## World Cotton Scenario - Production and Consumption with Reference to India

With a M.Sc. and Ph.D. in Agronomy, Dr. M.S. Kairon has 46 years of experience in teaching and research in the cotton sector. He has extensive experience of working for cotton production technology relating to water use, nutrient management, weed control and other cultural practices in India as well as other countries, such as Myanmar, Vietnam and Senegal (West Africa). He is the recipient of several awards including Hexmar Award in Agronomy from the Indian Society for Cotton Improvement (1992-93), Special Award from the Haryana Agronomist Association, India (1993), Award from the Agronomy Society of India (2000) and Award from the Magnum Foundation of India as a Friends of Farmers (1999). He has published about 304 articles on cotton at the National and International level. At present, he is the President of KVSS -Kairon Foundation, Sakarla, Parseoni, Nagpur.

Cotton is cultivated in around 90 countries across the globe and 105 countries consume cotton. The major cotton producing countries and consuming countries include India, China, United States, Brazil, Pakistan, Australia, Turkey, Uzbekistan, Turkmenistan and Burkina Faso.

The global 2019-20 cotton area, production, consumption and productivity was originally projected at 33.62 million ha, 25.92 M tonnes, 26.19 m tonnes and $771 \mathrm{~kg} /$ ha respectively. Global consumption for 2019-20 was estimated to reduce to 23 million tonnes due to the COVID 19 pandemic. A $4 \%$ decrease in global area is anticipated for 202021 and this decrease is based on lower prices.

India with ( 6.0 m tonnes) followed by China ( 5.8 M tonnes) are the world's largest cotton producers. The estimate is likely to be revised since the entire cotton has yet not been procured. The global cotton productivity is projected at $771 \mathrm{~kg} / \mathrm{ha}$ as against $479 \mathrm{~kg} / \mathrm{ha}$ in India.

With ( 5.355 m tonnes ) India is the second largest consumer of cotton after China ( 8.05 m tonnes). The area, production and productivity of cotton in India is presented in Table 1. The production and productivity figures are tentative and are likely to be changed.

In May 2020, CAI has reduced the projected cotton production for 2019-20 to 330 lakh bales. Maharashtra, Gujarat and Telangana ranking top three in area, together occupy about ( $70 \%$ )
of cotton area. Their combined contribution to cotton production is around 65.5 \%. The North, Central and South Zone account for 13.8, 60.5 and 24.0 percent respectively of the area under cotton in India. The North, Central and South Zone account for $17.2,55.6$ and 25.9 percent respectively to the total cotton produced in India

Table 1. Area, Production (estimate) and Productivity of Cotton in India (2019-20)

| Year | 2019-20 |  |  |
| :---: | :---: | :---: | :---: |
| State | Area (lakh ha) | Production <br> (Lakh <br> bales)* | $\begin{gathered} \text { Yield } \\ (\mathrm{kg} \text { lint/ha) } \end{gathered}$ |
| Punjab | 3.92 | 10 | 434 |
| Haryana | 7.01 | 26 | 631 |
| Rajasthan | 6.45 | 25 | 659 |
| North total | 17.38 | 61 | 597 |
| Gujarat | 26.29 | 96 | 621 |
| Maharashtra | 43.69 | 85 | 331 |
| Madhya Pradesh | 6.10 | 16 | 446 |
| Central total | 76.08 | 197 | 440 |
| Telangana | 17.61 | 51 | 492 |
| Andhra Pradesh | 5.86 | 15 | 435 |
| Karnataka | 5.50 | 20.5 | 634 |
| Tamil Nadu | 1.28 | 5 | 664 |
| South total | 30.25 | 91.5 | 514 |
| Orissa | 1.70 | 4 | 400 |
| Others | 0.43 | 1 | 395 |
| Total | 125.84 | 354.5 | 479 |

The Cotton Corporation of India (CCI) despite several operational hurdles due to COVID 19, intervened and procured a record 98 lakh bales of cotton at MSP from the states of Gujarat, Maharashtra, Telangana, Haryana and Punjab till the first week of June 2020.

## Overview of Cotton Production in 2018-19

 Table 2.| Year | 2018-19 <br> StateArea <br> (lakh ha) |  |  |
| :--- | :---: | :---: | :---: |
| Production <br> (Lakh <br> bales) | Yield <br> (kg lint/ha) |  |  |
| Punjab | 2.84 | 11.50 | 688 |
| Haryana | 6.65 | 27.00 | 690 |
| Rajasthan | 4.96 | 22.00 | 754 |
| North total | $\mathbf{1 4 . 4 5}$ | $\mathbf{6 0 . 5 0}$ | $\mathbf{7 1 2}$ |


| Gujarat | 27.09 | 92.00 | 577 |
| :--- | :---: | :---: | :---: |
| Maharashtra | 41.19 | 81.00 | 334 |
| Madhya Pradesh | 6.97 | 24.00 | 585 |
| Central total | $\mathbf{7 5 . 2 5}$ | $\mathbf{1 9 7 . 0 0}$ | $\mathbf{4 4 5}$ |
| Telangana | 17.94 | 53.00 | 502 |
| Andhra Pradesh | 5.51 | 20.00 | 617 |
| Karnataka | 5.75 | 18.00 | 532 |
| Tamil Nadu | 1.40 | 6.00 | 729 |
| South Total | $\mathbf{3 0 . 6 0}$ | $\mathbf{9 7 . 0 0}$ | $\mathbf{5 3 9}$ |
| Orissa | 1.58 | 4.50 | 484 |
| Others | 0.50 | 2.00 | 680 |
| GR TOTAL | $\mathbf{1 2 2 . 3 8}$ | $\mathbf{3 6 1 . 0 0}$ | $\mathbf{5 0 1}$ |

## Source: Cotton Corporation of India -https://cotcorp.org.in/current_cotton.aspx

## Current Cotton Scenario in Different States (2018-19)

Data pertaining to cotton area, production and productivity of cotton in different states / zones, during 2018-19 is depicted in Table 2.

The North, Central and South zones respectively contributed 17,56 and $27 \%$ to the national cotton production.

Around $60 \%$ of the cotton area is under the Central zone and $11.5 \%$ and $27.4 \%$ of the area is spread over North and South zones respectively.

Around 1.88 lakh ha ( $1.3 \%$ ) area is in the state of Odisha.

The leading cotton growing states are Maharashtra, Gujarat and Telangana. Together, these three states occupy $69 \%$ of the cotton area and contribute $64 \%$ to the national cotton production.

High cotton productivity is realised in the states of Rajasthan ( $754 \mathrm{~kg} / \mathrm{ha}$ ), Punjab ( 688 kg / ha), Haryana ( $690 \mathrm{~kg} / \mathrm{ha}$ ) and Tamilnadu ( 680 $\mathrm{kg} / \mathrm{ha}$ ).

On All India basis, cotton was cultivated in 122.38 lakh ha and the average annual production was 361 lakh bales with a productivity of 501 kg/ha.

The total consumption was 305 lakh bales ( 278 by non SSI mills and 27 lakh bales by SSI).

During 2018-19 65 lakh bales of cotton was exported and 15 lakh bales was imported.

Table 3: World Cotton Situation in Major Cotton Producing Countries: (Area, Production and Productivity) till 2017-18

| Country | Area <br> $(\mathrm{m} ~ h a) ~$ |  | Production <br> (m bales of 480 lbs$)$ |  | Yield lint (kg/ha) |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $2013-14$ | $2017-18$ | $2013-14$ | $2017-18$ | $2013-14$ | $2017-18$ |
| India | 11.7 | 12.4 | 29 | 29 | 540 | 506 |
| China | 5.05 | 3.4 | 32 | 27.5 | 1380 | 1763 |
| United States | 3.102 | 4.49 | 13.187 | 20.9 | 926 | 1014 |
| Pakistan | 3 | 2.6 | 9.5 | 8.2 | 689 | 687 |
| Brazil | 1.1 | 1.19 | 7.4 | 9.2 | 1465 | 1685 |
| Australia | 0.415 | 0.53 | 4.1 | 4.9 | 2151 | 2015 |
| Uzbekistan | 1.285 | 1.25 | 4.25 | 3.95 | 720 | 689 |
| Turkmenistan | 0.575 | 0.545 | 1.5 | 1.36 | 568 | 543 |
| Mali | 0.53 | 0.73 | 0.94 | 1.35 | 386 | 403 |
| Burkina | 0.575 | 0.85 | 1.125 | 1.775 | 426 | 455 |
| Egypt | 0.13 | 0.091 | 0.45 | 0.3 | 754 | 718 |
| World | 33.145 | 33.38 | 116.671 | 123.69 | 766 | 808 |

## Overview of Cotton Production in 2017-18

During the year (2017-18) the world cotton production was estimated at 123.69 million bales of 480 lbs (Table 3). That was an increase of $14.81 \%$ compared to the previous year. The area under cotton remained static around 33 million ha. Although, India continued to position itself as a leading cotton producer in the world,

China and United States increased their cotton production around $23 \%$ as compared to the previous year. The world productivity of cotton increased from 766 kg lint/ ha in 2013-14 to 808 $\mathrm{kg} / \mathrm{ha}$ in 2017-18.
(to be continued...)
(The views expressed in this column are of the author and not that of Cotton Association of India)

# CAI Maintains its Crop Estimate for the Cotton Season 2019-20 at 330 Lakh Bales 

Cotton Association of India (CAI) has released its May estimate of the cotton crop for the season 2019-20 beginning from 1st October 2019. The CAI has retained its cotton crop estimate for 2019-20 at the same level as estimated by it in the previous month i.e. at 330 lakh bales of 170 kgs. each. The cotton crop finalised by the CAI for the last year i.e. for the crop year 2018-19 was 312.00 lakh bales of 170 kgs . each. A statement containing the Statewise estimate of the cotton crop and the balance sheet as on 30th September 2020 drawn by the Crop Committee of the CAI with the corresponding data for 2018-19 crop year are given below.

The total cotton supply estimated by the CAI during the months of October 2019 to May 2020 is 352.65 lakh bales of 170 kgs . each which consists of the arrivals of 307.65 lakh bales upto 31st May 2020, imports of 13.00 lakh bales upto 31st May 2020 and the opening stock estimated by the CAI at 32.00 lakh bales at the beginning of the season.

Further, the CAI has estimated cotton consumption during the months of October 2019 to May 2020 at 174.00 lakh bales of 170 kgs . each while
the export shipment of cotton estimated by the CAI upto 31st May 2020 is 37.10 lakh bales of 170 kgs . each. Stock at the end of May 2020 is estimated by the CAI at 141.55 lakh bales including 17.00 lakh bales with textile mills and the remaining 124.55 lakh bales with CCI and others (MNCs, Traders, Ginners, etc.).

The Crop Committee of the Association has estimated total cotton supply till end of the cotton season i.e. upto 30th September 2020 at 377.00 lakh bales of 170 kgs . each (i.e. at the same level as estimated in the previous month). Total cotton supply consists of the Opening Stock of 32.00 lakh bales at the beginning of the cotton season on 1st October 2019, crop for the season estimated at 330.00 lakh bales and imports estimated by the CAI at 15.00 lakh bales, which are lower by 17.00 lakh bales compared to the previous year's estimate of 32.00 lakh bales.

Domestic consumption for the entire crop year i.e. upto 30th September 2020 has been estimated at 280.00 lakh bales i.e. at the same level as estimated in the last month. The consumption for the crop year 2019-20 was earlier estimated the CAI at 331.00
lakh bales based on the estimate of Cotton Advisory Board made in their meeting held on 28th November 2019 but the same was reduced by 51.00 lakh bales in the previous month due to the lower consumption of cotton on account of disruptions caused by the COVID-19 Pandemic in the country. The CAI has retained its export estimate for the season at the same level as estimated in the previous month i.e. at 47 lakh bales against 42.00 lakh bales estimated earlier. The increase of 5.00 lakh bales in the export estimate than estimated in the previous year was made looking to the favourable conditions existing for exports of cotton from India. The carryover stock estimated at the end of the season is 50 lakh bales.

Highlights of deliberations held by the Crop Committee of Cotton Association of India on $15^{\text {th }}$ June 2020

Crop Committee of Cotton Association of India (CAI) has arrived at its May estimate of the cotton crop for the 2019-20 season beginning on 1st October 2019 and drawn estimated cotton balance sheet based on the data available from various trade sources, upcountry associations and other stakeholders.

The following are the highlights of deliberations of the Crop Committee of the CAI: -

## 1) Consumption

The CAI has retained its consumption estimate for the current crop year at the same level as estimated in the last month i.e. 280.00 lakh bales. The consumption for the Season was previously estimated at 331.00 lakh bales but the same was reduced by 51 lakh bales to 280 lakh bales in the last month due to the disruptions caused on account of lockdown and the shortage of labour.

Upto 31st May, consumption is estimated at 174.00 lakh bales of 170 Kgs . each.

The members of the CAI Crop Committee will monitor consumption figures very closely and if any increase or decrease is required to be made in the estimate of cotton consumption, the same will be made in the crop reports for the months of June, July and August.

## 2) Production

The CAI has maintained its cotton production estimate for the season 2019-20 at the same level as estimated in the previous month i.e. at 330.00 lakh bales against 354.50 lakh bales estimated by it previously. The crop estimate was reduced by 24.50 lakh bales in the previous month.

The Committee members will have a close watch on the cotton arrivals of the months of June, July and August and if any addition or reduction is required to be made in the production estimate, the same will be made in the report for the month of August.

## 3) Imports

The estimate of the cotton imports into India has been maintained by the CAI at the same level as estimated in the previous month i.e. at 15.00 lakh bales. The cotton import estimate was lowered by 10.00 lakh bales in the last month (i.e. 15.00 lakh bales against 25.00 lakh bales estimated previously as due to the depreciation in the value of Indian Rupee, imported cotton has become costly as also as Indian cotton is now very cheap and easily available in quantity. This import estimate is lower by 17.00 lakh bales compared to that estimated for the last year.

Upto 31st May, 13 lakh plus cotton bales are estimated to have arrived Indian Ports.

## 4) Exports

The CAI has retained its export estimate at the same level as estimated by it in the previous month i.e. at 47.00 lakh bales against the previous year's exports estimate of 42.00 lakh bales. The projection of cotton exports for the season was increased by 5.00 lakh bales in the previous month. This increase in cotton export was estimated looking to the favourable conditions for exports viz. depreciation of Indian Rupee by about $8-10 \%$ lending a big support and the fact the Indian cotton is the cheapest in the world at this time raising an expectation that demand for Indian cotton in the international markets at the prevailing rate would increase.

Upto 30th May, 37.10 lakh bales are estimated to have been shipped and shipment of the remaining 9.90 lakh bales is expected to take place upto 30th September 2020.

## 5) Arrivals

Indian cotton arrivals during the months of October 2019 to May 2020 are estimated at 307.65 lakh bales of 170 kgs . each which are equivalent to 326.90 lakh running bales of 160 kgs. each.
6) Stock as on $31^{\text {st }}$ May

Cotton stock held by mills in their godowns on 31st May 2020 is estimated at 17.00 lakh bales (equivalent to 18.06 lakh running bales of 160 kgs . each). Mills have on an average about 24 days' cotton stock in their godowns.

CCI, MNCs, Ginners and MCX are estimated to have stock of about 124.55 lakh bales as on 31st May 2020 which is equal to about 132.33 lakh running bales of 160 kgs . each.

Thus, total stock held by spinning mills and stockists on 31st May 2020 is estimated at 141.55 lakh bales of 170 kgs. each which is equal to about 150.40 lakh running bales of 160 kgs . each.

## 7) Closing Stock as on $30^{\text {th }}$ September

Closing stock as on 30th September 2020 is
estimated by the Committee at 50.00 lakh bales of 170 kgs. each which is equivalent to about 53.00 lakh running bales of 160 kgs . each.

The meeting of the CAI Crop Committee has taken place on WhatsApp and more than 20 Members have participated.

All 31 members of the Crop Committee of the CAI from all over the country will meet after the lockdown is over sometime in the month of July/ August to arrive at the final figures for the current crop year 2019-20.

> CAI's Estimates of Cotton Crop as on 31st May 2020
> for the Seasons 2019-20 and 2018-19
> $\quad$ (in lakh bales of 170 kg .)

| State | Production* |  | Arrivals as on <br> 31st May 2020 <br> (2019-20) |
| :---: | :---: | :---: | :---: |
|  | 2019-20 | 2018-19 |  |
| Punjab | 9.50 | 8.50 | 9.07 |
| Haryana | 24.00 | 23.00 | 23.70 |
| Upper Rajasthan | 12.00 | 13.35 | 11.50 |
| Lower Rajasthan | 13.50 | 14.65 | 13.40 |
| Total North Zone | 59.00 | 59.50 | 57.67 |
| Gujarat | 85.00 | 88.00 | 72.50 |
| Maharashtra | 76.50 | 70.00 | 72.70 |
| Madhya Pradesh | 16.00 | 22.63 | 15.00 |
| Total Central Zone | 177.50 | 180.63 | 160.20 |
| Telangana | 51.00 | 35.20 | 50.18 |
| Andhra Pradesh | 14.00 | 11.85 | 13.70 |
| Karnataka | 18.50 | 15.50 | 18.05 |
| Tamil Nadu | 5.00 | 5.00 | 3.10 |
| Total South Zone | 88.50 | 67.55 | 85.03 |
| Orissa | 4.00 | 3.32 | 3.75 |
| Others | 1.00 | 1.00 | 1.00 |
| Total | 330.00 | 312.00 | 307.65 |

* Including loose

The Balance Sheet drawn by the Association for 2019-20 and 2018-19 is reproduced below:-
(in lakh bales of 170 kg .)

| Details | $\mathbf{2 0 1 9 - 2 0}$ | $\mathbf{2 0 1 8 - 1 9}$ |
| :--- | :---: | :---: |
| Opening Stock | 32.00 | 33.00 |
| Production | 330.00 | 312.00 |
| Imports | 15.00 | 32.00 |
| Total Supply | $\mathbf{3 7 7 . 0 0}$ | $\mathbf{3 7 7 . 0 0}$ |


| Mill Consumption | 243.00 | 274.50 |
| :--- | :---: | :---: |
| Consumption by SSI Units | 21.00 | 25.00 |
| Non-Mill Use | 16.00 | 12.00 |
| Total Domestic Demand | $\mathbf{2 8 0 . 0 0}$ | $\mathbf{3 1 1 . 5 0}$ |
| Available Surplus | $\mathbf{9 7 . 0 0}$ | $\mathbf{6 5 . 5 0}$ |
| Exports | 47.00 | 42.00 |
| Closing Stock | $\mathbf{5 0 . 0 0}$ | $\mathbf{2 3 . 5 0}$ |

Balance Sheet of 8 months i.e. from 1.10.2019 to 31.05.2020 for the season 2019-20

| Details | (in lakh b/s <br> of $\mathbf{1 7 0} \mathbf{~ k g}$ ) | (in '000 <br> Tons) |
| :--- | :---: | :---: |
| Opening Stock as on <br> 01.10 .2019 | 32.00 | 544.00 |
| Arrivals upto 31.05.2020 | 307.65 | 5230.05 |
| Imports upto 31.05.2020 | 13.00 | 221.00 |
| Total Available | 352.65 | 5995.05 |
| Consumption | 174.00 | 2958.00 |
| Export Shipment upto <br> 31.05 .2020 | 37.10 | 630.70 |
| Stock with Mills | 17.00 | 289.00 |
|  <br> Ginners | 124.55 | 2117.35 |
| Total | 352.65 | 5995.05 |

As per Cotton Association of India
Stock on 31.05.2020
(Figures in lakh bales of 170 kg .)

| State | GINNERS/ <br> MNC | cCiNEW | CCIOLD | MCX | MAH. <br> FEDN. | TOTAL |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| PUNJAB | 0.30 | 3.40 | 0.00 | 0.00 | 0.00 | 3.70 |
| HARYANA | 0.35 | 6.00 | 0.00 | 0.00 | 0.00 | 6.35 |
| RAJASTHAN | 2.05 | 3.40 | 0.00 | 0.00 | 0.00 | 5.45 |
| GUJARAT | 3.00 | 8.50 | 0.06 | 0.78 | 0.00 | 12.34 |
| MAHARASHTRA | 2.50 | 20.00 | 1.01 | 0.65 | 13.05 | 37.21 |
| ANDHRA <br> PRADESH | 0.35 | 2.10 | 0.10 | 0.00 | 0.00 | 2.55 |
| TELANGANA | 0.40 | 40.00 | 5.60 | 0.02 | 0.00 | 46.02 |
| MADHYA <br> PRADESH | 1.15 | 3.55 | 0.30 | 0.00 | 0.00 | 5.00 |
| ORISSA | 0.50 | 1.60 | 0.18 | 0.00 | 0.00 | 2.28 |
| KARNATAKA | 1.00 | 2.55 | 0.10 | 0.00 | 0.00 | 3.65 |
| TOTAL | 11.60 | 91.10 | 7.35 | 1.45 | 13.05 | 124.55 |

UPCOUNTRY SPOT RATES



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April 2020











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| Growth | P/H/R | $\begin{gathered} \mathrm{P} / \mathrm{H} / \mathrm{R} \\ (\mathrm{SG}) \end{gathered}$ | GUJ | KAR | M/M(P) | $\begin{aligned} & \mathrm{P} / \mathrm{H} / \\ & \mathrm{R}(\mathrm{U}) \\ & (\mathrm{SG}) \end{aligned}$ | $\mathrm{M} / \mathrm{M}(\mathrm{P}) /$ SA/TL | $\begin{aligned} & \mathrm{P} / \mathrm{H} / \\ & \mathrm{R}(\mathrm{U}) \end{aligned}$ | $\begin{gathered} \mathrm{M} / \mathrm{M}(\mathrm{P} / / \\ \mathrm{SA} / \\ \mathrm{TL} / \mathrm{G} \end{gathered}$ | $\mathrm{M} / \mathrm{M}(\mathrm{P}) /$ SA/TL | $\begin{gathered} \mathrm{P} / \mathrm{H} / \\ \mathrm{R}(\mathrm{U}) \end{gathered}$ | M/M(P) | SA/TL | GUJ | R(L) | M/M(P) | $\begin{gathered} \mathrm{SA} / \\ \mathrm{TL} / \mathrm{K} \end{gathered}$ | GUJ | M/M(P) | $\begin{gathered} \text { SA/TL/ } \\ \text { K/O } \end{gathered}$ | M/M(P) | $\begin{aligned} & \text { SA/ } \\ & \text { TL/ K/ } \\ & \text { TN/O } \end{aligned}$ | $\begin{aligned} & \mathrm{SA} / \\ & \mathrm{TL} / \mathrm{K} / \\ & \mathrm{TN} / \mathrm{O} \end{aligned}$ | M/M(P) | K/TN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Grade Standard | ICS-101 | ICS-201 | ICS-102 | ICS-103 | ICS-104 | ICS-202 | ICS-105 | ICS-105 | ICS-105 | ICS-105 | ICS-105 | ICS-105 | ICS-105 | ICS-105 | ICS-105 | ICS-105 | ICS-105 | ICS-105 | ICS-105 | ICS-105 | ICS-105 | ICS-105 | ICS-106 | ICS-107 | ICS-107 |
| Grade | ne | Fine | ine | Fine | Fine | Fine | Fine | ine | Fine | Fine | Fine | Fine | Fine | Fine | Fine | Fine | Fine | Fine | Fine | Fine | Fine | Fine | Fine | Fine | Fine |
| Staple | Below <br> 22 mm | $\begin{aligned} & \text { Below } \\ & 22 \mathrm{~mm} \end{aligned}$ | 22 mm | 23 mm | 24 mm | 27 mm | 26 mm | 27 mm | 27 mm | 27 mm | 28 mm | 28 mm | 28 mm | 28 mm | 29 mm | 29 mm | 29 mm | 29 mm | 30 mm | 30 mm | 31 mr | 31 mm | 32 mm | 34 mm | 34 mm |
| Micronaire | 5.0-7.0 | 5.0-7.0 | 4.0-6.0 | 4.0-5.5 | 4.0-5.5 | 3.5-4.9 | 3.0-3.4 | 3.5-4.9 | 3.0-3.4 | 3.5-4.9 | 3.5-4.9 | 3.5-4.9 | 3.8-4.2 | 3.8-4.2 | 3.7-4.9 | 3.8-4.2 | 3.8-4.2 | 3.8-4.2 | 3.8-4.2 | 3.8-4.2 | 3.8-4.2 | 3.8-4.2 | 3.5-4.9 | 3.0-3.8 | 3.0-3.8 |
| Gravimetric Tra | 4\% | 4.5\% | 13\% | 4.5\% | 4\% | 4.5\% | 4\% | 4\% | 4\% | 3.5\% | 4\% | 3.5\% | 3.5\% | 3\% | 3.5\% | 3.5\% | 3\% | 3\% | 3.5\% | 3\% | 3\% | 3\% | 3\% | 4\% | 3.5\% |
| Strength/GPT | 15 | 15 | 20 | 21 | 23 | 26 | 25 | 26 | 25 | 26 | 27 | 27 | 27 | 27 | 28 | 28 | 28 | 28 | 29 | 29 | 30 | 30 | 31 | 33 | 33 |
| 1 | 10292 | 10432 | - | - | 9336 | 10123 | - | 10236 | - | 9842 | 10320 | 10208 | 10292 | 10208 | 10489 | 10404 | 10461 | 10376 | 10376 | 10629 | 11107 | 1220 | 11529 | 15016 | 15578 |
| 2 |  |  |  |  |  |  |  |  |  |  | O L | A Y |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3 | 10292 | 10432 | - | - | 9336 | 10123 | - | 1023 | - | 9842 | 10320 | 10208 | 10292 | 10208 | 10489 | 10404 | 10461 | 10376 | 10573 | 10629 | 11107 | 1220 | 11529 | 15016 | 578 |
| 4 | 10292 | 10432 | - | - | 9336 | 10123 | - | 10236 | - | 9842 | 10320 | 10208 | 10292 | 10208 | 10489 | 10404 | 10461 | 10376 | 10573 | 10629 | 11107 | 11220 | 11529 | 15016 | 15578 |
| 6 | 10292 | 10404 | - | - | 9336 | 10067 | - | 10179 | - | 9842 | 10264 | 10179 | 10264 | 10179 | 10432 | 10376 | 10432 | 10348 | 10573 | 10629 | 11107 | 11220 | 11529 | 15016 | 15578 |
| 7 | 10292 | 10404 | - | - | 9392 | 10123 | - | 10236 | - | 9870 | 10320 | 10236 | 10320 | 10236 | 10489 | 10432 | 10489 | 10404 | 10573 | 10629 | 11107 | 11220 | 11529 | 15100 | 15578 |
| 8 | 10292 | 10404 | - | - | 9392 | 10123 | - | 10236 | - | 9870 | 10320 | 10236 | 10320 | 10236 | 10489 | 10432 | 10489 | 10404 | 10573 | 10629 | 11107 | 11220 | 11529 | 15100 | 15578 |
| 9 | 10292 | 10404 |  |  | 9420 | 10151 |  | 10264 |  | 9898 | 10348 | 10264 | 10348 | 10264 | 10517 | 10461 | 10517 | 10432 | 10573 | 10629 | 11107 | 11220 | 11529 | 15100 | 15578 |
| 10 | 10292 | 10404 | - | - | 9420 | 1015 | - | 1026 | - | 9898 | 10348 | 10264 | 10348 | 10264 | 10517 | 10461 | 10517 | 10432 | 10573 | 10629 | 11107 | 11220 | 11529 | 15100 | 15578 |
| 11 | 10292 | 10404 | - | - | 9420 | 10151 | - | 10264 | - | 9898 | 10348 | 10264 | 10348 | 10264 | 10517 | 10461 | 10517 | 10432 | 10573 | 10629 | 11107 | 11220 | 11529 | 15100 | 15578 |
| 13 | 10292 | 10404 | - | - | 9420 | 10151 | - | 10264 | - | 9898 | 10348 | 10264 | 10348 | 10264 | 10517 | 10461 | 10517 | 10432 | 10573 | 10629 | 11107 | 11220 | 11529 | 15100 | 15578 |
| 14 | 10292 | 10404 | - | - | 9420 | 10151 | - | 10264 | - | 9898 | 10348 | 10264 | 10348 | 10264 | 10517 | 10461 | 10517 | 10432 | 10573 | 10629 | 11107 | 11220 | 11529 | 15100 | 15578 |
| 15 | 10292 | 10404 | - | - | 9364 | 10095 | - | 10208 | - | 9842 | 10292 | 10208 | 10292 | 10208 | 10461 | 10404 | 10461 | 10376 | 10517 | 10573 | 11051 | 11164 | 11473 | 15044 | 15522 |
| 16 | 10292 | 10404 | - | - | 9420 | 10151 | - | 10264 | - | 9898 | 10348 | 10264 | 10348 | 10264 | 10517 | 10461 | 10517 | 10432 | 10573 | 10629 | 11107 | 11220 | 11529 | 15100 | 15578 |
| 17 | 10264 | 10376 | - | - | 9280 | 9983 | - | 10095 | - | 9758 | 10179 | 10123 | 10208 | 10123 | 10348 | 10320 | 10376 | 10292 | 10432 | 10489 | 10967 | 11079 | 11389 | 14960 | 15438 |
| 18 | 10264 | 10376 | - | - | 9364 | 9983 | - | 10095 | - | 9842 | 10179 | 10208 | 10292 | 10208 | 10348 | 10404 | 10461 | 10376 | 10517 | 10573 | 11051 | 11164 | 11473 | 15044 | 15522 |
| 20 | 10179 | 10292 | 6749 | 8155 | 9280 | 9898 | - | 10011 | - | 9758 | 10095 | 10123 | 10208 | 10123 | 10264 | 10320 | 10376 | 10292 | 10432 | 10489 | 10967 | 11079 | 11389 | 14960 | 15438 |
| 21 | 10179 | 10292 | 6693 | 8155 | 9223 | 9842 | - | 9954 | - | 9701 | 10039 | 10067 | 10151 | 10067 | 10208 | 10264 | 10320 | 10236 | 10376 | 10432 | 10911 | 11023 | 11332 | 14904 | 15382 |
| 22 | 10179 | 10292 | 6693 | 8155 | 9223 | 9842 | - | 9954 | - | 9701 | 10039 | 10067 | 10151 | 10067 | 10208 | 10264 | 10320 | 10236 | 10376 | 10432 | 10911 | 11023 | 11332 | 14904 | 15382 |
| 23 | 10179 | 10292 | 6777 | 8239 | 9308 | 9926 | - | 10039 | - | 9786 | 10123 | 10151 | 10236 | 10151 | 10292 | 10348 | 10404 | 10320 | 10461 | 10517 | 10995 | 11107 | 11417 | 14988 | 15466 |
| 24 | 10179 | 10292 | 6749 | 8211 | 9280 | 9926 |  | 10039 |  | 9758 | 10123 | 10123 | 10208 | 10067 | 10292 | 10320 | 10376 | 10292 | 10432 | 10489 | 10967 | 11079 | 11389 | 14960 | 15438 |
| 25 | 10179 | 10292 | 6693 | 8211 | 9280 | 9926 | - | 10039 | - | 9758 | 10123 | 10039 | 10208 | 9983 | 10292 | 10320 | 10376 | 10292 | 10432 | 10489 | 10967 | 11079 | 11389 | 14960 | 15438 |
| 27 | 10123 | 10236 | 6636 | 8155 | 9223 | 9870 | - | 9983 | - | 9701 | 10067 | 9983 | 10151 | 9926 | 10236 | 10264 | 10320 | 10236 | 10376 | 10432 | 10911 | 11023 | 11332 | 14904 | 15382 |
| 28 | 10039 | 10151 | 6552 | 8070 | 9139 | 9786 | - | 9898 | - | 9617 | 9983 | 9898 | 10067 | 9842 | 10151 | 10179 | 10236 | 10151 | 10292 | 10348 | 10826 | 10939 | 11248 | 14819 | 15297 |
| 29 | 10039 | 10151 | 6496 | 8014 | 9083 | 9729 | - | 9842 | - | 9561 | 9926 | 9842 | 10011 | 9786 | 10095 | 10123 | 10179 | 10095 | 10236 | 10292 | 10770 | 10882 | 11192 | 14763 | 15241 |
| 30 | 10039 | 10151 | 6496 | 8014 | 9083 | 9786 |  | 9898 |  | 9561 | 9983 | 10208 | 10011 | 9786 | 10151 | 10123 | 10179 | 10095 | 10236 | 10292 | 10770 | 10882 | 11192 | 14763 | 15241 |
| H | 10292 | 10432 | 6777 | 8239 | 9420 | 10151 | - | 10264 | - | 9898 | 10348 | 10264 | 10348 | 10264 | 10517 | 10461 | 10517 | 10432 | 10573 | 10629 | 11107 | 11220 | 11529 | 15100 | 15578 |
| L | 10039 | 10151 | 6496 | 8014 | 9083 | 9729 | - | 9842 | - | 9561 | 9926 | 9842 | 10011 | 9786 | 10095 | 10123 | 10179 | 10095 | 10236 | 10292 | 10770 | 10882 | 11192 | 14763 | 15241 |
| A | 10226 | 10341 | 6653 | 8138 | 9308 | 10003 |  | 10115 |  | 9790 | 10200 | 10138 | 10239 | 10124 | 10368 | 10351 | 10408 | 10323 | 10476 | 10532 | 11011 | 11123 | 11432 | 14990 | 15482 |


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

