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<th>Denomination</th>
<th>Acknowledgement No.</th>
<th>Crop</th>
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</table>

1. Crop wise details of Seed sent for DUS Testing to DUS Test centres during the month of May, 2016.
2. DUS Test guideline of Betelvine (*Piper betle* L.)
3. Passport data of 24 Extant (VCK) and 3 New Varieties published here for calling objection if any from persons in this matter.
PUBLIC NOTICE

Sub: Notice is given under Rule 29 (8 and 9) of the PPV & FR Rules, 2003.

As a requirement under Rule 29 (8) and (9) of the PPV & FR Rules, 2003, it is hereby informed that the crop specific DUS test guideline namely: Betelvine (Piper betle L.) is hereby published in ‘Plant Variety Journal of India’, Vol. 10, No. 06, JUne 03, 2016.

Sd/-
(R.C.Agrawal)
Registrar-General
I. Subject

These test guidelines shall apply to all varieties and hybrids of Betelvine (Piper betle L.) grown under open system of cultivation and closed (Boroj) system of cultivation.

The open system of cultivation under natural condition is practiced in north eastern and southern states. Betelvine is grown with arecanut (Areca catechu L.) and Sesbania grandiflora as support crop for the vine.

Boroj is an artificially erected closed hut structure, the main framework of which is made of bamboo poles to a height of 2m. Its sides and roof are made of locally available materials like jute stick, straw, grass banana leaf etc. For support of the vine, jute sticks or sliced bamboo sticks or reeds are used.

II. Planting material required

The protection of Plant Varieties and Farmer’s Rights Authority (PPV & FRA) shall decide when, where and in what quantity and quality the planting material is required for testing a variety denomination applied for registration under the protection of Plant Varieties and Farmer’s Rights Act, 2001. Applicants submitting such planting material from a country other than India shall make sure that all customs and quarantine requirements stipulated under relevant national legislations and regulations are complied with.

The minimum number of planting materials (rooted cuttings) to be supplied by the applicant shall be 15/30 rooted cuttings of cultivars or hybrids depending on the testing condition.

1. The planting material supplied shall be healthy, not lacking in vigor or affected by any pest or diseases as well as nutrient deficiency. The age of the rooted cutting from the terminal shoots shall be 3 months from the date of planting in the polythene bags [20cm x 10cm size with soil mixture (1:1:1 soil, FYM and sand)]. The rooted cutting shall be of minimum height of 25 cm.

2. The plant material should not have undergone any treatment which would affect the expression of the characteristics of the variety. The planting material shall not have undergone any chemical or biophysical treatment unless the Competent Authority allow or request such treatments. If it has been treated, full details of the treatment must be given.

III. Conduct of tests

1. The minimum duration of DUS tests shall be two crop years from the date of planting from same plants or till the observations recorded on leaves from plagiotropic branches. For the purpose of these test guidelines, crop years include continuous leaf harvestable years (Leaves from Plagiotropic shoot(open system of cultivation and leaves from orthotropic shoot(closed system of cultivation)).

2. The test shall normally be conducted at one place suitable to its growing systems. If any essential characteristics of the candidate variety are not expressed for visual observation at this location, the variety shall be considered for further examinations at another test site or under special test protocol on expressed request of the applicant.

3. The field test shall be carried out under favoring normal growth and expression of all test characteristics. In particular, a satisfactory crop must be produced in at least two crop years. As a minimum, each test shall include fifteen/thirty vines which shall be divided between two or more replicates.

4. Test plot design
Open system of cultivation

Standard : Under Areca nut
Duration : 3 years
Spacing : 2.7/2.7m
Number of replications : 3
Plants/ replication : 5

Standard : Under Sesbania
Duration : 2 years
Spacing : 100 cm x 20 cm
Number of replications : 3
Plants/ replication : 10

Closed system of cultivation

Standard : Bamboo sticks
Duration : 2 years
Spacing : 70 cm x 10 cm
Number of replications : 3
Plants/ replication : 10

5. Additional test protocols for special tests established by the PPV & FR Authority.

IV. Methods and observation

1. The characteristics described in the Table of characteristics (section VII) shall be used for testing of varieties and hybrids for their DUS.

2. Unless otherwise indicated, all observations determined by measurement or counting shall be made on five vines or parts of five vines.

3. All the leaf characters shall be recorded on harvestable mature leaves of orthotropic shoot which may be present on or beyond 8\text{th} node from the tip under closed system of cultivation. All the leaf characters shall be recorded on the 2\text{nd} /3\text{rd} (harvestable) leaf from plagiotropic shoot (lateral branch) or orthotropic shoot in open system of cultivation.

4. All observations shall be taken only from the established vines which shall be at least one year after the planting of cuttings.

V. Grouping of varieties

1. The candidate varieties for DUS testing shall be divided into groups to facilitate the assessment of Distinctiveness. Characteristics, which are known from experience not to vary or to vary only slightly, within a variety and which in their various states are evenly distributed across all varieties in the collection, are suitable for grouping purposes.
2. The following characteristics shall be used for grouping of Betelvine varieties.
   i. Plant: Orthotropic shoot stripe colour (Characteristic 3)
   ii. Plant: Orthotropic shoot intermodal length (Characteristic 4)
   iii. Leaf: Orthotropic leaf l/b ratio (Characteristic 8)
   iv. Leaf: Orthotropic leaf petiole length (Characteristic 9)
   v. Leaf: Orthotropic leaf -Depth/width of lobe (Characteristic 13)
   vi. Leaf: Leaf lamina colour (orthotropic/plagiotropic) (characteristic 5&19)
   vii. Plagiotropic leaf:l/b ratio (characteristic 23)
   viii. Plant: Sex of the plant (characteristic 24)
   ix. Flowering habit: (characteristic 25)
   x. Female Catkin: Colour (characteristic 26)
   xi. Male Catkin: Length (characteristic 28)

VI. Characteristics and symbols
1. To assess Distinctiveness, uniformity and stability, the characteristics and their states are given in the table of characteristics (Section VII) shall be used. The characters shall be recorded in open and closed system of cultivation as specified in the table (Section VII).
2. Notes (1 to 9) shall be used to describe the state of each character for the purpose of digital data processing and these notes shall be given against the state of each characteristic.
3. Legend
   (*) Characteristics that shall be observed during every growing season on all varieties and shall always be included in the description of the variety, except when the state of expression of any of these characters is rendered impossible by a preceding phenomenal characteristic or by the environmental conditions of the testing region. Under such exceptional situation, adequate explanation shall be provided.
   (**) : Open condition
   (*,**): open/closed condition
   (+) See explanation on the table of characteristics in section VIII. It is to be noted that for certain characteristics the plant parts on which observations to be taken are given in the explanation or figure(s) for clarity and not for the colour variation.
5. The optimum stage of plant growth for assessment of each characteristic is given in the sixth column of the characteristic.
6. Type of assessment of characteristics indicated in column seven of Table of characteristics is as follows.

**MG**: Measurement by a single observation of a group of plants or parts of plants

**MS**: Measurement of a number of individual plants or parts of plants
**VG:** Visual assessment by a single observation of a group of plants or parts of plants

**VS:** Visual assessment by observation of individual plant or parts of plants
## VII. Table of characteristics

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<tr>
<th>S. No</th>
<th>Characteristics</th>
<th>States</th>
<th>Note</th>
<th>Example variety</th>
<th>Stage of observation</th>
<th>Type of assessment</th>
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<tr>
<td>1 (+)</td>
<td>Plant: Adventitious root production (Closed)</td>
<td>Few (&lt; 5.0)</td>
<td>3</td>
<td>HalisaharSanchi</td>
<td>Fully established vines (at least one year after planting)</td>
<td>MS</td>
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<tr>
<td></td>
<td></td>
<td>Medium (5-10)</td>
<td>5</td>
<td>Kali Bangla</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Many (&gt; 10)</td>
<td>7</td>
<td>DogapanSada</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 (+)</td>
<td>Plant: Orthotropic Shoot base colour (Closed)</td>
<td>Light Green</td>
<td>1</td>
<td>Swarna Kapoori</td>
<td>Fully established vines</td>
<td>VG</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Green</td>
<td>2</td>
<td>CARI-6</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Moderately Green</td>
<td>3</td>
<td>Ghanagete</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Dark Green</td>
<td>4</td>
<td>Gangarampur Sanchi</td>
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<td></td>
</tr>
<tr>
<td>3 (*)</td>
<td>Plant: Orthotropic Shoot Stripe colour (Closed)</td>
<td>Green</td>
<td>1</td>
<td>CARI-6</td>
<td>Fully established vines</td>
<td>VG</td>
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<tr>
<td>(*) (+)</td>
<td></td>
<td>Light Brown</td>
<td>2</td>
<td>Kapoori Pedacheppali</td>
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<td></td>
<td></td>
<td>Brown</td>
<td>3</td>
<td>Kalibaghini</td>
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<td></td>
<td>Dark Brown</td>
<td>4</td>
<td>Kadwa</td>
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<tr>
<td>4 (*,** ) (+)</td>
<td>Plant: Orthotropic Shoot Internodal length (cm) (Closed/open)</td>
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<td>Ghanagette</td>
<td>Fully established vines</td>
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<td>Medium (6.0-7.5)</td>
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<td>KutkiBangala, Godi Bangla</td>
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<tr>
<td></td>
<td></td>
<td>Long (&gt; 7.5)</td>
<td>7</td>
<td>CARI-2</td>
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<td></td>
</tr>
<tr>
<td>5 (*,** ) (+)</td>
<td>Leaf: Orthotropic Leaf lamina colour (Closed/open)</td>
<td>Light Green</td>
<td>1</td>
<td>Swarna Kapoori</td>
<td>Harvestable /mature leaves on orthotropic shoots</td>
<td>VG</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Green</td>
<td>2</td>
<td>Ghanagete, Godi Bangla</td>
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<td></td>
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<td>Dark Green</td>
<td>3</td>
<td>CARI-2</td>
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<tr>
<td>6 (+)</td>
<td>Leaf: Orthotropic Leaf Length (l) (cm) (Closed)</td>
<td>Short (&lt; 11.50)</td>
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<td>Kadwa</td>
<td>Harvestable /mature leaves on orthotropic shoots</td>
<td>MS</td>
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<td>Medium (11.50-14.50)</td>
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<td>Long (&gt; 14.50)</td>
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<td>KutkiBangala</td>
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<tr>
<td>7 (+)</td>
<td>Leaf: Orthotropic Leaf Breadth (b) (cm) (Closed)</td>
<td>Short (&lt; 9.50)</td>
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<td>MS</td>
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<tr>
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<td>Medium (9.50-12.50)</td>
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<td>Lakshman</td>
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<td>Broad (&gt; 12.50)</td>
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<td>Kari Bangla</td>
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<tr>
<td>8 (*)</td>
<td>Leaf: Orthotropic Leaf l/b ratio</td>
<td>Low (&lt; 1.30)</td>
<td>3</td>
<td>Lakshman</td>
<td>Harvestable /mature leaves on orthotropic shoots</td>
<td>MS</td>
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<td>(+)</td>
<td>(Closed)</td>
<td>Medium (1.30-1.50)</td>
<td>5</td>
<td>Meetha-2 Gangarampur</td>
<td>Sanchi on orthotropic shoots</td>
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<td>9 (*) (+)</td>
<td>Leaf: Orthotropic Leaf Petiole length (cm) (Closed)</td>
<td>Short (&lt; 6.0)</td>
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<td>SimuraliSanchi Lakshman Ghanagette</td>
<td>Harvestable/mature leaves on orthotropic shoots</td>
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<tr>
<td>10 (+)</td>
<td>Leaf: Orthotropic Leaf Thickness (µm) (Closed)</td>
<td>Thin (&lt; 190)</td>
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<td>Kalbaghini Bagherhat</td>
<td>Harvestable/mature leaves on orthotropic shoots</td>
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<td>11 (+)</td>
<td>Leaf: Depth of Orthotropic leaf lobe (cm) (Closed)</td>
<td>Shallow (&lt;0.60)</td>
<td>3</td>
<td>Kalbaghini SimuraliBhabna Kari Bangla</td>
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<td>12 (+)</td>
<td>Leaf: Width of Orthotropic leaf lobe (cm) (Closed)</td>
<td>Short (&lt;3.50)</td>
<td>3</td>
<td>Kalbaghini Ghanagette Kari Bangla</td>
<td>Harvestable/mature leaves on orthotropic shoots</td>
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<td>13 (*) (+)</td>
<td>Leaf: Depth / Width of Orthotropic leaf lobe (Closed)</td>
<td>Entire or Slightly lobed (&lt; 0.15)</td>
<td>1</td>
<td>SimuraliSanchi Kalbaghini Ghanagette</td>
<td>Harvestable/mature leaves on orthotropic shoots</td>
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<tr>
<td>14 (+)</td>
<td>Leaf: Orthotropic leaf apex Shape (open)</td>
<td>Acuminate Acute</td>
<td>1</td>
<td>Sirugamani-1 Banavalli</td>
<td>Harvestable leaves on orthotropic shoots six monthly assessment</td>
<td></td>
</tr>
<tr>
<td>15 (+)</td>
<td>Leaf: Orthotropic leaf Texture (open)</td>
<td>Glabrous Coriaceous Glabrous membranous</td>
<td>1</td>
<td>Banavalli Maghai</td>
<td>Harvestable leaves on Orthotropic shoots</td>
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<tr>
<td>16 (+)</td>
<td>Leaf: Relative distance between basal lobes of Orthotropic leaf (Closed)</td>
<td>Overlapped Close to overlap Separate</td>
<td>1</td>
<td>Ghanagette Bankura Bangla</td>
<td>Harvestable/mature leaves on orthotropic shoots</td>
<td></td>
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<tr>
<td>17 (+)</td>
<td>Number of plagiotropic shoots/unit length (No/m) (open)</td>
<td>Medium (3 to 6)</td>
<td>High (&gt;6)</td>
<td>5</td>
<td>Bangla(UP)</td>
<td>Six months after it starts plagiotropic shoot production</td>
</tr>
<tr>
<td>18 (+)</td>
<td>Plant: Plagiotropic Shoot Colour (open)</td>
<td>Light Green</td>
<td>Green</td>
<td>1</td>
<td>SwarnaKapoori</td>
<td>After it starts plagiotropic shoot production</td>
</tr>
<tr>
<td>19 (**+) (++)</td>
<td>Leaf: Plagiotropic leaf colour (open)</td>
<td>Light Green</td>
<td>Green</td>
<td>1</td>
<td>SwarnaKapoori</td>
<td>Harvestable leaves on plagiotropic shoots</td>
</tr>
<tr>
<td>20 (+)</td>
<td>Leaf: Plagiotropic leaf lamina shape (open)</td>
<td>Elliptic</td>
<td>Ovate</td>
<td>1</td>
<td>SwarnaKapoori</td>
<td>Harvestable leaves on plagiotropic shoots</td>
</tr>
<tr>
<td>21 (+)</td>
<td>Leaf: Plagiotropic leaf apex Shape. (open)</td>
<td>Acuminate</td>
<td>Acute</td>
<td>1</td>
<td>SwarnaKapoori</td>
<td>Harvestable leaves on plagiotropic shoots</td>
</tr>
<tr>
<td>22 (+)</td>
<td>Leaf: Plagiotropic leaf texture. (open)</td>
<td>Glabrous coriaceous</td>
<td>Glabrous</td>
<td>1</td>
<td>Banavalli</td>
<td>Harvestable leaves on plagiotropic shoots</td>
</tr>
<tr>
<td>23 (**+) (+)</td>
<td>Leaf: Plagiotropic leaf l/b ratio (open)</td>
<td>Low (&lt;1.5)</td>
<td>Medium (1.5 to 2.0)</td>
<td>High (&gt;2.0)</td>
<td>3</td>
<td>Godi Bangla</td>
</tr>
<tr>
<td>24 (**+) (+)</td>
<td>Plant: Sex of the plant (open)</td>
<td>Female</td>
<td>Male</td>
<td>1</td>
<td>HalisaharSanchi</td>
<td>During flowering period</td>
</tr>
<tr>
<td>25 (**+) (+)</td>
<td>Flowering Habit (open)</td>
<td>Shy flowering</td>
<td>Moderate flowering</td>
<td>Profuse flowering</td>
<td>3</td>
<td>Maghai</td>
</tr>
<tr>
<td></td>
<td>Female Catkin: colour (open)</td>
<td>Beige</td>
<td>Yellow</td>
<td>2</td>
<td>Sirugamani 1 HalisaharSanchi</td>
<td>During flowering period</td>
</tr>
<tr>
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</tr>
<tr>
<td>26</td>
<td>Female Catkin: length (cm) (open)</td>
<td>Short (&lt;2.5cm) Medium (2.5 to 4cm) Long (&gt;4cm)</td>
<td>3</td>
<td>Maghai Sirugamani-1 Halisahar Sanchi</td>
<td>During flowering period</td>
<td>MS</td>
</tr>
<tr>
<td>27</td>
<td>Male Catkin: length (cm) (open)</td>
<td>Medium (7.0 to 10 cm) Long (&gt;10cm)</td>
<td>5</td>
<td>Swarna Kapoori, IIHR BV96-1</td>
<td>During flowering period</td>
<td>MS</td>
</tr>
</tbody>
</table>

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| Number of inflorescence /Plagiotropic branch (open) | Low (<2.0 ) Medium (2.0 to 4.0 ) High (>4) | 3 | Maghai HalisaharSanchi CARI-6 | During flowering period | MS |

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<p>| | | | | | | | |</p>
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</thead>
</table>
VIII. Explanation for the Table of characteristics

Characteristic 1. Plant: Adventitious root production (Boroj)

Adventitious roots shall be counted at 4\textsuperscript{th}, 5\textsuperscript{th} & 6\textsuperscript{th} nodes from the tip of the orthotropic shoot (mean of 3 nodes) from five vines.

Characteristics 2 & 3. Plant: Orthotropic shoot base colour & Orthotropic shoot stripe colour:

The overall colour of shoot of betelvine is the combination of ground colour of the stem and colour of the longitudinal stripes on it. Orthotropic shoot colour shall be noted at 3\textsuperscript{rd} and 4\textsuperscript{th} nodes from tip of the vine. The visual assessment of the appearance shall be noted.
Characteristic 4. Plant: Orthotropic shoot internodal length (cm)

Orthotropic shoot internodal length shall be measured from 5th to 8th internodes from the tip of the orthotropic shoot as mean of 3 nodes from five vines.

Characteristic 5. Leaf: Orthotropic Leaf lamina Colour
Orthotropic leaf colour shall be observed on harvestable leaves from orthotropic shoot

Characteristic 6. Leaf: Orthotropic Leaf length(l)(cm)
Leaf length will be measured as distance between point of attachment of lamina with petiole and the tip of the leaf from 25 mature leaves of five randomly selected vines.

Characteristic 7. Leaf: Orthotropic Leaf breadth (b)(cm)

Leaf width will be measured as maximum distance between two lateral margins with the help of a scale from 25 mature leaves of five randomly selected vines.

Characteristic 8. Leaf: Orthotropic leaf l/b ratio Orthotropic leaf l/b ratio will be calculated as length of leaf divide by width of leaf from 25 observations from five vines.
Characteristic 9. Leaf: Orthotropic Leaf petiole length (cm)

Leaf petiole length will be measured as distance between points of attachment of the petiole with shoot and lamina from 25 mature leaves of five randomly selected vines.

Characteristic 10. Leaf: Orthotropic leaf thickness (µm) Orthotropic leaf thickness will be measured from 25 mature leaves of five randomly selected vines with the help of stereo microscope.
**Characteristic 11&12. Leaf: Depth & Width of Orthotropic leaf lobe**

![Leaf Diagram]

Depth of lobe will be calculated as length of leaf including lobe subtracted by leaf length (Leaf length from midrib) and measured from 25 mature leaves of five randomly selected vines.

Leaf lobe width will be measured from one side, left or right.

**Characteristic 13. Leaf: Depth/ Width of Orthotropic leaf Lobe**

Ratio of lobe depth to width will be calculated. According to ratios, three categories will be made as follows:

- Entire or slightly lobed with value (< 0.15) and (Note=1)
- Moderately lobed with value (0.15 - 0.25) and (Note=2)
- Deeply lobed with value (>0.25) and (Note=3)
**Characteristic 14. Leaf: Orthotropic leaf apex Shape**

Orthotropic leaf apex Shape is assessed from the harvestable leaves from orthotropic shoot as given below:

- **Acuminate**: The margins between the apex and 0.75L is concave, curving toward the center of the leaf, or is convex basally and concave apically.
- **Acute**: the margin between the apex and 0.75L curves away from the center of the leaf (L=Leaf length).

**Characteristic 15. Leaf: Orthotropic leaf Texture**

Orthotropic leaf Texture is observed on the harvestable leaves from orthotropic Shoot.

- Glabrous coriaceous: Leaf texture is thick and leathery devoid of trichomes.
- Glabrous membranaceous: Leaf texture is thin devoid of trichomes.

**Characteristic 16. Leaf: Relative distance between basal lobes of Orthotropic leaf**

On the basis of relative distance between basal lobes of leaf, three categories will be made as follows:

- **Lobes overlapped (Note=1)**: when lobes are physically overlapping each other near the point of attachment of lamina and petiole.
- **Close to overlap (Note=2)**: when lobes are physically very close but not overlapping.
Separate (Note-3): when lobes are sufficiently apart from each other.
The visual assessment of the appearance shall be noted.

**Characteristic 17. Number of Plagiotropic shoots /unit length (No/m)**
Number of Plagiotropic shoots /unit length shall be counted in one meter length on the orthotropic shoot leaving 30 cm from the base in five vines.

**Characteristic 18. Plant: Plagiotropic Shoot Colour**
Plagiotropic Shoot Colour shall be assessed on Terminal Shoot of plagiotropic shoot between 3rd & 4th node.

**Characteristic 19. Leaf: Plagiotropic leaf lamina colour**
Plagiotropic leaf colour shall be assessed on harvestable leaves of plagiotropic shoot

**Characteristic 20. Leaf: Plagiotropic leaf lamina shape**

Plagiotropic leaf lamina shape shall be observed from the harvestable leaves of plagiotropic shoots as described below

**Elliptic** - The widest part of the leaf is on an axis in the middle fifth of the long axis of the leaf

**Ovate** - The widest part of the leaf is on axis in the basal 2/5 of the leaf.

**Wide Elliptic** - The widest part of the leaf is on an axis in the middle fifth of the long axis of the leaf but ovate in shape.
Characteristic 21. Leaf: Plagiotropic leaf apex Shape

Plagiotropic leaf apex Shape shall be assessed on the harvestable leaves of plagiotropic shoot

**Acuminate** - The margins between the apex and 0.75L is concave, curving toward the center of the leaf, or is convex basally and concave apically

**Acute** - the margin between the apex and 0.75L curves away from the center of the leaf (L= Leaf Length)

Characteristic 22. Leaf: Plagiotropic leaf texture.

Plagiotropic leaf texture shall be observed from the harvestable leaves of plagiotropic shoot

**Glabrous coriaceous** - Leaf texture is thick and leathery devoid of trichomes

**Glabrous membranaceous** - Leaf texture is thin and devoid of trichomes

Characteristic 23. Leaf: Plagiotropic leaf l/b ratio

Plagiotropic Leaf length (l): Leaf length will be measured as distance between point of attachment of lamina with petiole and the tip of the leaf from 25 harvestable plagiotropic leaves of five randomly selected vines.

Plagiotropic Leaf breadth (b): Maximum leaf width will be measured as maximum distance between two lateral margins from 25 harvestable plagiotropic leaves of five randomly selected vines.
Plagiotropic leaf l/b ratio is calculated by dividing length /breadth of the leaf (average of 25 leaves from five vines)

**Characteristic 24. Plant: Sex of the plant**

Sex of the vine shall be assessed from inflorescences borne on plagiotropic shoots

- **Female**: vine with pistillate flowers only.
- **Male**: vine with staminate flowers only.

**Characteristic 25: Flowering Habit**
Flowering Habit shall be assessed on duration of flowering and number of inflorescences per Plagiotropic shoot
Profuse flowering: Flowering is observed throughout the year and >4 number of inflorescences per plagiotropic shoot
Moderate flowering: Flowering observed for 4-5 months and 2 to 4 inflorescences per plagiotropic shoot
Shy flowering: Flowering is observed for 1-2 months or less and < 2 inflorescence per plagiotropic shoot

**Characteristic 26. Female Catkin: colour**
Inflorescence colour shall be observed on inflorescences found on plagiotropic shoots of female varieties/hybrids

**Characteristic 27. Female Catkin: length (cm)**

Inflorescence length shall be measured on Inflorescences on plagiotropic shoots at full bloom stage in female varieties/hybrids (average of 10 female inflorescences)
Characteristic 28. Male Catkin: length (cm)

Inflorescence length shall be measured on Inflorescences on plagiotropic shoots at full bloom stage in male varieties/hybrids (average of observations on 10 male inflorescences)
Characteristic 29: Number of inflorescence /plagiotropic shoots
Number of inflorescence /plagiotropic shoots shall be counted on plagiotropic shoots (average of 15 plagiotropic shoots from five vines)

IX. Literature


4. Guidelines for the conduct of Test for Distinctiveness, Uniformity and Stability on Black Pepper (Piper nigrum L.)

X. Working group details

The test guidelines developed by the task force (09/2014) constituted by the PPV & FR Authority for Betelvine with consultation by Indian Institute of Horticultural Research (IIHR) Bangalore and Bidhan Chandra KrishiViswavidyalaya (BCKV), Kalyani, West Bengal and Technical inputs also provided by the PPV & FR Authority and nodal officer.

The members of the Task Force

1. Dr. D.P. Biradar
   Vice – Chancellor
   University of Agricultural Sciences, Yettinagudda Campus,
   Krishinagar, Dharwad – 580 005 (Karnataka)

2. Dr. Kandipudi Nirmal Babu
   Project Coordinator,
   All India Coordinated Research Project on Spices (AICRPS)
   Indian Institute of Spices Research, Manikunnu Post, Calicut-673012

3. Dr. Z. Abraham
   Principal Scientist (Retd.)
   B-104, Gardenia Jasminoides, Second Cross, Lakshmaiah Layout,
   Opposite Agara Lake, Horamavu, Bangalore - 560043, Karnataka

4. Dr. (Mrs) K. Hima Bindu
   Senior Scientist (Plant Breeding) & PI Nodal Centre,
   Section of Medicinal Crops, Indian Institute of Horticultural Research,
   Bengaluru-560089
5. Dr. B.K. Das  
Associate Professor & Officer-in-Charge,
AICRP & PI Co-Nodal Centre
on Medicinal and Aromatic Plants & Betelvine,
Directorate of Research, Bidhan Chandra Krishi Viswavidyalaya,
Kalyani, Nadia, West Bengal - 741 235

6. Dr. N. K. Biradarpatil  
Dean (Agriculture)
College of Agriculture, Bijapur, Karnataka

7. Dr. Ravi Prakash  
Registrar, PPV & FRA, New Delhi

XI. DUS testing centers

<table>
<thead>
<tr>
<th>Nodal DUS test centre</th>
<th>Co nodal DUS Test Center</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICAR-Indian Institute Horticultural Research (IIHR), Hessaraghatta lake post, Bangalore-560089</td>
<td>Bidhan Chandra Krishi Viswavidyalaya (BCKV), Kalyani, Nadia, West Bengal - 741 235</td>
</tr>
</tbody>
</table>
PUBLIC NOTICE

Sub: Advertisement is given under sub-section (2) and (3) of Section 21 of the Protection of Plant Varieties and Farmers’ Rights Act, 2001 and Rules 30 and 31 of PPV & FR Rules, 2003

It is hereby advertised that the application (s) for registration of varieties listed herein have been accepted subject to the condition of fulfillment of provisions under section 19 of the Act read with Rule 29 of PPV&FR Rules, 2003. The passport data of each variety furnished by the applicant are herewith advertised as specified for calling objections from the interested persons in the matter.

The place or places where the specimen of the variety may be inspected can be obtained in writing from the Registrar of the PPV & FR Authority.

Any person may, within three months from the date of advertisement of the application(s) give notice of opposition in writing to the registration of variety (as per Form PV-3 of the First Schedule of PPV&FR Rules, 2003). Oppositions, if any, to the registration must be submitted, in triplicate, to the Registrar, PPV&FRA, NASC Complex, DPS Marg, New Delhi -110 012 accompanied with the fee of Rs.10,000/- (Rupees Ten Thousand Only) by way of Demand Draft drawn in favour of “PPV & FR Authority” payable at New Delhi.
FORM O-1
(See Rule 30)
Government of India, Plant Varieties Registry
Advertisement of accepted application for registration

1. Application No. E5 GH13 11 424 filed on 18.07.2011 by Monsanto Holdings Pvt. Ltd, Ahura Centre, 5th floor, 96, Mahakali Caves Road, Andheri (East), Mumbai-400093 for a Extant (VCK) of crop Tetraploid Cotton \( [Gossypium hirsutum \text{ L.}] \) having denomination S07H878 BGII the specification includes its drawing and or photograph(s) of which are given below, has been accepted and given registration number -------- NA ----------- on ------------------ NA --------.

The convention application no.-----NA-----, in respect of the said variety has been filed on -----NA-----, in -- -NA----.


Passport data of the variety : S07H878 BGII
Applicant : Monsanto Holdings Pvt. Ltd.
Address of the Applicant : Ahura Centre, 5th floor, 96, Mahakali Caves Road, Andheri (East), Mumbai-400093

Nationality of Applicant : Indian
Application details :
   a. Number : E5 GH13 11 424
   b. Date of receipt : 18.07.2011
   c. Date of acceptance : --
Crop (Taxonomical Lineage) : Tetraploid Cotton \( [Gossypium hirsutum \text{ L.}] \)
Denomination : S07H878 BGII
Type of Variety : Extant(Variety of Common Knowledge)
Classification of Variety : Transgenic (Hybrid)
Previously proposed : Not applicable
Denomination

Name of Parental Material: IC1153N X IC1156B2
Source of Parental material : In-house germplasm of Monsanto Holding Pvt. Ltd.
Name of Reference Varieties : Sahana, Supriya

Variety Description:

<table>
<thead>
<tr>
<th>A. Group Characteristics</th>
<th>Remarks measured values, example varieties, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leaf: Shape</td>
<td>Palmate</td>
</tr>
<tr>
<td>Flower: Petal colour</td>
<td>Cream</td>
</tr>
</tbody>
</table>

**Flower:** Pollen colour | Cream
---|---
**Boll:** Shape (longitudinal section) | Round
**Fibre:** Length (2.5% span length)(mm) | Long to very long

<table>
<thead>
<tr>
<th><strong>B. Distinct Characteristics:</strong></th>
<th>S07H878 BGII has distinguishing character as Leaf hairiness: Medium, Boll shape (longitudinal section): Round</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>C. Reference varieties:</strong></th>
<th>Sahana has distinguishing character as Leaf hairiness: Sparse, Boll shape (longitudinal section): Ovate Supriya has distinguishing character as Leaf hairiness: Sparse</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>D. Date of commercialization of the variety</strong></th>
<th>16/04/2010 sold as MaxxCot BG II</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>E. Agronomic and commercial attributes</strong></th>
<th>The candidate variety, S07H878 BGII is a <em>G. hirsutum</em> x <em>G. hirsutum</em> Cotton hybrid recommended for Haryana, Punjab and Rajasthan states under assured irrigation cultivation. It needs a spacing of 105 x 60 cm or 67.5 x 75 cm in medium to heavy soils and a RDF of 120-60-40 kg NPK per hectare for optimum yields. It is a semi spreading hybrid maturing in 160-170 days. It is moderately tolerant to sucking pests like white fly, Jassids and Thrips. It is a big boll hybrid with good boll opening and good fiber qualities.</th>
</tr>
</thead>
</table>

**Photographs:** (See Figure-1)

2. Application No. [E60 GH71 09 174] filed on 16.04.2009 by Nuziveedu Seeds Ltd., Survey No. 69, Gundlapochampally (Vill. & Panchayat), Medchal-Mandal, Rangareddy- Dist, Telangana -501401 for a *Extant* (Variety of Common Knowledge) of crop *Tetraploid Cotton* [*Gossypium hirsutum* L.] having denomination NC-106 the specification includes its drawing and or photograph(s) of which are given below, has been accepted and given registration number --------NA----------on -----------------NA--------.

The convention application no.-----NA------, in respect of the said variety has been filed on -----NA------, in ----NA------.

Appropriate office for the opposition of proceeding under Rule 29, of the Protection of Plant Varieties and Farmers’ Rights Rules, 2003 is **Office of the Registrar, PPV & FR Authority, New Delhi – 110 012.**
Passport data of the variety: NC-106
Applicant: Nuziveedu Seeds Ltd.
Address of the Applicant: Survey No. 69, Gundlapochampally (Vill. &Panchayat), Medchal-Mandal, Rangareddy Dist, Telangana-501401

Nationality of Applicant: Indian
Application details:
   a. Number: E60 GH71 09 174
   b. Date of receipt: 16.04.2009
   c. Date of acceptance: --
Crop(Taxonomical Lineage): Tetraploid Cotton [Gossypium hirsutum L.]
Denomination: NC-106
Type of Variety: Extant(Variety of Common Knowledge)
Classification of Variety: Other (Parental line)
Previously proposed: Not applicable
Denomination
Name of Parental Material: (NCGP-745 X HS 6)-16-8-8-3-1
Source of parental material: R&D Farm, Nuziveedu Seeds Ltd.
Name of Reference Varieties: G. cot 12

Variety Description:

<table>
<thead>
<tr>
<th>A. Group Characteristics</th>
<th>Remarks measured values, example varieties, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leaf: Shape</td>
<td>Palmate</td>
</tr>
<tr>
<td>Flower: Petal colour</td>
<td>Yellow</td>
</tr>
<tr>
<td>Flower: Pollen colour</td>
<td>Cream</td>
</tr>
<tr>
<td>Boll: Shape (longitudinal section)</td>
<td>Ovate</td>
</tr>
<tr>
<td>Fibre: Length(2.5% span length)(mm)</td>
<td>Long to medium long</td>
</tr>
</tbody>
</table>

B. Distinct Characteristics: NC-106 has distinguishing character as Flower: Petal colour: Yellow

C. Reference variety: G. cot 12 has distinguishing character as Flower: Petal colour: Cream

D. Date of commercialization of the variety: 12/06/2001

E. Agronomic and commercial attributes:

- Plant Height: Tall, Growth Habit: Semi Spreading, Days to 50% flowering: 50-60 days, Maturity Group: Medium, Boll shape & size: Ovate & Medium, Response to fertilizer and irrigation: Responds to added fertilizers, Reaction to major pests: Moderate tolerance to jassids and thrips, Quality characteristics of the variety: Ginning > 37%, Strength: 21.0-24.0, Mic: 3.0-3.9, Expected yield of the variety: 1200-1400 Kg/ha., Adoptability: Suitable to varied agro-climatic conditions, Commercial attributes: it has a good combining
Photographs: (See figure-2)

3. Application No. E340 GH145 08 476 filed on 27.10.2008 by Nuziveedu Seeds Ltd., Survey No. 69, Gundlapochampally (Vill. & Panchayat), Medchal-Mandal, Rangareddy Dist, Telangana -501401 fora Extant (Variety of Common Knowledge) of crop Tetraploid Cotton [Gossypium hirsutum L.] having denomination Omkar Bt (NCS 950 Bt) the specification includes its drawing and or photograph(s) of which are given below, has been accepted and given registration number --NA--on -------------- NA -----

The convention application no.-----NA-----, in respect of the said variety has been filed on -----NA------, in --NA----.


Passport data of the variety:

Applicant: Nuziveedu Seeds Ltd.
Address of the Applicant: Survey No. 69, Gundlapochampally (Vill. & Panchayat), Medchal-Mandal, Rangareddy Dist, Telangana-501401
Nationality of Applicant: Indian
Application details:

a. Number: E340 GH145 08 476
b. Date of receipt: 27.10.2008
c. Date of acceptance: --
Crop (Taxonomical Lineage): Tetraploid Cotton [Gossypium hirsutum L.]
Denomination: Omkar Bt (NCS 950 Bt)
Type of Variety: Extant(Variety of Common Knowledge)
Classification of Variety: Transgenic & Hybrid
Previously proposed: Not applicable
Denomination:
Name of Parental Material: (NC 142 Bt X NC 1102 Bt)
Source of parental material: R&D Farm, Nuziveedu Seeds Ltd.
Name of Reference Varieties: Sahana
Variety Description:

A. Group Characteristics

<table>
<thead>
<tr>
<th>Remarks measured values, example varieties, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leaf: Shape</td>
</tr>
<tr>
<td>Flower: Petal colour</td>
</tr>
<tr>
<td>Flower: Pollen colour</td>
</tr>
<tr>
<td><strong>Boll: Shape (longitudinal section)</strong></td>
</tr>
<tr>
<td>--------------------------------------</td>
</tr>
<tr>
<td><strong>Fibre: Length (2.5% span length) (mm)</strong></td>
</tr>
</tbody>
</table>

**B. Distinct Characteristics:** OmkarBt (NCS 950 Bt) has distinguishing character as Flower: Pollen colour: **Yellow**

**C. Reference variety:** Sahana has distinguishing character as Flower: Pollen colour: **Cream**

<table>
<thead>
<tr>
<th><strong>D. Date of commercialization of the variety</strong></th>
<th>08/06/2007</th>
</tr>
</thead>
</table>

**E. Agronomic and commercial attributes**

Plant Height: Tall, Growth Habit: Semi Spreading, Days to 50% flowering: 50-60 days, Maturity Group: Medium, Boll shape & size: Round & Large, Response to fertilizer and irrigation: Responds to added fertilizers, Reaction to major pests: Resistant to American Bollworm, Quality characteristics of the variety: Ginning 33-34%, Strength: 21.0-24.0, Mic: 4.0-4.9, Expected yield of the variety: 2200-2500 Kg/ha., Adoptability: Suitable to varied agro-climatic conditions, Commercial attributes: it has a long staple length with big boll.

Photographs: (See figure-3)
4. Application No. [E344] [GH148] [08] [480] filed on 03.11.2008 by Nuziveedu Seeds Ltd.,
Survey No. 69, Gundlapochampally (Vill. & Panchayat), Medchal-Mandal, Rangareddy-Dist, Telangana -501401
for a Extant (Variety of Common Knowledge) of crop Tetraploid Cotton [Gossypium hirsutum L.] having
denomination Super Mallika Bt (NCS 955 Bt) the specification includes its drawing and or photograph(s) of which
are given below, has been accepted and given registration number ---------NA----------on ------------------ NA--------.

The convention application no.-----NA-----, in respect of the said variety has been filed on -----NA-----, in --
-NA----.

Appropriate office for the opposition of proceeding under Rule 29, of the Protection of Plant Varieties and

Passport data of the variety : Super Mallika Bt (NCS 955 Bt)
Applicant : Nuziveedu Seeds Ltd.
Address of the Applicant : Survey No. 69, Gundlapochampally (Vill. & Panchayat), Medchal-
Mandal, Rangareddy-Dist, Telangana-501401

Nationality of Applicant : Indian
Application details
  a. Number : [E344] [GH148] [08] [480]
  b. Date of receipt : 03.11.2008
  c. Date of acceptance : --
Crop (Taxonomical Lineage) : Tetraploid Cotton [Gossypium hirsutum L.]
Denomination : Super Mallika Bt (NCS 955 Bt)
Type of Variety : Extant(Variety of Common Knowledge)
Classification of Variety : Transgenic & Hybrid
Previously proposed : Not applicable
Denomination
Name of Parental Material : (NC 113Bt X NC 1102 Bt)
Source of parental material : R&D Farm, Nuziveedu Seeds Ltd.
Name of Reference Varieties : Sahana

Variety Description:

<table>
<thead>
<tr>
<th>A. Group Characteristics</th>
<th>Remarks measured values, example varieties, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leaf: Shape</td>
<td>Palmate</td>
</tr>
<tr>
<td>Flower: Petal colour</td>
<td>Cream</td>
</tr>
<tr>
<td>Flower: Pollen colour</td>
<td>Yellow</td>
</tr>
<tr>
<td>Boll: Shape (longitudinal section)</td>
<td>Ovate</td>
</tr>
<tr>
<td>Fibre: Length(2.5% span length)(mm)</td>
<td>Long</td>
</tr>
</tbody>
</table>
B. Distinct Characteristics: Super Mallika Bt (NCS 955 Bt) has distinguishing character as Flower: Pollen colour: Yellow

C. Reference variety: Sahana has distinguishing character as Flower: Pollen colour: Cream

D. Date of commercialization of the variety: 13.06.2007

E. Agronomic and commercial attributes

| Plant Height: Tall, Growth Habit: Semi Spreading, Days to 50% flowering: 50-60 days, Maturity Group: Medium, Boll shape & size: Ovate&very large, Response to fertilizer and irrigation: Responds to added fertilizers, Reaction to major pests: Resistant to American Bollworm, Quality characteristics of the variety: Ginning 35-36%, Strength: 21.0-24.0, Mic: 3.0-3.9, Expected yield of the variety: 2600-3100 Kg/ha., Adoptability: Suitable to varied agro-climatic conditions, Commercial attributes: it has a high ginning with big boll. |

Photographs: (See figure-4)

5. Application No. E86 GH98 09 202 filed on 22.04.2009 by Nuziveedu Seeds Ltd., Survey No. 69, Gundlapochampally (Vill. &Panchayat), Medchal-Mandal, Rangareddy- Dist, Telangana -501401 fora Extant (Variety of Common Knowledge) of crop Tetraploid Cotton [Gossypium hirsutum L.] having denomination NC-185 the specification includes its drawing and or photograph(s) of which are given below, has been accepted and given registration number --------NA ---------------on ------------------ NA --------.

The convention application no.-----NA------, in respect of the said variety has been filed on -----NA------, in --NA----.


Passport data of the variety : NC-185

Applicant : Nuziveedu Seeds Ltd.

Address of the Applicant : Survey No. 69, Gundlapochampally (Vill. &Panchayat), Medchal-Mandal, Rangareddy- Dist, Telangana-501401

Nationality of Applicant : Indian

Application details

- Number : E86 GH98 09 202
- Date of receipt : 22.04.2009
- Date of acceptance :

Crop(Taxonomical Lineage) : Tetraploid Cotton [Gossypium hirsutum L.]
Denomination : NC-185
**Type of Variety**: Extant (Variety of Common Knowledge)

**Classification of Variety**: Other (Inbred Parent Line)

**Previously proposed**: Not applicable

**Denomination**

**Name of Parental Material**

(NCGP-741 X AKH-081)-15-7-5-2-1

**Source of parental material**

R&D Farm, Nuziveedu Seeds Ltd.

**Name of Reference Varieties**

Kanchana

**Variety Description**:

<table>
<thead>
<tr>
<th>A. Group Characteristics</th>
<th>Remarks measured values, example varieties, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leaf: Shape</td>
<td>Palmate</td>
</tr>
<tr>
<td>Flower: Petal colour</td>
<td>Yellow</td>
</tr>
<tr>
<td>Flower: Pollen colour</td>
<td>Yellow</td>
</tr>
<tr>
<td>Boll: Shape (longitudinal section)</td>
<td>Ovate</td>
</tr>
<tr>
<td>Fibre: Length(2.5% span length)(mm)</td>
<td>Medium long</td>
</tr>
</tbody>
</table>

**B. Distinct Characteristics**: NC-185 has distinguishing character as Leaf: Colour: **Light green**, Seed: Index (100 seed wt in gram): **Bold**.

**C. Reference variety**: Kanchana has distinguishing character as Leaf: Colour: **Green**, Seed: Index (100 seed wt in gram): **Medium**

**D. Date of commercialization of the variety**

The candidate variety NC-185 is one of the Parental lines of our Cotton Hybrid NCS-109 registered in 19-05-1999. Which was first sold on 24-04-2001.

**E. Agronomic and commercial attributes**

Plant Height: Medium Tall, Growth Habit: Semi Spreading, Days to 50% flowering: 50-60 days, Maturity Group: Medium, Boll shape & size: Ovate & Medium, Response to fertilizer and irrigation: Responds to added fertilizers, Reaction to major pests: Tolerance to Thrips, Jassids and grey mildew, Quality characteristics of the variety: Ginning 35-36%, Strength: 21.0-24.0, Mic: 3.0-3.9, Expected yield of the variety: 1000-1400 Kg/ha., Adoptability: Suitable to varied agro-climatic conditions, Commercial attributes: it has a good combining ability and good tolerance to sucking pest.

Photographs: (See figure-5)
6. Application No. E107 GH119 09 228 filed on 05.05.2009 by Nuziveedu Seeds Ltd.,
Survey No. 69, Gundlapochampally (Vill. &Panchayat), Medchal-Mandal, Rangareddy- Dist, Telangana -501401
fora Extant (Variety of Common Knowledge) of crop Tetraploid Cotton [Gossypium hirsutum L.] having
denomination NC-171 the specification includes its drawing and or photograph(s) of which are given below, has
been accepted and given registration number NA on NA.

The convention application no. NA, in respect of the said variety has been filed on NA, in --NA--.

Appropriate office for the opposition of proceeding under Rule 29, of the Protection of Plant Varieties and

Passport data of the variety: NC-171
Applicant: Nuziveedu Seeds Ltd.
Address of the Applicant: Survey No. 69, Gundlapochampally (Vill. &Panchayat), Medchal-
Mandal, Rangareddy- Dist, Telangana-501401

Nationality of Applicant: Indian
Application details:
   a. Number: E107 GH119 09 228
   b. Date of receipt: 05.05.2009
   c. Date of acceptance: --
Crop(Taxonomical Lineage): Tetraploid Cotton [Gossypium hirsutum L.]
Denomination: NC-171
Type of Variety: Extant(Variety of Common Knowledge)
Classification of Variety: Other (Inbred Parent Line)
Previously proposed: Not applicable
Denomination
Name of Parental Material: (NDL-1325X BN-1)
Source of parental material: R&D Farm, Nuziveedu Seeds Ltd.
Name of Reference Varieties: MCU 8 & Narasimha

Variety Description:
A. Group Characteristics | Remarks measured values, example varieties, etc.
---|---
Leaf: Shape | Palmate
Flower: Petal colour | Cream
Flower: Pollen colour | Cream
Boll: Shape (longitudinal section) | Ovate
Fibre: Length(2.5% span length)(mm) | Long
**B. Distinct Characteristics:** NC-1171 has distinguishing character as Leaf: Colour: **Light green**.

**C. Reference variety:** MCU 8 and Narasimha has distinguishing character as Leaf: Colour: **Green**.

**D. Date of commercialization of the variety**
The candidate variety NC-1171 is one of the Parental lines of our Cotton Hybrid NC-999 registered in 2005. Which was first sold on 07-05-2005.

**E. Agronomic and commercial attributes**
- **Plant Height:** Tall, **Growth Habit:** Semi Spreading, **Days to 50% flowering:** 50-60 days, **Maturity Group:** Medium, **Boll shape & size:** Ovate & Small, **Response to fertilizer and irrigation:** Responds to added fertilizers, **Reaction to major pests and stress:** Moderate tolerance to Thrips, Jassids and drought tolerance, **Quality characteristics of the variety:** Ginning > 37%, **Strength:** 25.0-28.0, **Mic:** 4.0-4.9, **Expected yield of the variety:** 1300-1500 Kg/ha., **Adoptability:** Suitable to varied agro-climatic conditions, **Commercial attributes:** it has a good combining ability and good bearing ability.

Photographs: (See figure-6)

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**7. Application No.** [E63 GH74 09 177] filed on 16.04.2009 by Nuziveedu Seeds Ltd., Survey No. 69, Gundlapochampally (Vill. & Panchayat), Medchal-Mandal, Rangareddy- Dist, Telangana -501401 fora **Extant** (Variety of Common Knowledge) of crop **Tetraploid Cotton** [Gossypium hirsutum L.] having denomination **NC-113** the specification includes its drawing and or photograph(s) of which are given below, has been accepted and given registration number --------NA ---------------on ------------------ NA --------.

The convention application no.-----NA-----, in respect of the said variety has been filed on -----NA-----, in -- -NA----.

Appropriate office for the opposition of proceeding under Rule 29, of the Protection of Plant Varieties and Farmers’ Rights Rules, 2003 is **Office of the Registrar, PPV & FR Authority, New Delhi – 110 012.**

**Passport data of the variety** : NC-113
**Applicant** : Nuziveedu Seeds Ltd.
**Address of the Applicant** : Survey No. 69, Gundlapochampally (Vill. & Panchayat), Medchal-Mandal, Rangareddy- Dist, Telangana-501401

**Nationality of Applicant** : Indian
**Application details**
- **Number** : [E63 GH74 09 177]
- **Date of receipt** : 16.04.2009
Crop (Taxonomical Lineage): Tetraploid Cotton [Gossypium hirsutum L.]

Denomination: NC-113

Type of Variety: Extant (Variety of Common Knowledge)

Classification of Variety: Other (Inbred Parent Line)

Previously proposed: Not applicable

Denomination

Name of Parental Material: (DS 59 X NCGP-692)

Source of parental material: R&D Farm, Nuziveedu Seeds Ltd.

Name of Reference Varieties: Supriya

Variety Description:

<table>
<thead>
<tr>
<th>A. Group Characteristics</th>
<th>Remarks measured values, example varieties, etc.</th>
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</thead>
<tbody>
<tr>
<td>Leaf: Shape</td>
<td>Palmate</td>
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<tr>
<td>Flower: Petal colour</td>
<td>Cream</td>
</tr>
<tr>
<td>Flower: Pollen colour</td>
<td>Cream</td>
</tr>
<tr>
<td>Boll: Shape (longitudinal section)</td>
<td>Ovate</td>
</tr>
<tr>
<td>Fibre: Length(2.5% span length)(mm)</td>
<td>Long</td>
</tr>
</tbody>
</table>

B. Distinct Characteristics: NC-113 has distinguishing character as Flower: Pollen colour: Cream.

C. Reference Variety: Supriya has distinguishing character as Flower: Pollen colour: Yellow.

D. Date of commercialization of the variety

The candidate variety NC-113 is one of the Parental lines of our Cotton Hybrid NCS-104 registered in 1999. Which was first sold on 19-05-1999.

E. Agronomic and commercial attributes

Plant Height: Tall, Growth Habit: Semi Spreading, Days to 50% flowering: 50-60 days, Maturity Group: Medium, Response to fertilizer and irrigation: Responds to added fertilizers, Quality characteristics of the variety: Ginning 33-34%, Strength: 25.0-28.0, Mic: <3.0, Expected yield of the variety: 900-1000 Kg/ha., Adoptability: Suitable to varied agro-climatic conditions, Commercial attributes: it has a good combining ability and good boll size.

Photographs: (See figure-7)
8. Application No. E99 GH111 09 215 filed on 22.04.2009 by Nuziveedu Seeds Ltd., Survey No. 69, Gundlapochampally (Vill. &Panchayat), Medchal-Mandal, Rangareddy- Dist, Telangana -501401 fora Extant (Variety of Common Knowledge) of crop Tetraploid Cotton [Gossypium hirsutum L.] having denomination NC-1108 the specification includes its drawing and or photograph(s) of which are given below, has been accepted and given registration number --------NA--------------on------------------- NA --------.

The convention application no.-----NA----, in respect of the said variety has been filed on -----NA-----, in NA---.


<table>
<thead>
<tr>
<th>Passport data of the variety</th>
<th>: NC-1108</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicant</td>
<td>: Nuziveedu Seeds Ltd.</td>
</tr>
<tr>
<td>Address of the Applicant</td>
<td>: Survey No. 69, Gundlapochampally (Vill. &amp;Panchayat), Medchal-Mandal, Rangareddy- Dist, Telangana-501401</td>
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</table>

Nationality of Applicant : Indian

Application details

a. Number : E99 GH111 09 215
b. Date of receipt : 22.04.2009
c. Date of acceptance : --

Crop(Taxonomical Lineage) : Tetraploid Cotton [Gossypium hirsutum L.]
Denomination : NC-1108

Type of Variety : Extant (Variety of Common Knowledge)

Classification of Variety : Other (Inbred Parent Line)

Previously proposed : Not applicable

Denomination

Name of Parental Material : [BN x (F 846 x RST 9)]-12-8-3-3-1
Source of parental material : R&D Farm, Nuziveedu Seeds Ltd.

Name of Reference Varieties : Supriya, Sahana

Variety Description:

<table>
<thead>
<tr>
<th>A. Group Characteristics</th>
<th>Remarks measured values, example varieties, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leaf: Shape</td>
<td>Palmate</td>
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<tr>
<td>Flower: Petal colour</td>
<td>Cream</td>
</tr>
<tr>
<td>Flower: Pollen colour</td>
<td>Cream</td>
</tr>
<tr>
<td>Boll: Shape (longitudinal section)</td>
<td>Ovate</td>
</tr>
<tr>
<td>Fibre: Length(2.5% span length)(mm)</td>
<td>Long</td>
</tr>
</tbody>
</table>
B. Distinct Characteristics: NC-1108 has distinguishing character as Flower: Pollen colour: Cream.

C. Reference variety: Supriya has distinguishing character as Flower: Pollen colour: Yellow.

D. Date of commercialization of the variety

The candidate variety NC-1108 is one of the Parental lines of our Cotton Hybrid NCS-165 and NCS-175 registered in 2000. Which was first sold on 29-04-2000.

E. Agronomic and commercial attributes

Plant Height: Tall, Growth Habit: Semi Spreading, Days to 50% flowering: 50-60 days, Maturity Group: Medium, Boll size: Large, Response to fertilizer and irrigation: Responds to added fertilizers, Reaction to major pests: Moderate tolerance to white flies and thrips, Quality characteristics of the variety: Ginning >37%, Strength: 21.0-24.0, Mic: 3.0-3.9, Expected yield of the variety: 1300-1500 Kg/ha.,

Adaptability: Suitable to varied agro-climatic conditions,
Commercial attributes: it has a good combining ability and good yielder.

Photographs: (See figure-8)

9. Application No. E57 GH68 09 171 filed on 16.04.2009 by Nuziveedu Seeds Ltd., Survey No. 69, Gundlapochampally (Vill. &Panchayat), Medchal-Mandal, Rangareddy- Dist, Telangana -501401 fora Extant (Variety of Common Knowledge) of crop Tetraploid Cotton [Gossypium hirsutum L.] having denomination NC-90 the specification includes its drawing and or photograph(s) of which are given below, has been accepted and given registration number --------NA -----------on -------------- NA --------.

The convention application no.-----NA------, in respect of the said variety has been filed on -----NA------, in -- -NA----.


Passport data of the variety : NC-90
Applicant : Nuziveedu Seeds Ltd.
Address of the Applicant : Survey No. 69, Gundlapochampally (Vill. &Panchayat), Medchal-Mandal, Rangareddy- Dist, Telangana-501401

Nationality of Applicant : Indian
Application details
   a. Number : E57 GH68 09 171
   b. Date of receipt : 16.04.2009
   c. Date of acceptance : --
Crop(Taxonomical Lineage) : Tetraploid Cotton [Gossypium hirsutum L.]
**Denomination**: NC-90  
**Type of Variety**: Extant (Variety of Common Knowledge)  
**Classification of Variety**: Other (Inbred Parent Line)  
**Previously proposed**: Not applicable  

**Denomination**  
**Name of Parental Material**: (NCGP-633 x SURAT DWARF) 13-9-2-3-1  
**Source of parental material**: R&D Farm, Nuziveedu Seeds Ltd.  
**Name of Reference Varieties**: G Cot 16 & Abadhita

### Variety Description:

<table>
<thead>
<tr>
<th>A. Group Characteristics</th>
<th>Remarks measured values, example varieties, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leaf: Shape</td>
<td>Palmate</td>
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<tr>
<td>Flower: Petal colour</td>
<td>Cream</td>
</tr>
<tr>
<td>Flower: Pollen colour</td>
<td>Cream</td>
</tr>
<tr>
<td>Boll: Shape (longitudinal section)</td>
<td>Round</td>
</tr>
<tr>
<td>Fibre: Length(2.5% span length)(mm)</td>
<td>Medium long</td>
</tr>
</tbody>
</table>

| B. Distinct Characteristics: NC-90 has distinguishing character as Leaf: Colour: **Light Green**, Boll : Shape: **Round**, Seed: Index (100 seed wt in gram): **Medium**, Fibre : Length (2.5% span length)(mm): **Medium long**. |

| C. Reference variety: G Cot 16 has distinguishing character as Leaf: Colour: **Green**, Boll : Shape: **Ovate**, Seed: Index (100 seed wt in gram): **Bold**, Fibre : Length (2.5% span length)(mm): **Long**. Abadhita has distinguishing character as Leaf: Colour : **Green**, Boll : Shape: **Ovate**, Seed: Index (100 seed wt in gram): **Bold**. |

| D. Date of commercialization of the variety | The candidate variety NC-90 is one of the Parental lines of our Cotton Hybrid NCS-88 registered in 1999. Which was first sold on 12/05/1999. |

| E. Agronomic and commercial attributes | Plant Height: Semi dwarf, Growth Habit: Semi Spreading, Days to 50% flowering: 50-60 days, Maturity Group: Medium, Boll Shape & size: Round and Small, Response to fertilizer and irrigation: Responds to added fertilizers, Quality characteristics of the variety: Ginning 35-36%, Strength: 17.0-20.0, Mic: 3.0-3.9, Expected yield of the variety: 1200-1600 Kg/ha., Adoptionability: Suitable to varied agro-climatic conditions, Commercial attributes: it has a good combining ability and good bearing ability with good yielder in production. |

Photographs: (See figure-9)
fora Extant (Variety of Common Knowledge) of crop Tetraploid Cotton [Gossypium hirsutum L.] having denomination NC-62 the specification includes its drawing and or photograph(s) of which are given below, has been accepted and given registration number ---------NA ------------ on -------------- NA --------.

The convention application no.-----NA-----, in respect of the said variety has been filed on -----NA------, in --NA----.


Passport data of the variety : NC-62
Applicant : Nuziveedu Seeds Ltd.
Address of the Applicant : Survey No. 69, Gundlapochampally (Vill. &Panchayat), Medchal-Mandal, Rangareddy- Dist, Telangana-501401

Nationality of Applicant : Indian
Application details : E54 GH65 09 168
a. Number : 
 b. Date of receipt : 16.04.2009
 c. Date of acceptance : --
Crop(Taxonomical Lineage) : Tetraploid Cotton [Gossypium hirsutum L.]
Denomination : NC-62
Type of Variety : Extant(Variety of Common Knowledge)
Classification of Variety : Other (Inbred Parent Line)
Previously proposed : Not applicable
Denomination Name of Parental Material : NCGP-707(having GM source) x NCGP-449
Source of parental material : R&D Farm, Nuziveedu Seeds Ltd.
Name of Reference Varieties : G Cot 12 & Anjali

Variety Description:

<table>
<thead>
<tr>
<th>A. Group Characteristics</th>
<th>Remarks measured values, example varieties, etc.</th>
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</thead>
<tbody>
<tr>
<td>Leaf: Shape</td>
<td>Palmate</td>
</tr>
<tr>
<td>Flower: Petal colour</td>
<td>Cream</td>
</tr>
<tr>
<td>Flower: Pollen colour</td>
<td>Cream</td>
</tr>
<tr>
<td>Boll: Shape (longitudinal section)</td>
<td>Round</td>
</tr>
<tr>
<td>Fibre: Length(2.5% span length)(mm)</td>
<td>Medium long</td>
</tr>
</tbody>
</table>

B. Distinct Characteristics: NC-62 has distinguishing character as Leaf: Hairiness: Medium, Flower: Petal colour : Yellow

C. Reference variety: G Cot 12 has distinguishing character as Leaf: Hairiness: Dense, Flower: Petal colour : Cream Anjali has distinguishing character as Flower: Petal colour : Cream.
D. Date of commercialization of the variety

The candidate variety NC-62 is one of the Parental lines of our Cotton Hybrid NCS-88 registered in 1999. Which was first sold on 27/04/2001.

E. Agronomic and commercial attributes

Plant Height: Medium tall, Growth Habit: Semi Spreading, Days to 50% flowering: 50-60 days, Maturity Group: Medium, Boll size: Small, Response to fertilizer and irrigation: Responds to added fertilizers, Reaction to major pests: Moderate tolerance to jassids and thrips, Quality characteristics of the variety: Ginning 35-36%, Strength: 21.0-24.0, Mic: 3.0-3.9, Expected yield of the variety: 600-800 Kg/ha., Adoptability: Suitable to varied agro-climatic conditions, Commercial attributes: it has a good combining ability.

Photographs: (See figure-10)

11. Application No. E77 GH89 09 193 filed on 22.04.2009 by Nuziveedu Seeds Ltd., Survey No. 69, Gundlapochampally (Vill. &Panchayat), Medchal-Mandal, Rangareddy Dist, Telangana -501401 for a Extant (Variety of Common Knowledge) of crop Tetraploid Cotton [Gossypium hirsutum L.] having denomination NC-167 the specification includes its drawing and or photograph(s) of which are given below, has been accepted and given registration number NA-----on NA-----.

The convention application no.-----NA------, in respect of the said variety has been filed on -----NA------, in --NA-----.


Passport data of the variety:
applicant: Nuziveedu Seeds Ltd.
Address of the Applicant: Survey No. 69, Gundlapochampally (Vill. &Panchayat), Medchal-Mandal, Rangareddy Dist, Telangana-501401
Nationality of Applicant: Indian
Application details:
- Number: E77 GH89 09 193
- Date of receipt: 22.04.2009
- Date of acceptance: --
Crop(Taxonomical Lineage): Tetraploid Cotton [Gossypium hirsutum L.]
Denomination: NC-167
Type of Variety: Extant(Variety of Common Knowledge)
Classification of Variety: Other (Inbred Parent Line)
Previously proposed: Not applicable
Denomination
Name of Parental Material: (MCU 7 x NCGP-980)-14-4-4-2-1
Source of parental material: R&D Farm, Nuziveedu Seeds Ltd.
Name of Reference Varieties: G Cot 16, Abadhita

Variety Description:

<table>
<thead>
<tr>
<th>A. Group Characteristics</th>
<th>Remarks measured values, example varieties, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leaf: Shape</td>
<td>Palmate</td>
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<tr>
<td>Flower: Petal colour</td>
<td>Cream</td>
</tr>
<tr>
<td>Flower: Pollen colour</td>
<td>Cream</td>
</tr>
<tr>
<td>Boll: Shape (longitudinal section)</td>
<td>Ovate</td>
</tr>
<tr>
<td>Fibre: Length(2.5% span length)(mm)</td>
<td>Long</td>
</tr>
</tbody>
</table>

B. Distinct Characteristics: NC-167 has distinguishing character as Seed: Index (100 seed wt in gram): Medium.

C. Reference variety: G Cot 16, Abadhita has distinguishing character as Seed: Index (100 seed wt in gram): Bold.

D. Date of commercialization of the variety
The candidate variety NC-167 is one of the Parental lines of our Cotton Hybrid NCS-113 registered in 1999. Which was first sold on 27-04-2001.

E. Agronomic and commercial attributes
Plant Height: Tall, Growth Habit: Spreading, Days to 50% flowering: 50-60 days, Maturity Group: Medium, Boll size: Medium, Response to fertilizer and irrigation: Responds to added fertilizers, Reaction to major pests: Moderate tolerance to jassids and thrips, Quality characteristics of the variety: Ginning 35-36%, Strength: 21.0-24.0, Mic: <3.0, Expected yield of the variety: 1100-1400 Kg/ha., Adoptability: Suitable to varied agro-climatic conditions, Commercial attributes: it has a good combining ability and good boll size.

Photographs: (See figure-11)

12. Application No. E3 GH27 10 35 filed on 08.02.2010 by Nuziveedu Seeds Ltd., Survey No. 69, Gundlapochampally (Vill. & Panchayat), Medchal-Mandal, Rangareddy- Dist, Telangana -501401 fora Extant (Variety of Common Knowledge) of crop Tetraploid Cotton [Gossypium hirsutum L.] having denomination NC-181 the specification includes its drawing and or photograph(s) of which are given below, has been accepted and given registration number-------NA *******on ************ NA -------.
The convention application no.-----NA-----, in respect of the said variety has been filed on -----NA-----, in --NA---.

Appropriate office for the opposition of proceeding under Rule 29, of the Protection of Plant Varieties and Farmers’ Rights Rules, 2003 is **Office of the Registrar, PPV & FR Authority, New Delhi – 110 012.**

### Passport data of the variety
- **: NC-181**

### Applicant
- **: Nuziveedu Seeds Ltd.**

### Address of the Applicant
- **: Survey No. 69, Gundlapochampally (Vill. &Panchayat), Medchal-Mandal, Rangareddy- Dist, Telangana-501401**

### Nationality of Applicant
- **: Indian**

### Application details
- **a. Number**: E3 GH27 10 35
- **b. Date of receipt**: 08.02.2010
- **c. Date of acceptance**: --

### Crop (Taxonomical Lineage)
- **: Tetraploid Cotton [Gossypium hirsutum L.]**

### Denomination
- **: NC-181**

### Type of Variety
- **: Extant(Variety of Common Knowledge)**

### Classification of Variety
- **: Other (Inbred Parent Line)**

### Previously proposed
- **: Not applicable**

### Denomination Name of Parental Material
- **: (AK 32 x (NCGP-990 x SURAT DWARF))-13-8-3-2-1**

### Source of parental material
- **: R&D Farm, Nuziveedu Seeds Ltd.**

### Name of Reference Varieties
- **: Kanchana, LRA 5166**

### Variety Description:

<table>
<thead>
<tr>
<th>A. Group Characteristics</th>
<th>Remarks measured values, example varieties, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leaf: Shape</td>
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</tr>
<tr>
<td>Flower: Petal colour</td>
<td>Yellow</td>
</tr>
<tr>
<td>Flower: Pollen colour</td>
<td>Cream</td>
</tr>
<tr>
<td>Boll: Shape (longitudinal section)</td>
<td>Round</td>
</tr>
<tr>
<td>Fibre: Length(2.5% span length)(mm)</td>
<td>Medium</td>
</tr>
</tbody>
</table>

**B. Distinct Characteristics: NC-181** has distinguishing character as Leaf: Colour: **Light Green**, Flower: Petal colour: **Yellow**, Fibre: Length (2.5% span length)(mm): **Medium**.

**C. Reference variety: Kanchana** has distinguishing character as Leaf: Colour: **Green**, Fibre: Length (2.5% span length)(mm): **Long**.

**LRA 5166** has distinguishing character as Flower: Petal colour: **Cream**, Fibre: Length (2.5% span length)(mm): **Long**.

**D. Date of commercialization of the variety**
- The candidate variety NC-181 is one of the Parental lines of our Cotton Hybrid NCS-113 was sold on dt 19.05.1999
### E. Agronomic and commercial attributes

| Plant Height: Semi dwarf, Growth Habit: Compact, Days to 50% flowering: 50-60 days, Maturity Group: Medium, Boll shape & size: Round & Small, Response to fertilizer & irrigation: Responds to added fertilizers, Quality characteristics of the variety: Ginning 35-36%, Strength: 17.0-20.0, Mic: 4.0-4.9, Expected yield of the variety: 800-1000 Kg/ha., Adoptability: Suitable to varied agro-climatic conditions, Commercial attributes: it has a good combining ability and good plant type. |

Photographs: (See figure-12)
### A. Group Characteristics

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Remarks measured values, example varieties, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leaf: Shape</td>
<td>Palmate</td>
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<tr>
<td>Flower: Petal colour</td>
<td>Cream</td>
</tr>
<tr>
<td>Flower: Pollen colour</td>
<td>Yellow</td>
</tr>
<tr>
<td>Boll: Shape (longitudinal section)</td>
<td>Ovate</td>
</tr>
<tr>
<td>Fibre: Length (2.5% span length) (mm)</td>
<td>Extra long</td>
</tr>
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</table>

### B. Distinct Characteristics

**NC-91** has distinguishing character as Fibre: Colour: **White**.

### C. Reference variety

**MCU 12, MCU 5 VT** has distinguishing character as Fibre: Colour: **Cream**.

### D. Date of commercialization of the variety

The candidate variety NC-91 is one of the Parental lines of our Cotton Hybrid NCS-999 registered in 2005.

### E. Agronomic and commercial attributes

- **Plant Height:** Very tall
- **Growth Habit:** Semi spreading
- **Days to flowering:** 50-60 days
- **Maturity Group:** Medium
- **Boll shape & size:** Ovate & Very large
- **Response to fertilizer & irrigation:** Responds to added fertilizers
- **Reaction to major pests:** Moderate tolerance to thrips
- **Quality characteristics of the variety: Ginning:** 33-34%, **Strength:** 25.0-28.0, **Mic:** 3.0-3.9
- **Expected yield of the variety:** 1000-1200 Kg/ha.
- **Adaptability:** Suitable to varied agro-climatic conditions
- **Commercial attributes:** It has a good combining ability and has good fiber quality with good plant type.

Photographs: (See figure-13)

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**Application No.** E80 GH92 09 196 filed on 22.04.2009 by Nuziveedu Seeds Ltd., Survey No. 69, Gundlapochampally (Vill. & Panchayat), Medchal-Mandal, Rangareddy Dist, Telangana - 501401 fora Extant (Variety of Common Knowledge) of crop Tetraploid Cotton [Gossypium hirsutum L.] having denomination NC-172 the specification includes its drawing and or photograph(s) of which are given below, has been accepted and given registration number --------NA --------on -------------- NA --------.

The convention application no.------NA------, in respect of the said variety has been filed on ------NA------, in -- -NA----.  


**Passport data of the variety** : NC-172
Applicant: Nuziveedu Seeds Ltd.

Address of the Applicant: Survey No. 69, Gundlapochampally (Vill. & Panchayat), Medchal-Mandal, Rangareddy- Dist, Telangana-501401

Nationality of Applicant: Indian

Application details

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<tr>
<th>a. Number</th>
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<th>GH92</th>
<th>09</th>
<th>196</th>
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b. Date of receipt: 22.04.2009
c. Date of acceptance: --

Crop (Taxonomical Lineage): Tetraploid Cotton [Gossypium hirsutum L.]

Denomination: NC-172

Type of Variety: Extant (Variety of Common Knowledge)

Classification of Variety: Other (Inbred Parent Line)

Previously proposed: Not applicable

Denomination

Name of Parental Material: [LPS 141 (L 389 x NCGP-683)]-11-8-6-2-1

Source of parental material: R&D Farm, Nuziveedu Seeds Ltd.

Name of Reference Varieties: F1378

Variety Description:

A. Group Characteristics

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<tr>
<th>Leaf: Shape</th>
<th>Palmate</th>
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<tbody>
<tr>
<td>Flower: Petal colour</td>
<td>Cream</td>
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<tr>
<td>Flower: Pollen colour</td>
<td>Cream</td>
</tr>
<tr>
<td>Boll: Shape (longitudinal section)</td>
<td>Ovate</td>
</tr>
<tr>
<td>Fibre: Length (2.5% span length)(mm)</td>
<td>Long</td>
</tr>
</tbody>
</table>

B. Distinct Characteristics: NC-172 has distinguishing character as Ginning %: Very high.

C. Reference variety: F1378 has distinguishing character as Ginning %: High.

D. Date of commercialization of the variety

The candidate variety NC-172 is one of the Parental lines of our Cotton Hybrid NCS-556 registered in 2004. The first sold on 03-06-2003.

E. Agronomic and commercial attributes

Plant Height: Medium tall, Growth Habit: Semi spreading, Days to 50% flowering: 50-60 days, Maturity Group: Medium, Boll shape & size: Round & Medium, Response to fertilizer & irrigation: Responds to added fertilizers, Quality characteristics of the variety: Strength: 25.0-28.0, Mic: 3.0-3.9, Expected yield of the variety: 1000-1200 Kg/ha., Adoptability: Suitable to varied agro-climatic conditions, Commercial attributes: it has a good combining ability.
Photographs: (See figure-14)

15. Application No. E82 GH94 09 198 filed on 22.04.2009 by Nuziveedu Seeds Ltd., Survey No. 69, Gundlapochampally (Vill. & Panchayat), Medchal-Mandal, Rangareddy- Dist, Telangana -501401 fora Extant (Variety of Common Knowledge) of crop Tetraploid Cotton [Gossypium hirsutum L.] having denomination NC-174 the specification includes its drawing and or photograph(s) of which are given below, has been accepted and given registration number ---------NA--------on ------------------NA--------.

The convention application no.-----NA-----, in respect of the said variety has been filed on -----NA------, in --NA----.


Passport data of the variety : NC-174
Applicant : Nuziveedu Seeds Ltd.
Address of the Applicant : Survey No. 69, Gundlapochampally (Vill. & Panchayat), Medchal-Mandal, Rangareddy- Dist, Telangana-501401

Nationality of Applicant : Indian
Application details
a. Number : E82 GH94 09 198
b. Date of receipt : 22.04.2009
c. Date of acceptance : --
Crop(Taxonomical Lineage) : Tetraploid Cotton [Gossypium hirsutum L.]
Denomination : NC-174
Type of Variety : Extant(Variety of Common Knowledge)
Classification of Variety : Other (Inbred Parent Line)
Previously proposed : Not applicable
Denomination
Name of Parental Material : (NCGP 707 (GMS) x NCGP 610)
Source of parental material : R&D Farm, Nuziveedu Seeds Ltd.
Name of Reference Varieties : Sahana, Supriya

Variety Description:

<table>
<thead>
<tr>
<th>A. Group Characteristics</th>
<th>Remarks measured values, example varieties, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leaf: Shape</td>
<td>Palmate</td>
</tr>
<tr>
<td>Flower: Petal colour</td>
<td>Cream</td>
</tr>
<tr>
<td>Flower: Pollen colour</td>
<td>Yellow</td>
</tr>
<tr>
<td>Boll: Shape (longitudinal section)</td>
<td>Ovate</td>
</tr>
<tr>
<td>Fibre: Length (2.5% span length)(mm)</td>
<td>Medium long</td>
</tr>
</tbody>
</table>

C. Reference variety: Sahana has distinguishing character as Flower: Pollen colour: Cream, Fibre: strength: Medium.

Supriya has distinguishing character as Fibre: strength: Medium.

D. Date of commercialization of the variety

The candidate variety NC-174 is one of the Parental lines of our Cotton Hybrid ANITHA registered in 1997. The first sold on 29-05-1999.

E. Agronomic and commercial attributes

Plant Height: Very tall, Growth Habit: Semi spreading, Days to 50% flowering: 50-60 days, Maturity Group: Medium, Boll shape & size: Round &Large, Response to fertilizer & irrigation: Responds to added fertilizers, Reaction to major Pests: Good tolerance to jassids, thrips and resistance to grey mildew, Quality characteristics of the variety: Ginning 31-32% Strength: 25.0-28.0, Mic: 3.0-3.9, Expected yield of the variety: 800-1000 Kg/ha., Adoptability: Suitable to varied agro-climatic conditions, Commercial attributes: it has a good combining ability and good plant type.

Photographs: (See figure-15)

16. Application No. E111 GH123 09 232 filed on 05.05.2009 by Nuziveedu Seeds Ltd., Survey No. 69, Gundlapochampally (Vill. & Panchayat), Medchal-Mandal, Rangareddy- Dist, Telangana -501401 for a Extant (Variety of Common Knowledge) of crop Tetraploid Cotton [Gossypium hirsutum L.] having denomination NC-170 the specification includes its drawing and or photograph(s) of which are given below, has been accepted and given registration number --NA-- on --NA--.

The convention application no.--NA-- in respect of the said variety has been filed on ----NA----, in --NA--.


Passport data of the variety : NC-170

Applicant : Nuziveedu Seeds Ltd.

Address of the Applicant : Survey No. 69, Gundlapochampally (Vill. & Panchayat), Medchal-Mandal, Rangareddy- Dist, Telangana-501401

Nationality of Applicant : Indian

Application details

a. Number : E111
b. Date of receipt : 05.05.2009
c. Date of acceptance : --

Crop(Taxonomical Lineage) : Tetraploid Cotton [Gossypium hirsutum L.]
**Denomination**: NC-170  
**Type of Variety**: Extant (Variety of Common Knowledge)  
**Classification of Variety**: Other (Inbred Parent Line)  
**Previously proposed**: Not applicable  
**Denomination Name of Parental Material**: [F 1378 x (F 286 x NCGP-359)]-17-11-6-3-2  
**Source of parental material**: R&D Farm, Nuziveedu Seeds Ltd.  
**Name of Reference Varieties**: Abadhita, F 1378  

**Variety Description:**

<table>
<thead>
<tr>
<th>A. Group Characteristics</th>
<th>Remarks measured values, example varieties, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leaf: Shape</td>
<td>Palmate</td>
</tr>
<tr>
<td>Flower: Petal colour</td>
<td>Cream</td>
</tr>
<tr>
<td>Flower: Pollen colour</td>
<td>Cream</td>
</tr>
<tr>
<td>Boll: Shape (longitudinal section)</td>
<td>Round</td>
</tr>
<tr>
<td>Fibre: Length (2.5% span length)(mm)</td>
<td>Medium long</td>
</tr>
</tbody>
</table>

**B. Distinct Characteristics**: NC-170 has distinguishing character as Boll: Shape (longitudinal section): **Round**

**C. Reference variety**: Abadhita, F 1378 has distinguishing character as Boll: Shape (longitudinal section): **Ovate**

**D. Date of commercialization of the variety**

The candidate variety NC-170 is one of the Parental lines of our Cotton Hybrid NCS-109 registered in 1999. The first sold on 27-04-2001.

**E. Agronomic and commercial attributes**

Plant Height: Tall, Growth Habit: Semi spreading, Days to 50% flowering: 50-60 days, Maturity Group: Medium, Boll shape & size: Round & Medium, Response to fertilizer & irrigation: Responds to added fertilizers, Quality characteristics of the variety: Ginning 35-36% Strength: 17.0-20.0, Mic: <3.0, Expected yield of the variety: 1100-1300 Kg/ha., Adoptability: Suitable to varied agro-climatic conditions, Commercial attributes: it has a good combining ability.

Photographs: (See figure-16)

17. Application No. **E56 GH62 09 165** filed on 16.04.2009 by Nuziveedu Seeds Ltd., Survey No. 69, Gundlapochampally (Vill. & Panchayat), Medchal-Mandal, Rangareddy- Dist, Telangana -501401 for a **Extant** (Variety of Common Knowledge) of crop **Tetraploid Cotton** [*Gossypium hirsutum* L.] having denomination **NC-47** the specification includes its drawing and or photograph(s) of which are given below, has been accepted and given registration number --------NA --------------- NA --------.
The convention application no.-----NA-----, in respect of the said variety has been filed on -----NA-----, in --NA-----.


Passport data of the variety : NC-47
Applicant : Nuziveedu Seeds Ltd.
Address of the Applicant : Survey No. 69, Gundlapochampally (Vill. &Panchayat), Medchal-Mandal, Rangareddy- Dist, Telangana-501401
Nationality of Applicant : Indian

Application details
a. Number : E56 GH62 09 165
b. Date of receipt : 16.04.2009
c. Date of acceptance : --

Crop (Taxonomical Lineage) : Tetraploid Cotton [Gossypium hirsutum L.]
Denomination : NC-47
Type of Variety : Extant(Variety of Common Knowledge)
Classification of Variety : Other (Inbred Parent Line)
Previously proposed : Not applicable

Denomination
Name of Parental Material : [G 67 x (NCGP-690 x NCGP-693)]
Source of parental material : R&D Farm, Nuziveedu Seeds Ltd.
Name of Reference Varieties : F 1378, Abadhita

Variety Description:

<table>
<thead>
<tr>
<th>A. Group Characteristics</th>
<th>Remarks measured values, example varieties, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leaf: Shape</td>
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</tr>
<tr>
<td>Flower: Petal colour</td>
<td>Cream</td>
</tr>
<tr>
<td>Flower: Pollen colour</td>
<td>Cream</td>
</tr>
<tr>
<td>Boll: Shape (longitudinal section)</td>
<td>Round</td>
</tr>
<tr>
<td>Fibre: Length(2.5% span length)(mm)</td>
<td>Long</td>
</tr>
</tbody>
</table>

B. Distinct Characteristics: NC-47 has distinguishing character as Boll: Shape (longitudinal section): **Round**, seed index (100 seed wt. in gram): **Bold**.

C. Reference variety: F 1378 has distinguishing character as Boll: Shape (longitudinal section): **Ovate**, seed index (100 seed wt. in gram): **Medium**.
Abadhita has distinguishing character as Boll: Shape (longitudinal section): **Ovate**.

D. Date of commercialization of the variety The candidate variety NC-47 is one of the Parental lines of our Cotton Hybrid NCS-165 registered in 1999.

E. Agronomic and commercial attributes Plant Height: Medium tall, Growth Habit: Semi spreading, Days to 50% flowering: >60 days, Maturity Group: Late, Boll
| shape & size: Round & Medium, Response to fertilizer & irrigation: Responds to added fertilizers, Reaction to major pests: Moderate tolerance to thrips, Quality characteristics of the variety: Ginning >37% Strength: 21.0-24.0, Mic:4.0-4.9, Expected yield of the variety: 1200-1600 Kg/ha., Adoptability: Suitable to varied agro-climatic conditions, Commercial attributes: it has a good combining ability. |

Photographs: (See figure-17)

18. Application No. E15 GH47 11 486 filed on 18.08.2011 by Nuziveedu Seeds Ltd., Survey No. 69, Gundlapochampally (Vill. & Panchayat), Medchal-Mandal, Rangareddy- Dist, Telangana -501401 for a Extant (Variety of Common Knowledge) of crop Tetraploid Cotton [Gossypium hirsutum L.] having denomination NCS-9028 Bt2 the specification includes its drawing and or photograph(s) of which are given below, has been accepted and given registration number ----NA----------on ----------------- NA -------.

The convention application no.-----NA-----, in respect of the said variety has been filed on -----NA-----, in -- -NA----.


Passport data of the variety : NCS-9028 Bt2
Applicant : Nuziveedu Seeds Ltd.
Address of the Applicant : Survey No. 69, Gundlapochampally (Vill. & Panchayat), Medchal-Mandal, Rangareddy- Dist, Telangana-501401

Nationality of Applicant : Indian
Application details
  a. Number : E15 GH47 11 486
  b. Date of receipt : 18.08.2011
  c. Date of acceptance :
Crop(Taxonomical Lineage) : Tetraploid Cotton [Gossypium hirsutum L.]
Denomination : NCS-9028 Bt2
Type of Variety : Extant (Variety of Common Knowledge)
Classification of Variety : Transgenie & Hybrid
Previously proposed : Not applicable
Denomination
Name of Parental Material : (NC 158 Bt2 X NC 185)
Source of parental material : R&D Farm, Nuziveedu Seeds Ltd.
Name of Reference Varieties : Suvin
Variety Description:

<table>
<thead>
<tr>
<th>A. Group Characteristics</th>
<th>Remarks measured values, example varieties, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leaf: Shape</td>
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<tr>
<td>Flower: Petal colour</td>
<td>Yellow</td>
</tr>
<tr>
<td>Flower: Pollen colour</td>
<td>Yellow</td>
</tr>
<tr>
<td>Boll: Shape (longitudinal section)</td>
<td>Ovate</td>
</tr>
<tr>
<td>Fibre: Length(2.5% span length)(mm)</td>
<td>Long</td>
</tr>
</tbody>
</table>


D. Date of commercialization of the variety 19/06/2010

E. Agronomic and commercial attributes

Plant Height: Tall, Growth Habit: Semi Spreading, Days to 50% flowering: 50-60 days, Maturity Group: Medium, Boll size: Large, Response to fertilizer and irrigation: Responds to added fertilizers, Reaction to major pests: Resistant to American Bollworm and spotted bollworm, Quality characteristics of the variety: Ginning >37%, Strength: 21.0-24.0, Mic: 3.0-3.9, Expected yield of the variety: 2500-3000 Kg/ha., Adoptability: Suitable to varied agro-climatic conditions, Commercial attributes: It has good sucking pest tolerance and high ginning out turn (GOT).

Photographs: (See figure-18)

19. Application No. E17 GH34 12 271 filed on 29.06.2012 by Asian Agri Genetics Ltd., #3-5-821, First Floor, Doshi Square, Hyderguda, Hyderabad-500029, A.P., India fora Extant (Variety of Common Knowledge) of crop Tetraploid Cotton [Gossypium hirsutum L.] having denomination AC-1910 the specification includes its drawing and or photograph(s) of which are given below, has been accepted and given registration number --------NA---------on ---------------- NA --------.

The convention application no.-----NA-----, in respect of the said variety has been filed on -----NA-----, in -- -NA-----.


Passport data of the variety : AC-1910
Applicant: Asian Agri Genetics Ltd.
Address of the Applicant: #3-5-821, First Floor, Doshi Square, Hyderguda, Hyderabad-500029, A.P., India
Nationality of Applicant: Indian
Application details:
- Number:
- Date of receipt: 29.06.2012
- Date of acceptance: --
Crop (Taxonomical Lineage): Tetraploid Cotton [Gossypium hirsutum L.]
Denomination: AC-1910
Type of Variety: Extant (Variety of Common Knowledge)
Classification of Variety: Typical & Other (Parental Line)
Previously proposed: Not applicable
Denomination
Name of Parental Material: AC-99 x L 389
Source of parental material: R&D Farm, Asian Agri Genetics Ltd.
Name of Reference Varieties: MCU 5 VT, MCU 12

Variety Description:

A. Group Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Remarks measured values, example varieties, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leaf: Shape</td>
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<tr>
<td>Flower: Petal colour</td>
<td>Cream</td>
</tr>
<tr>
<td>Flower: Pollen colour</td>
<td>Yellow</td>
</tr>
<tr>
<td>Boll: Shape (longitudinal section)</td>
<td>Ovate</td>
</tr>
<tr>
<td>Fibre: Length (2.5% span length) (mm)</td>
<td>Long</td>
</tr>
</tbody>
</table>


C. Reference variety: MCU 5 VT, MCU 12 has distinguishing character as Seed Fuzz colour: Grey.

D. Date of commercialization of the variety: 27.05.2004

E. Agronomic and commercial attributes

Plant Height: Very tall, Growth Habit: Semi Spreading, Days to 50% flowering: 50-60 days, Maturity Group: Medium, Boll Shape & size: Ovate & Very large, Response to fertilizer and irrigation: Responds to added fertilizers, Quality characteristics of the variety: Ginning 33-34%, Strength: 25.0-28.0, Mic: 3.0-3.9, Expected yield of the variety: 1100-1200 Kg/ha., Adoptability: Suitable to varied agro-climatic conditions, Commercial attributes: It has good combining ability.

Photographs: (See figure-19)
20. Application No. E16 GH33 12 270 filed on 29.06.2012 by Asian Agri Genetics Ltd., #3-5-821, First Floor, Doshi Square, Hyderguda, Hyderabad-500029, A.P., India for Extant (Variety of Common Knowledge) of crop Tetraploid Cotton [Gossypium hirsutum L.] having denomination AC-1207 the specification includes its drawing and or photograph(s) of which are given below, has been accepted and given registration number NA-NA on NA-NA.

The convention application no.-----NA----, in respect of the said variety has been filed on -----NA-----, in --NA----.


**Passport data of the variety**: AC-1207

**Applicant**: Asian Agri Genetics Ltd.

**Address of the Applicant**: #3-5-821, First Floor, Doshi Square, Hyderguda, Hyderabad-500029, A.P., India

**Nationality of Applicant**: Indian

**Application details**

<table>
<thead>
<tr>
<th>a. Number</th>
<th>E16 GH33 12 270</th>
</tr>
</thead>
<tbody>
<tr>
<td>b. Date of receipt</td>
<td>29.06.2012</td>
</tr>
<tr>
<td>c. Date of acceptance</td>
<td>--</td>
</tr>
</tbody>
</table>

**Crop(Taxonomical Lineage)**: Tetraploid Cotton [Gossypium hirsutum L.]

**Denomination**: AC-1207

**Type of Variety**: Extant(Variety of Common Knowledge)

**Classification of Variety**: Typical & Other (Parental Line)

**Previsouly proposed**: Not applicable

**Denomination Name of Parental Material**: (Supriya x MCU 5)-11-2-2-1-1

**Source of parental material**: R&D Farm, Asian Agri Genetics Ltd.

**Name of Reference Varieties**: F 1378, F 846

**Variety Description**:

<table>
<thead>
<tr>
<th>A. Group Characteristics</th>
<th>Remarks measured values, example varieties, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leaf: Shape</td>
<td>Palmate</td>
</tr>
<tr>
<td>Flower: Petal colour</td>
<td>Cream</td>
</tr>
<tr>
<td>Flower: Pollen colour</td>
<td>Cream</td>
</tr>
<tr>
<td>Boll: Shape (longitudinal section)</td>
<td>Ovate</td>
</tr>
<tr>
<td>Fibre: Length(2.5% span length)(mm)</td>
<td>Extra long</td>
</tr>
</tbody>
</table>

**B. Distinct Characteristics: AC-1207** has distinguishing character as Seed Fuzz: Dense, Seed: Index (100 seed wt in gram): Very bold.
C. Reference variety: F 1378, F 846 has distinguishing character as Seed Fuzz: Medium, Seed: Index (100 seed wt in gram): Medium.

<table>
<thead>
<tr>
<th>D. Date of commercialization of the variety</th>
<th>10-06-2004</th>
</tr>
</thead>
</table>

D. Date of commercialization of the variety 10-06-2004

E. Agronomic and commercial attributes

| Plant Height: Very tall, Growth Habit: Spreading, Days to 50% flowering: 50-60 days, Maturity Group: Medium, Boll Shape & size: Round&Large, Response to fertilizer and irrigation: Responds to added fertilizers, Quality characteristics of the variety: Ginning 33-34%, Strength: 25.0-28.0, Mic: <3.0, Expected yield of the variety: 1200-1500 Kg/ha., Adoptability: Suitable to varied agro-climatic conditions, Commercial attributes: It has good combining ability and long staple length with big boll.

Photographs: (See figure-20)

21. Application No. [E217 GH65 08 296] filed on 02.04.2008 by Bharati Seeds., M/S Bharati Seeds, Opp. Petrol pump Noonepalli, Nandyal-518503, A.P. fora Extant (Variety of Common Knowledge) of crop Tetraploid Cotton [Gossypium hirsutum L.] having denomination 7493870 B the specification includes its drawing and or photograph(s) of which are given below, has been accepted and given registration number -------NA ------- ----on ----------------- NA -------.

The convention application no.-----NA-----, in respect of the said variety has been filed on -----NA-----, in -- -NA----.


Passport data of the variety : 7493870 B
Applicant : Bharati Seeds.
Address of the Applicant : M/S Bharati Seeds, Opp. Petrol pump Noonepalli, Nandyal-518503, A.P.

Nationality of Applicant : Indian
Application details

a. Number : [E217 GH65 08 296]
b. Date of receipt : 02.04.2008
c. Date of acceptance : --

Crop(Taxonomical Lineage) : Tetraploid Cotton [Gossypium hirsutum L.]
Denomination : 7493870 B
Type of Variety : Extant (Variety of Common Knowledge)
Classification of Variety : Hybrid
Previously proposed : Not applicable
### Denomination

Name of Parental Material: BSC 1401 x BSC 1402  
Source of parental material: Own material  
Name of Reference Varieties: JLH 168, MCU 10

### Variety Description:

<table>
<thead>
<tr>
<th>A. Group Characteristics</th>
<th>Remarks measured values, example varieties, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leaf: Shape</td>
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</tr>
<tr>
<td>Flower: Petal colour</td>
<td>Yellow</td>
</tr>
<tr>
<td>Flower: Pollen colour</td>
<td>Yellow</td>
</tr>
<tr>
<td>Boll: Shape (longitudinal section)</td>
<td>Round</td>
</tr>
<tr>
<td>Fibre: Length(2.5% span length)(mm)</td>
<td>Extra long</td>
</tr>
</tbody>
</table>

**B. Distinct Characteristics:** 7493870 B has distinguishing character as Seed: Index (100 seed wt in gram): **Bold.**

**C. Reference Variety:** JLH 168, MCU 10 has distinguishing character as Seed: Index (100 seed wt in gram): **Medium.**

**D. Date of commercialization of the variety**  
01-06-2002

**E. Agronomic and commercial attributes**  
Highly branched monopodial hybrids of cotton require more spacing than non-branched sympodial type. Factor affecting yield and quality is the availability of adequate balanced nutrition. Application of organic manures at the time of planting enhances the nutrient and water holding capacity of soil. In case of fertilizers, split application is recommended for better utilization.

Photographs: (See figure-21)
Passport data of the variety: PC-P711
Applicant: Prabhat Agri Biotech Ltd.
Address of the Applicant: 6-3-541/B, Opp. Heritage Office, Punjagutta, Hyderabad-500082, A.P.

Nationality of Applicant: Indian
Application details:
- Number: E22 GH39 12 276
- Date of receipt: 29.06.2012
- Date of acceptance: --

Crop (Taxonomical Lineage): Tetraploid Cotton [Gossypium hirsutum L.]
Denomination: PC-P711
Type of Variety: Extant (Variety of Common Knowledge)
Classification of Variety: Hybrid
Previously proposed: Not applicable
Denomination Name of Parental Material: PCGP-707 x PCGP-944
Source of parental material: R&D, Prabhat Agri Biotech Ltd
Name of Reference Varieties: G Cot 12, PKV Rajat

Variety Description:

<table>
<thead>
<tr>
<th>A. Group Characteristics</th>
<th>Remarks measured values, example varieties, etc.</th>
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<tr>
<td>Flower: Pollen colour</td>
<td>Cream</td>
</tr>
<tr>
<td>Boll: Shape (longitudinal section)</td>
<td>Ovate</td>
</tr>
<tr>
<td>Fibre: Length(2.5% span length)(mm)</td>
<td>Long</td>
</tr>
</tbody>
</table>

B. Distinct Characteristics: PC-P711 has distinguishing character as Plant Stem hairiness: Medium, Boll Weight of seed cotton/boll (g): Medium, Seed: Index (100 seed wt in gram): Very bold, Fibre Length (2.5% span length)(mm): Long.

C. Reference variety: G Cot 12 has distinguishing character as Plant Stem hairiness: Dense, Boll Weight of seed cotton/boll (g): Large, Fibre Length (2.5% span length)(mm): Medium long.
PKV Rajat has distinguishing character as Seed: Index (100 seed wt in gram): Medium, Fibre Length (2.5% span length)(mm): Medium long.

D. Date of commercialization of the variety: 18-06-2001

E. Agronomic and commercial attributes
Plant Height: Medium tall, Growth Habit: Semi Spreading, Days to 50% flowering: 50-60 days, Maturity Group: Medium, Boll Shape & size: Ovate & Medium, Response to fertilizer and irrigation: Responds to added fertilizers, Reaction to major pests: Good tolerance to jassids & thrips, Quality characteristics of the variety: Strength: 25.0-28.0, Mic: 4.0-4.9, Expected yield of the variety: 1000-1200
Photographs: (See figure-22)

23. Application No. E28 GH45 12 282 filed on 29.06.2012 by Prabhat Agri Biotech Ltd, 6-3-541/B, Opp. Heritage Office, Punjagutta, Hyderabad-500082, A.P. fora Extant (Variety of Common Knowledge) of crop Tetraploid Cotton [Gossypium hirsutum L.] having denomination PC-P3812 the specification includes its drawing and or photograph(s) of which are given below, has been accepted and given registration number -------- NA ------------ on ------------------ NA --------.

The convention application no.-----NA----, in respect of the said variety has been filed on -----NA-----, in -- -NA----. Appropriate office for the opposition of proceeding under Rule 29, of the Protection of Plant Varieties and Farmers’ Rights Rules, 2003 is Office of the Registrar, PPV & FR Authority, New Delhi – 110 012.

Passport data of the variety : PC-P3812
Applicant : Prabhat Agri Biotech Ltd.
Address of the Applicant : 6-3-541/B, Opp. Heritage Office, Punjagutta, Hyderabad-500082, A.P.

Nationality of Applicant : Indian
Application details
  a. Number : E28 GH45 12 282
  b. Date of receipt : 29.06.2012
  c. Date of acceptance :
Crop(Taxonomical Lineage) : Tetraploid Cotton [Gossypium hirsutum L.]
Denomination : PC-P3812
Type of Variety : Extant(Variety of Common Knowledge)
Classification of Variety : Hybrid
Previously proposed : Not applicable
Denomination
Name of Parental Material : PCGP-619 x (PCGP-953 x KHANDWA 2)
Source of parental material : R&D, Prabhat Agri Biotech Ltd
Name of Reference Varieties : Kanchana
Variety Description:

<table>
<thead>
<tr>
<th>A. Group Characteristics</th>
<th>Remarks measured values, example varieties, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leaf: Shape</td>
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</tr>
<tr>
<td>Flower: Petal colour</td>
<td>Yellow</td>
</tr>
</tbody>
</table>
Flower: Pollen colour | Cream  
Boll: Shape (longitudinal section) | Round  
Fibre: Length(2.5% span length)(mm) | Long  

**B. Distinct Characteristics:** PC-P3812 has distinguishing character as Plant Stem hairiness: **Medium**, Seed: Fuzz colour: **White**.

**C. Reference variety:** Kanchana has distinguishing character as Plant Stem hairiness: **Sparse**, Seed: Fuzz colour: **Grey**.

**D. Date of commercialization of the variety**  
First developed hybrid first sale invoice is 06-05-2006

**E. Agronomic and commercial attributes**  
Plant Height: Very tall, Growth Habit: Semi Spreading, Days to 50% flowering: 50-60 days, Maturity Group: Medium, Boll size: Medium, Response to fertilizer and irrigation: Responds to added fertilizers, Reaction to major pests: tolerance to jassids & moderately tolerant white flies, Quality characteristics of the variety: Ginning 35-36%, Staple Length: 27.5-32.0 mm, Strength: 21.0-24.0, Mic: 5.0-5.9, Expected yield of the variety: 1600-1800 Kg/ha., Adoptability: Suitable to varied agro-climatic conditions, Commercial attributes: It has good combining ability and good plant type with good yielder.

Photographs: (See figure-23)

24. Application No. [N9 AE9 10 453] filed on 27.12.2010 by Nuziveedu Seeds Pvt. Ltd., Survey No. 69, Gundlapochampally (Vill. &Panchayat), Medchal-Mandal, Rangareddy- Dist, Telangana -501401. fora New Variety of crop Okra [Abelmoschus esculentus (L.) Moench] having denomination NOKH-1003, the specification includes its drawing and or photograph(s) of which are given below, has been accepted and given registration number ⎯⎯⎯NA ⎯⎯⎯on ⎯⎯⎯Na⎯⎯⎯.  

The convention application no. ⎯⎯NA⎯⎯, in respect of the said variety has been filed on ⎯⎯NA⎯⎯, in ⎯⎯NA⎯⎯.  


Passport data of the variety: NOKH-1003  
Applicant: Nuziveedu Seeds Pvt. Ltd.  
Address of the Applicant: Survey No. 69, Gundlapochampally (Vill. &Panchayat), Medchal-Mandal, Rangareddy- Dist, Telangana -501401.

Nationality of Applicant: Indian  
Application details: [N9 AE9 10 453]
a. Number : 

b. Date of receipt : 27.12.2010

c. Date of acceptance : --

Crop (Taxonomical Lineage) : Okra [Abelmoschus esculentus (L.) Moench]

Denomination : NOKH-103

type of Variety : New

Classification of Variety : Hybrid

Previously proposed : Not applicable

Denomination

Name of Parental Material : OK-189 x OK-199

Source of Parental material : Nuziveedu Seeds Pvt. Ltd. At its R & D Centre

Name of Reference Varieties : Varsha Uphar

Variety Description:

A. Group Characteristics | Remarks measured values, example varieties, etc.

| Stem: Colour | Green |
| Leaf blade: Depth of lobbing | Deep |
| Stem: Number of nodes at first flowering | Medium |
| Fruit: colour | Green |
| Fruit: Number of locules | <6 |
| Plant: Number of branches | Many |

B. Distinct Characteristics: NOKH-1003 has distinguishing character as Leaf blade: Depth of lobbing: Deep

C. Reference variety: Varsha Uphar has distinguishing character as Leaf blade: Depth of lobbing: Shallow

D. Date of commercialization of the variety 28/06/2010

E. Agronomic and commercial attributes

| Days to Produce: 47-48 days, Fruit Colour: Lusk Dark Green, Fruit Length (CM): 10-12, Fruit Tenderness: Tender Fruits, Leaf type: Okra, No. of Locules: 5, Plant height: Medium Tall |

Photographs: (See Figure-24)

The convention application no. -----NA-----, in respect of the said variety has been filed on -----NA-----, in --NA--.
Appropriate office for the opposition of proceeding under Rule 29, of the Protection of Plant Varieties and Farmers’ Rights Rules, 2003 is **Office of the Registrar, PPV & FR Authority, New Delhi – 110 012.**

**Passport data of the variety**: OK-199

**Applicant**: Nuziveedu Seeds Pvt. Ltd.

**Address of the Applicant**: Survey No. 69, Gundlapochampally (Vill. &Panchayat), Medchal-Mandal, Rangareddy-Dist, Telangana -501401.

**Nationality of Applicant**: Indian

**Application details**
- a. Number: E11 AE6 11 77
- b. Date of receipt: 13.01.2011
- c. Date of acceptance: --

**Crop (Taxonomical Lineage)**: Okra \([Abelmoschus esculentus \text{(L.)} \text{Moench}]\)

**Denomination**: OK-199

**Type of Variety**: Extant (Variety of Common Knowledge)

**Classification of Variety**: Other (Parental Line)

**Previously proposed**: Not applicable

**Denomination**

**Name of Parental Material**: OKHI-17-7-5-1-4-2-1

**Source of Parental material**: R&D Centre, Nuziveedu Seeds Ltd.

**Name of Reference Varieties**: KashiLalima, Arka Anamika

**Variety Description:**

<table>
<thead>
<tr>
<th>A. Group Characteristics</th>
<th>Remarks measured values, example varieties, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stem: Colour</td>
<td>Green</td>
</tr>
<tr>
<td>Leaf blade: Depth of lobing</td>
<td>Deep</td>
</tr>
<tr>
<td>Stem: Number of nodes at first flowering</td>
<td>Medium</td>
</tr>
<tr>
<td>Fruit: colour</td>
<td>Green</td>
</tr>
<tr>
<td>Fruit: Number of locules</td>
<td>&lt;6</td>
</tr>
<tr>
<td>Plant: Number of branches</td>
<td>Medium</td>
</tr>
</tbody>
</table>

| B. Distinct Characteristics: OK-199 | has distinguishing character as Fruit Colour: **Green**. |

| C. Reference variety: **KashiLalima** | has distinguishing character as Fruit Colour: **Red**. |

<table>
<thead>
<tr>
<th>D. Date of commercialization of the variety</th>
<th>This candidate variety OK-199 is one of the parental lines of our hybrid NBH-24 commercialize since 20-06-2006</th>
</tr>
</thead>
</table>

|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
Photographs: (See Figure-25)

26. Application No. N5 AE7 12 380 filed on 21.08.2012 by DCM Shriram Limited, 5th Floor Kanchenjunga Building, 18 Barakhamba Road, New Delhi-110001, India for a New Variety of crop Okra [Abelmoschus esculentus (L.) Moench], the specification includes its drawing and or photograph(s) of which are given below, has been accepted and given registration number NA on -- NA.

The convention application no. NA, in respect of the said variety has been filed on NA, in --NA.---


Passport data of the variety: LR62216
Applicant: DCM Shriram Limited.
Address of the Applicant: 5th Floor Kanchenjunga Building, 18 Barakhamba Road, New Delhi-110001, India.

Nationality of Applicant: Indian
Application details:
   a. Number: N5 AE7 12 380
   b. Date of receipt: 21.08.2012
   c. Date of acceptance: --
Crop (Taxonomical Lineage): Okra [Abelmoschus esculentus (L.) Moench]
Denomination: LR62216
Type of Variety: New
Classification of Variety: Other (Inbred parent line)
Previously proposed: Not applicable
Denomination: SSR25 x OK0213
Source of Parental material: R&D farm Bioseed Research India.
Name of Reference Varieties: Arka Anamika

Variety Description:

<table>
<thead>
<tr>
<th>A. Group Characteristics</th>
<th>Remarks measured values, example varieties, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stem: Colour</td>
<td>Green</td>
</tr>
<tr>
<td>Leaf blade: Depth of lobbing</td>
<td>Deep</td>
</tr>
<tr>
<td>Stem: Number of nodes at first flowering</td>
<td>Few</td>
</tr>
<tr>
<td>Fruit: colour</td>
<td>Light Green</td>
</tr>
<tr>
<td>Fruit: Number of locules</td>
<td>&lt;6</td>
</tr>
<tr>
<td>-------------------------</td>
<td>----</td>
</tr>
<tr>
<td>Plant: Number of branches</td>
<td>Medium</td>
</tr>
</tbody>
</table>

**B. Distinct Characteristics:** LR62216 has distinguishing character as Fruit: Colour: **Light green**, Plant: Number of branches: **Medium**.

**C. Reference variety:** Arka Anamika has distinguishing character as Fruit: Colour: **Green**, Plant: Number of branches: **Many**.

**D. Date of commercialization of the variety**

One of the parental lines in development of an okra hybrid having denomination BIO 228 H, which is commercially marketed as Avantika, and was first sold on 16-02-2008.

**E. Agronomic and commercial attributes**

Plant height at maturity is short with a range of 80-90 cm as per our R&D farm observation. 4-5 Average numbers of branches. It takes 40-45 days for first picking in summer and 43-48 days in kharif. Light green fruit colour. Leaf blade is deeply lobed. Fair tolerant YVM.

**Photographs:** (See Figure-26)

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27. Application No. **N6 AE8 12 387** filed on 31.08.2012 by DCM Shriram Limited, 5th Floor Kanchenjunga Building, 18 Barakhamba Road, New Delhi-110001, India for a **New Variety** of crop **Okra [Abelmoschus esculentus (L.) Moench]** having denomination **DI62459**, the specification includes its drawing and or photograph(s) of which are given below, has been accepted and given registration number """" NA """"on """" """" NA """".

The convention application no. """" NA """", in respect of the said variety has been filed on """" NA """", in """" NA """".

Appropriate office for the opposition of proceeding under Rule 29, of the Protection of Plant Varieties and Farmers’ Rights Rules, 2003 is **Office of the Registrar, PPV & FR Authority, New Delhi – 110 012**.

**Passport data of the variety**: DI62459

**Applicant**: DCM Shriram Limited.

**Address of the Applicant**: 5th Floor Kanchenjunga Building, 18 Barakhamba Road, New Delhi-110001, India.

**Nationality of Applicant**: Indian

**Application details**

<table>
<thead>
<tr>
<th>a. Number</th>
<th>b. Date of receipt</th>
<th>c. Date of acceptance</th>
</tr>
</thead>
<tbody>
<tr>
<td>N6 AE8 12 387</td>
<td>31.08.2012</td>
<td>--</td>
</tr>
</tbody>
</table>

**Crop (Taxonomical Lineage)**: Okra [Abelmoschus esculentus (L.) Moench]
**Denomination**: DI62459  
**Type of Variety**: New  
**Classification of Variety**: Other (Inbred parent line)  
**Previously proposed**: Not applicable  
**Denomination**  
**Name of Parental Material**: CH02 x CH06  
**Source of Parental material**: R&D farm Bioseed Research India.  
**Name of Reference Varieties**: VRO-3  

**Variety Description**:  

<table>
<thead>
<tr>
<th>A. Group Characteristics</th>
<th>Remarks measured values, example varieties, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stem: Colour</td>
<td>Green</td>
</tr>
<tr>
<td>Leaf blade: Depth of lobbing</td>
<td>Shallow</td>
</tr>
<tr>
<td>Stem: Number of nodes at first flowering</td>
<td>Medium</td>
</tr>
<tr>
<td>Fruit: colour</td>
<td>Green</td>
</tr>
<tr>
<td>Fruit: Number of locules</td>
<td>&lt;6</td>
</tr>
<tr>
<td>Plant: Number of branches</td>
<td>Medium</td>
</tr>
</tbody>
</table>

**B. Distinct Characteristics**: DI62459 has distinguishing character as Fruit: Colour: **Green**, Fruit: Length of physiologically mature fruit: **Medium**.

**C. Reference variety**: VRO-3 has distinguishing character as Fruit: Colour: **Light green**, Fruit: Length of physiologically mature fruit: **Many**.

**D. Date of commercialization of the variety**  
One of the parental lines in development of an okra hybrid having denomination BIO 228 H, which is commercially marketed as Avantika, and was first sold on 16-02-2008.

**E. Agronomic and commercial attributes**  
Plant height at maturity is Tall as per our R&D farm observation.  
It takes 43-46 days for first picking in summer and 47-49 days in kharif.  
Green fruit colour.  
Fruit surface between is flat.  
Fair tolerant to YVM.

**Photographs**: (See Figure-27)
<table>
<thead>
<tr>
<th>Varietal Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetraploid cotton / S07H878 BGII</td>
<td>Figure-1: Boll: Shape (longitudinal section): Round</td>
</tr>
<tr>
<td>Tetraploid cotton / NC-106</td>
<td>Figure-2: Flower: Pollen Colour: Yellow</td>
</tr>
<tr>
<td>Tetraploid cotton / Omkar Bt (NCS 950 Bt)</td>
<td>Figure-3: General view of Boll</td>
</tr>
<tr>
<td>Tetraploid cotton / Super Mallika Bt (NCS 955 Bt)</td>
<td>Figure-4: General view of Plant</td>
</tr>
<tr>
<td>Tetraploid cotton / NC-185</td>
<td></td>
</tr>
<tr>
<td>Tetraploid cotton / NC-1171</td>
<td></td>
</tr>
<tr>
<td>Figure</td>
<td>Description</td>
</tr>
<tr>
<td>--------</td>
<td>-------------</td>
</tr>
<tr>
<td>5</td>
<td>Flower: Pollen Colour: Yellow</td>
</tr>
<tr>
<td>6</td>
<td>Leaf: Colour : Light green</td>
</tr>
<tr>
<td>7</td>
<td>Flower: Pollen Colour: Cream</td>
</tr>
<tr>
<td>8</td>
<td>Flower: Pollen Colour: Cream</td>
</tr>
<tr>
<td>9</td>
<td>Boll shape: Round</td>
</tr>
<tr>
<td>10</td>
<td>Flower: Petal Colour : Yellow</td>
</tr>
</tbody>
</table>

**Legend:**
- **Tetraploid cotton**
- **NC**
<table>
<thead>
<tr>
<th>Tetraploid cotton / NC-167</th>
<th>Tetraploid cotton / NC-181</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure-11: General view of Plant</td>
<td>Figure-12: Leaf colour: Light green</td>
</tr>
<tr>
<td>Tetraploid cotton / NC-91</td>
<td>Tetraploid cotton / NC-172</td>
</tr>
<tr>
<td>Figure-13: General view of Boll</td>
<td>Figure-14: General view of Boll</td>
</tr>
<tr>
<td>Tetraploid cotton / NC-174</td>
<td>Tetraploid cotton / NC-170</td>
</tr>
</tbody>
</table>
Figure 15: Flower: Pollen Colour: Yellow

Tetraploid cotton / NC-47

Figure 16: Boll shape (longitudinal section): Round

Tetraploid cotton / NCS-9028 Bt2

Figure 17: Boll shape (longitudinal section): Round

Tetraploid cotton / AC-1910

Figure 18: Flower petal colour: Yellow

Tetraploid cotton / AC-1207
<table>
<thead>
<tr>
<th><strong>Figure-19: General view of boll</strong></th>
<th><strong>Figure-20: General view of boll</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetraploid cotton /7493870 B</td>
<td>Tetraploid cotton / PC-P711</td>
</tr>
<tr>
<td><img src="image1.png" alt="Image" /></td>
<td><img src="image2.png" alt="Image" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Figure-21: General view of plant</strong></th>
<th><strong>Figure-22: General view of plant</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetraploid cotton / PC-P3812</td>
<td>Okra / NOKH-1003</td>
</tr>
<tr>
<td><img src="image3.png" alt="Image" /></td>
<td><img src="image4.png" alt="Image" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Figure-23: Plant stem hairiness: Medium</strong></th>
<th><strong>Figure-24: Leaf blade: Depth of lobing: Deep</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Okra / OK-199</td>
<td>Okra / LR62216</td>
</tr>
<tr>
<td><img src="image5.png" alt="Image" /></td>
<td><img src="image6.png" alt="Image" /></td>
</tr>
</tbody>
</table>
Figure-25: Fruit: Colour: Green

Figure-26: Leaf blade: Colour between veins: Green

Okra / DI62459

Figure-27: Fruit colour: Green