |       |
|            | (Grade : Fine) Trash - 4%<br>Strength/GPT 26 |                |                   |                 | (2.30)             |            |                   |        |                    |            | (0.61)         |           |       |
| 9          | M/M(P) /SA/TL/G ICS-105                      | Superfine      | N.A.              | Fully Good      | -800               | 28         | +1400             |        |                    | 2.7 - 2.9  | -500           |           |       |
|            | (Staple length 27mm)                         |                | - 111-21          |                 |                    |            |                   |        |                    |            |                |           |       |
|            | Micronaire 3.0 - 3.4                         |                |                   |                 | (1.22)             |            | (2.14)            |        |                    |            | (0.77)         |           |       |
|            | (Grade: Fine)                                | Extra S. Fine  | N.A.              | Good            | -1000              |            |                   |        |                    |            |                |           |       |
|            | Trash - 4% Strength/GPT 25                   |                |                   |                 | (1.53)             |            |                   |        |                    |            |                |           |       |
| 10         | M/M(P)/SA/TL<br>ICS-105                      | Superfine      | +900              | Fully Good      | -1000              |            |                   |        |                    |            |                |           |       |
|            | (Staple length 27mm)                         |                | (1.38)            |                 | (1.53)             |            |                   |        |                    |            |                |           |       |
|            | Micronaire 3.5 - 4.9                         |                | , ,               |                 | . ,                |            |                   |        |                    |            |                |           |       |
|            | (Grade:Fine) Trash - 3.5%                    | Extra S. Fine  | N.A.              | Good            | -1200              |            |                   |        |                    |            |                |           |       |
|            | Strength/GPT 26                              |                |                   |                 | (1.84)             |            |                   |        |                    |            |                |           |       |
| 11         | P/H/R (U)                                    | C (:           | 11000             | F. II. G. 1     | 1200               | 29         | NT A              |        |                    | 20.02      | 000            |           |       |
|            | ICS-105                                      | Superfine      | +1200             | Fully Good      | -1200              | 29         | N.A.              |        |                    | 3.0 - 3.2  | -800           |           |       |
|            | (Staple length 28mm)                         |                | (1.84)            |                 | (1.84)             |            |                   |        |                    |            | (1.22)         |           |       |
|            | Micronaire 3.5 - 4.9                         | Extra S. Fine  | N.A.              | Good            | -1500              |            |                   |        |                    | 3.3 -3.4   | -400           |           |       |
|            | (Grade:Fine)                                 | Extra 5. Title | IV.A.             | Good            | -1300              |            |                   |        |                    | 3.3-3.4    | -400           |           |       |
|            | Trash - 4%                                   |                |                   |                 | (2.30)             |            |                   |        |                    |            | (0.61)         |           |       |
|            | Strength/GPT 27                              |                |                   |                 |                    |            |                   |        |                    |            |                |           |       |
| 12         | M/M(P)                                       | Superfine      | +900              | Fully Good      | -800               |            |                   |        |                    | 3.0 - 3.2  | -1200          |           |       |
|            | ICS-105                                      |                | (4.00)            |                 | (4.00)             |            |                   |        |                    |            | (4.0.4)        |           |       |
|            | (Staple length 28mm)                         |                | (1.38)            |                 | (1.22)<br>-1100    |            |                   |        |                    |            | (1.84)<br>-800 |           |       |
|            | Micronaire 3.7 – 4.5                         | Extra S. Fine  | N.A.              | Good            | (1.68)             |            |                   |        |                    | 3.3 - 3.4  | (1.22)         |           |       |
|            | (Grade:Fine) Trash - 3.5%<br>Strength/GPT 27 |                |                   |                 |                    |            |                   |        |                    | 3.5 – 3.6  | -400<br>(0.61) |           |       |
| 13         | SA/TL/K                                      | Superfine      | +900              | Fully Good      | -800               |            |                   |        |                    | 3.0 - 3.2  | -1200          |           |       |
|            | ICS-105                                      | Superinc       | 1,700             | Tully Good      | -000               |            |                   |        |                    | 3.0 - 3.2  | -1200          |           |       |
|            | (Staple length 28mm)                         |                | (1.38)            |                 | (1.22)             |            |                   |        |                    |            | (1.84)         |           |       |
|            | Micronaire 3.7 - 4.5                         | Extra S. Fine  | N.A.              | Good            | -1100<br>(1.68)    |            |                   |        |                    | 3.3 - 3.4  | -800<br>(1.22) |           |       |
|            | (Grade:Fine) Trash – 3.5%<br>Strength/GPT 27 |                |                   |                 |                    |            |                   |        |                    | 3.5 - 3.6  | -400<br>(0.61) |           |       |
| 14         | GUJ<br>ICS-105                               | Superfine      | +900              | Fully Good      | -800               |            |                   | 27     | -1800              | 3.0 - 3.2  | -1200          |           |       |
|            | (Staple length 28mm)                         |                | (1.38)            |                 | (1.22)             |            |                   |        | (2.76)             |            | (1.84)         |           |       |
|            | Micronaire 3.7 – 4.5                         |                |                   |                 | -1100              |            |                   |        |                    |            | -800           |           |       |
|            | (Grade:Fine)                                 | Extra S. Fine  | N.A.              | Good            | (1.68)             |            |                   |        |                    | 3.3 - 3.4  | (1.22)         |           |       |
|            | Trash - 3% Strength/GPT 27                   |                |                   |                 |                    |            |                   |        |                    | 3.5 - 3.6  | -400<br>(0.61) |           |       |
| 15         | R (L)  |                | 14000             |                 | 1400               |            |                   |        | 1000               | 20.22      | 1000           |           |       |
| 13         | ICS-105                                      | Superfine      | Superfine         | Superfine +1000 | +1000              | Fully Good | -1100             |        |                    | 28         | -1200          | 3.0 - 3.2 | -1200 |
|            | (Staple length 29mm)                         |                | (1.53)            |                 | (1.68)             |            |                   |        | (1.84)             |            | (1.84)         |           |       |
|            | Micronaire 3.7 – 4.5                         |                |                   |                 |                    |            |                   |        |                    | 3.3 - 3.4  | -800           |           |       |
|            | (Grade:Fine)                                 | Extra S. Fine  | N.A.              | Good            | -1300              |            |                   |        |                    | 0.0 - 0.4  | (1.22)         |           |       |
|            | Trash - 3.5% Strength/<br>GPT 28             |                |                   |                 | (1.99)             |            |                   |        |                    | 3.5 - 3.6  | -400<br>(0.61) |           |       |

| Sr. |  | Grade         |                   |            |                    |         | Sta               | Micronaire |                    |            |                |  |
|-----|--|---------------|-------------------|------------|--------------------|---------|-------------------|------------|--------------------|------------|----------------|--|
| No. | Parameters                                   | Premium       |                   | Discounts  |                    | Premium |                   | Discounts  |                    | Micro      | aire           |  |
|     |  | Grade         | Premium<br>Amount | Grade      | Discount<br>Amount | Staple  | Premium<br>Amount | Staple     | Discount<br>Amount | Micronaire | Discount       |  |
| 16  | M/M(P)                                       | Superfine     | +500              | Fully Good | -700               |         |                   |            |                    | 3.0 - 3.2  | -1200          |  |
|     | ICS-105                                      |               |                   | . ,        |                    |         |                   |            |                    |            |                |  |
|     | (Staple length 29mm)  Micronaire 3.7 – 4.5   |               | (0.77)            |            | (1.07)             |         |                   |            |                    |            | (1.84)         |  |
|     | (Grade:Fine)                                 | Extra S. Fine | +800              | Good       | -1000              |         |                   |            |                    | 3.3 - 3.4  | -800           |  |
|     | Trash-3.5% Strength/GPT28                    |               | (1.22)            |            | (1.53)             |         |                   |            |                    | 3.5 - 3.6  | (1.22)<br>-400 |  |
|     | SA/TL/K                                      |               | (1.22)            |            | (1.55)             |         |                   |            |                    | 3.3 - 3.0  | (0.61)         |  |
| 17  | ICS-105                                      | Superfine     | +500              | Fully Good | -700               |         |                   |            |                    | 3.0 - 3.2  | -1200          |  |
|     | (Staple length 29mm)                         |               | (0.77)            |            | (1.07)             |         |                   |            |                    |            | (1.84)         |  |
|     | Micronaire 3.7 – 4.5                         |               | +800              |            | -1000              |         |                   |            |                    | 3.3 - 3.4  | -800           |  |
|     | (Grade:Fine)                                 | Extra S. Fine | (1.22)            | Good       | (1.53)             |         |                   |            |                    |            | (1.22)         |  |
|     | Trash - 3% Strength/GPT 28                   |               |                   |            |                    |         |                   |            |                    | 3.5 - 3.6  | -400<br>(0.61) |  |
| 18  | GUJ<br>ICS-105                               | Superfine     | +500              | Fully Good | -700               | 30      | +1200             |            |                    | 3.0 - 3.2  | -1200          |  |
|     | (Staple length 29mm)                         |               | (0.77)            |            | (1.07)             |         | (1.84)            |            |                    |            | (1.84)         |  |
|     | Micronaire 3.7 – 4.5                         |               |                   |            |                    |         |                   |            |                    |            |                |  |
|     | (Grade:Fine)                                 | Extra S. Fine | +800<br>(1.22)    | Good       | -1000<br>(1.53)    |         |                   |            |                    | 3.3 - 3.4  | -800<br>(1.22) |  |
|     | Trash - 3% Strength/GPT 28                   |               |                   |            |                    |         |                   |            |                    | 3.5 - 3.6  | -400<br>(0.61) |  |
| 19  | M/M(P) ICS-105                               | Superfine     | +500              | Fully Good | -1000              |         |                   |            |                    | 3.0 - 3.2  | -1200          |  |
|     | (Staple length 30mm)                         |               | (0.77)            |            | (1.53)             |         |                   |            |                    |            | (1.84)         |  |
|     | Micronaire 3.7 – 4.5<br>(Grade:Fine)         | Extra S. Fine | +800              | Good       | -1200              |         |                   |            |                    | 3.3 - 3.4  | -800<br>(1.22) |  |
|     | Trash-3.5% Strength/GPT29                    |               | (1.22)            |            | (1.84)             |         |                   |            |                    | 3.53.6     | -400<br>(0.61) |  |
| 20  | SA/TL/K/O<br>ICS-105                         | Superfine     | +500              | Fully Good | -1000              |         |                   |            |                    | 3.0 - 3.2  | -1200          |  |
|     | (Staple length 30mm)                         |               | (0.77)            |            | (1.53)             |         |                   |            |                    |            | (1.84)         |  |
|     | Micronaire 3.7 – 4.5                         |               | (0.77)            |            | (1.00)             |         |                   |            |                    |            | (1.01)         |  |
|     | (Grade:Fine)                                 | Extra S. Fine | +800              | Good       | -1200              |         |                   |            |                    | 3.3 - 3.4  | -800<br>(1.22) |  |
|     | Trash - 3% Strength/GPT 29                   |               | (1.22)            |            | (1.84)             |         |                   |            |                    | 3.53.6     | -400<br>(0.61) |  |
| 21  | M/M(P) ICS-105                               | Superfine     | +700              | Fully Good | -1000              |         |                   |            |                    | 3.0 - 3.2  | -1200          |  |
|     | (Staple length 31mm)                         |               | (1.07)            |            | (1.53)             |         |                   |            |                    |            | (1.84)         |  |
|     | Micronaire 3.7 – 4.5                         | Extra S. Fine | +1000             | Good       | -1200              |         |                   |            |                    | 3.3 - 3.4  | -800<br>(1.22) |  |
|     | (Grade : Fine) Trash - 3%<br>Strength/GPT 30 |               | (1.53)            |            | (1.84)             |         |                   |            |                    | 3.53.6     | -400<br>(0.61) |  |
| 22  | SA/TL/K/TN/O<br>ICS-105                      | Superfine     | +700              | Fully Good | -1000              |         |                   |            |                    | 3.0 - 3.2  | -1200          |  |
|     | (Staple length 31mm)                         |               | (1.07)            |            | (1.53)             |         |                   |            |                    |            | (1.84)         |  |
|     | Micronaire 3.7 – 4.5                         | Extra S. Fine | +1000             | Good       | -1200              |         |                   |            |                    | 3.3 - 3.4  | -800<br>(1.22) |  |
|     | (Grade : Fine) Trash – 3%<br>Strength/GPT 30 |               | (1.53)            |            | (1.84)             |         |                   |            |                    | 3.5 -3.6   | -400<br>(0.61) |  |

| Sr. | Parameters                                     |               | Gra               | de         |                    |           | Sta               | Micronaire |                    |            |          |            |       |    |       |    |       |           |      |
|-----|--|---------------|-------------------|------------|--------------------|-----------|-------------------|------------|--------------------|------------|----------|------------|-------|----|-------|----|-------|-----------|------|
| No. |  | Prem          | ium               | Disco      | ounts              | Premium   |                   |            |                    | Discounts  |          |            |       |    |       |    |       |           |      |
|     |  | Grade         | Premium<br>Amount | Grade      | Discount<br>Amount | Staple    | Premium<br>Amount | Staple     | Discount<br>Amount | Micronaire | Discount |            |       |    |       |    |       |           |      |
| 23  | SA/TL/K/TN/O                                   | 6 6           | NI A              | E II G I   | NT A               |           |                   | 0.1        | NT A               | 20.22      | NT A     |            |       |    |       |    |       |           |      |
|     | ICS-106  | Superfine     | N.A.              | Fully Good | N.A.               |           |                   | 31         | N.A.               | 3.0 - 3.2  | N.A.     |            |       |    |       |    |       |           |      |
|     | (Staple length 32mm)                           |               |                   |            |                    |           |                   |            |                    |            |          |            |       |    |       |    |       |           |      |
|     | Micronaire 3.5 - 4.2                           | Extra S. Fine | N.A.              | Good       | N.A.               |           |                   |            |                    | 3.3 - 3.4  | N.A.     |            |       |    |       |    |       |           |      |
|     | (Grade : Fine) Trash - 3%<br>Strength/GPT 31   |               |                   |            |                    |           |                   |            |                    |            |          |            |       |    |       |    |       |           |      |
| 24  | M/M(P)   | Superfine     | +1500             | Fully Good | -1000              | 35        | +2000             | 33         | -3000              | 2.5 - 2.7  | -700     |            |       |    |       |    |       |           |      |
|     | ICS-107  | Supermie      | 1300              | runy Good  | -1000              | 33        | 12000             | 33         | -3000              | 2.5 - 2.7  | -700     |            |       |    |       |    |       |           |      |
|     | (Staple length 34mm)                           |               | (2.30)            |            | (1.53)             |           | (3.06)            |            | (4.59)             |            | (1.07)   |            |       |    |       |    |       |           |      |
|     | Micronaire 2.8 - 3.7                           | Extra S. Fine | N.A.              | Good       | -1500              | 36        | +3500             |            |                    |            |          |            |       |    |       |    |       |           |      |
|     | (Grade : Fine) Trash - 4%<br>Strength/GPT 33   |               |                   |            | (2.30)             |           | (5.36)            |            |                    |            |          |            |       |    |       |    |       |           |      |
| 25  | K/TN   | Superfine     | +2000             | F11 C 4    | -1000              | 35        | +1500             | 33         | -3000              | 2.5 - 2.7  | -700     |            |       |    |       |    |       |           |      |
|     | ICS-107  |               | +2000             | Fully Good | -1000              | 33        | +1500             | 33         | -3000              | 2.5 - 2.7  | -700     |            |       |    |       |    |       |           |      |
|     | (Staple length 34mm)                           |               | (3.06)            |            | (1.53)             |           | (2.30)            |            | (4.59)             |            | (1.07)   |            |       |    |       |    |       |           |      |
|     | Micronaire 2.8 - 3.7                           | Extra S. Fine | N.A.              | Good       | -1500              | 36        | +3000             |            |                    |            |          |            |       |    |       |    |       |           |      |
|     | (Grade : Fine) Trash – 3.5%<br>Strength/GPT 34 |               |                   |            | (2.30)             |           | (4.59)            |            |                    |            |          |            |       |    |       |    |       |           |      |
| 26  | M/M(P)   |               |                   |            |                    |           |                   |            |                    |            |          |            |       |    |       |    |       |           |      |
|     | ICS-107  | Superfine     | Superfine         | Superfine  | Superfine          | Superfine | Superfine         | Superfine  | Superfine          | Superfine  | +1500    | Fully Good | -1000 | 36 | +1500 | 34 | -2000 | 2.5 - 2.7 | -700 |
|     | (Staple length 35mm)                           |               | (2.30)            |            | (1.53)             |           | (2.30)            |            | (3.06)             |            | (1.07)   |            |       |    |       |    |       |           |      |
|     | Micronaire 2.8 - 3.7                           | Extra S. Fine | N.A.              | Good       | -1500              |           |                   |            |                    |            |          |            |       |    |       |    |       |           |      |
|     | (Grade : Fine) Trash – 4%<br>Strength/GPT 35   |               |                   |            | (2.30)             |           |                   |            |                    |            |          |            |       |    |       |    |       |           |      |
| 27  | K/TN   |               |                   |            |                    | _         |                   |            |                    |            | _        |            |       |    |       |    |       |           |      |
|     | ICS-107  | Superfine     | +2000             | Fully Good | -1000              | 36        | +1500             | 34         | -1500              | 2.5 - 2.7  | -700     |            |       |    |       |    |       |           |      |
|     | (Staple length 35mm)                           |               | (3.06)            |            | (1.53)             |           | (2.30)            |            | (2.30)             |            | (1.07)   |            |       |    |       |    |       |           |      |
|     | Micronaire 2.8 - 3.7                           | Extra S. Fine | N.A.              | Good       | -1500              |           |                   |            |                    |            |          |            |       |    |       |    |       |           |      |
|     | (Grade : Fine) Trash - 3.5%<br>Strength/GPT 35 |               |                   |            | (2.30)             |           |                   |            |                    |            |          |            |       |    |       |    |       |           |      |

Conversion factor -653.07 based on the RBI closing exchange rate of 1 US = Rs.83.30 prevailing on 25th April 2024. Figures in bracket denotes value difference in Cents per Lb.

#### Note:

- $(1) \quad \textit{These Value Differences are applicable to domestic trade}.$
- (2 The above differences are merely indicative in nature. Cotton Association of India gives no warranty as to the accuracy or completeness of information contained herein and accepts no legal responsibility howsoever arising in relation to such information.
- (3) Premium and Discount mentioned in Indian Rupees above will remain constant for one month whereas the same mentioned in Cents per Lb. will vary as per the exchange rate fixed by the Reserve Bank of India.

COTTON STATISTICS & NEWS

|        |  |          |       |               | UPCOUI     | NTRY SPO    | OT RAT   | ES               |  |                  |                  | (R               | ls./Qtl)         |
|--------|--|----------|-------|---------------|------------|-------------|----------|------------------|--|------------------|------------------|------------------|------------------|
| Star   | Standard Descriptions with Basic Grade & Staple in Millimetres based on Upper Half Mean Length [ By law 66 (A) (a) (4) ] |          |       |               |            |             |          |                  | Spot Rate (Upcountry) 2023-24 Crop<br>May 2024 |                  |                  |                  |                  |
|        |  | Grade    |       |               |            | Gravimetric | Strength |                  |  |                  |                  |                  |                  |
| Sr. No | . Growth   | Standard | Grade | Staple        | Micronaire | Trash       | /GPT     | 13th             | 14th   | 15th             | 16th             | 17th             | 18th             |
| 1      | P/H/R  | ICS-101  | Fine  | Below         | 5.0 - 7.0  | 4%          | 15       | 12513            | 12513  | 12345            | 12457            | 12457            | 12457            |
|        |  |          |       | 22mm          |            |             |          | (44500)          | (44500)  | (43900)          | (44300)          | (44300)          | (44300)          |
| 2      | P/H/R (SG)   | ICS-201  | Fine  | Below<br>22mm | 5.0 – 7.0  | 4.5%        | 15       | 12682<br>(45100) | 12682<br>(45100)                               | 12513<br>(44500) | 12626<br>(44900) | 12626<br>(44900) | 12626<br>(44900) |
| 3      | GUJ  | ICS-102  | Fine  | 22mm          | 4.0 - 6.0  | 13%         | 20       | 10545<br>(37500) | 10545<br>(37500)                               | 10517<br>(37400) | 10545<br>(37500) | 10573<br>(37600) | 10573<br>(37600) |
| 4      | KAR  | ICS-103  | Fine  | 22mm          | 4.5 - 6.0  | 6%          | 21       | 12373            | 12373  | 12317            | 12317            | 12345            | 12345            |
| 5      | M/M (P)  | ICS-104  | Fine  | 23mm          | 4.5 - 7.0  | 4%          | 22       | (44000)<br>14397 | (44000)<br>14369                               | (43800)<br>14341 | (43800)<br>14341 | (43900)<br>14341 | (43900)<br>14341 |
| 6      | P/H/R (U) (SG)   | ICS-202  | Fine  | 27mm          | 3.5 - 4.9  | 4.5%        | 26       | (51200)<br>15100 | (51100)<br>15100                               | (51000)<br>14960 | (51000)<br>15016 | (51000)<br>14988 | (51000)<br>14988 |
|        |  |          |       |               |            |             |          | (53700)          | (53700)  | (53200)          | (53400)          | (53300)          | (53300)          |
| 7      | M/M(P)/<br>SA/TL   | ICS-105  | Fine  | 26mm          | 3.0 - 3.4  | 4%          | 25       | N.A.<br>(N.A.)   | N.A.<br>(N.A.)                                 | N.A.<br>(N.A.)   | N.A.<br>(N.A.)   | N.A.<br>(N.A.)   | N.A.<br>(N.A.)   |
| 8      | P/H/R(U)   | ICS-105  | Fine  | 27mm          | 3.5 – 4.9  | 4%          | 26       | 15241            | 15241  | 15100            | 15157            | 15129            | 15129            |
|        | 3.5 /3.5 (D) /   | 100 405  | т.    | 27            | 20 24      | 4.0/        |          | (54200)          | (54200)  | (53700)          | (53900)          | (53800)          | (53800)          |
| 9      | M/M(P)/<br>SA/TL/G   | ICS-105  | Fine  | 2/mm          | 3.0 – 3.4  | 4%          | 25       | 14341<br>(51000) | 14341<br>(51000)                               | 14341<br>(51000) | 14341<br>(51000) | 14341<br>(51000) | 14341<br>(51000) |
| 10     | M/M(P)/  | ICS-105  | Fine  | 27mm          | 3.5 - 4.9  | 3.5%        | 26       | 15185            | 15185  | 15185            | 15185            | 15185            | 15185            |
|        | SA/TL  | 100 100  | 11110 | _,            | 0.0        | 0.0 /0      | _0       | (54000)          | (54000)  | (54000)          | (54000)          | (54000)          | (54000)          |
| 11     | P/H/R(U)   | ICS-105  | Fine  | 28mm          | 3.5 - 4.9  | 4%          | 27       | 15438<br>(54900) | 15438<br>(54900)                               | 15297<br>(54400) | 15353<br>(54600) | 15325<br>(54500) | 15325<br>(54500) |
| 12     | M/M(P)   | ICS-105  | Fine  | 28mm          | 3.7 - 4.5  | 3.5%        | 27       | 15635            | 15635  | 15494            | 15522            | 15522            | 15522            |
| 13     | SA/TL/K  | ICS-105  | Fine  | 28mm          | 3.7 - 4.5  | 3.5%        | 27       | (55600)<br>15691 | (55600)<br>15691                               | (55100)<br>15550 | (55200)<br>15578 | (55200)<br>15578 | (55200)<br>15578 |
|        |  |          |       |               |            |             |          | (55800)          | (55800)  | (55300)          | (55400)          | (55400)          | (55400)          |
| 14     | GUJ  | ICS-105  | Fine  | 28mm          | 3.7 - 4.5  | 3%          | 27       | 15803<br>(56200) | 15803<br>(56200)                               | 15635<br>(55600) | 15663<br>(55700) | 15663<br>(55700) | 15663<br>(55700) |
| 15     | R(L)   | ICS-105  | Fine  | 29mm          | 3.7 - 4.5  | 3.5%        | 28       | 16085            | 16085  | 15944            | 15944            | 15944            | 15944            |
| 16     | M/M(P)   | ICS-105  | Fine  | 20mm          | 3.7 - 4.5  | 3.5%        | 28       | (57200)<br>16056 | (57200)<br>16056                               | (56700)<br>15916 | (56700)<br>15944 | (56700)<br>15944 | (56700)<br>15944 |
| 10     | 101/101(11)  | 103-103  | гине  | 29111111      | 3.7 - 4.3  | 3.5 /0      | 20       |                  | (57100)  |                  |                  | (56700)          |                  |
| 17     | SA/TL/K  | ICS-105  | Fine  | 29mm          | 3.7 - 4.5  | 3%          | 28       | 16141            | 16141  | 16000            | 16028            | 16028            | 16028            |
| 10     | CLU  | ICC 10E  | г.    | 20            | 0.7.4.5    | 2.0/        | 20       | (57400)          | (57400)  | (56900)          | (57000)          | (57000)          | (57000)          |
| 18     | GUJ  | ICS-105  | Fine  | 29mm          | 3.7 – 4.5  | 3%          | 28       | 16085<br>(57200) | 16085<br>(57200)                               | 15916<br>(56600) | 15944<br>(56700) | 15944<br>(56700) | 15944<br>(56700) |
| 19     | M/M(P)   | ICS-105  | Fine  | 30mm          | 3.7 - 4.5  | 3.5%        | 29       | 16366            | 16366  | 16310            | 16310            | 16310            | 16310            |
|        | , ( )  |          |       |               |            |             |          | (58200)          | (58200)  | (58000)          | (58000)          | (58000)          | (58000)          |
| 20     | SA/TL/K/O  | ICS-105  | Fine  | 30mm          | 3.7 – 4.5  | 3%          | 29       | 16394<br>(58300) | 16394<br>(58300)                               | 16338<br>(58100) | 16338<br>(58100) | 16338<br>(58100) | 16338<br>(58100) |
| 21     | M/M(P)   | ICS-105  | Fine  | 31mm          | 3.7 - 4.5  | 3%          | 30       | 16759            | 16788  | 16731            | 16731            | 16731            | 16731            |
| 22     | SA/TL/   | ICS-105  | Fine  | 31mm          | 3.7 - 4.5  | 3%          | 30       | (59600)<br>16788 | (59700)<br>16816                               | (59500)<br>16759 | (59500)<br>16759 | (59500)<br>16759 | (59500)<br>16759 |
|        | K/TN/O   |          |       |               |            |             |          | (59700)          | (59800)  | (59600)          | (59600)          | (59600)          | (59600)          |
| 23     | SA/TL/K/<br>TN/O   | ICS-106  | Fine  | 32mm          | 3.5 – 4.2  | 3%          | 31       | N.A.<br>(N.A.)   | N.A.<br>(N.A.)                                 | N.A.<br>(N.A.)   | N.A.<br>(N.A.)   | N.A.<br>(N.A.)   | N.A.<br>(N.A.)   |
| 24     | M/M(P)   | ICS-107  | Fine  | 34mm          | 2.8 - 3.7  | 4%          | 33       | 22496            | 22496  | 22355            | 22355            | 22355            | 22355            |
| 25     | K/TN   | ICS-107  | Fine  | 34mm          | 2.8 - 3.7  | 3.5%        | 34       | (80000)          | (80000)  | (79500)<br>23058 | (79500)<br>23058 | (79500)<br>23058 | (79500)<br>23058 |
|        |  |          |       |               |            |             |          | (83000)          | (82500)  | (82000)          | (82000)          | (82000)          | (82000)          |
| 26     | M/M(P)   | ICS-107  | Fine  | 35mm          | 2.8 - 3.7  | 4%          | 35       | 23058<br>(82000) | 23058<br>(82000)                               | 22918<br>(81500) | 22918<br>(81500) | 22918<br>(81500) | 22918<br>(81500) |
| 27     | K/TN   | ICS-107  | Fine  | 35mm          | 2.8 - 3.7  | 3.5%        | 35       | 23902            | 23761  | 23621            | 23621            | 23621            | 23621            |
|        |  |          |       |               |            |             |          | (85000)          | (84500)  | (84000)          | (84000)          | (84000)          | (84000)          |

(Note: Figures in bracket indicate prices in Rs./Candy)