

भारत सरकार GOVERNMENT OF INDIA

भारतीय पौधा किस्म जरनल PLANT VARIETY JOURNAL OF INDIA

[kM& 05] val & 06] tw 01, 2011

Vol. - 05, No. - 06, June 01, 2011



पौधा किस्म और कृषक अधिकार संरक्षण प्राधिकरण एनएएससी काम्प्लैक्स, डीपीएस मार्ग, निकट टोडापुर गांव, नई दिल्ली–110012

PROTECTION OF PLANT VARIETIES & FARMERS' RIGHTS AUTHORITY NASC COMPLEX, DPS MARG, Opp. Todapur Village, New Delhi-110012



Hijr ljdij GOVERNMENT OF INDIA

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Plant Variety Journal of India, Vol. 05, No. 06 June 01, 2011 / Jyaishtha Krishna 30, Saka 1932



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PROTECTION OF PLANT VARIETIES & FARMERS' RIGHTS AUTHORITY NASC Complex, DPS Marg, Opp. Todapur Village, New Delhi – 110 012 'भारतीय पौधा किस्म जरनल' पौधा किस्म और कृषक अधिकार संरक्षण प्राधिकरण (पौ.कि.कृ.अ.सं.प्रा.) का आधिकारिक जरनल है। पीपीवी और एफआर अधिनियम, 2001 तथा पीपीवी और एफआर नियमावली, 2003 के नियम 2 (जी) के अंतर्गत अध्यक्ष, पीपीवी और एफआरए, एनएएससी काम्प्लैक्स (द्वितीय तल), डीपीएस मार्ग, निकट टोडापुर गांव, नई दिल्ली–110012 की ओर से प्राधिकरण के रजिस्ट्रार द्वारा प्रकाशित किया जा रहा है।

Plant Variety Journal of India is the Official Journal of the Protection of Plant Varieties and Farmers' Rights Authority (PPV & FRA) published by the Registrar on behalf of the Chairperson, PPV & FRA, NASC Complex (IInd Floor), DPS Marg, Opp. Todapur Village, New Delhi-110012 under the PPV & FR Act, 2001 and Rule 2 (g) of the PPV & FR Rules, 2003.

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 specific DUS test guideline for Menthol mint (*Mentha arvensis* L.) crop species is hereby published in 'Plant Variety Journal of India', Vol. 05, No. 06, June 01, 2011. Interested parties may read these guidelines and act accordingly.

Menthol mint (Mentha arvensis L.)

I. Subject

These test guidelines shall apply to all varieties of Menthol mint (Mentha arvensis L.).

II. Planting material required

- 1. The Protection of Plant Varieties and Farmers' Rights Authority (PPV&FRA) shall decide when, where and in what quantity and quality of the planting material are required for testing a variety denomination applied for registration under the Protection of Plant Varieties and Farmers' Rights (PPV&FR) 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 quantity of planting material to be supplied by applicant in one or several samples shall be: 5.0 kg clean and wholesome suckers (underground stolons) 10-15 cm long. The suckers shall be packed in cotton cloth bag with proper labeling.
- 2. The planting material supplied should be visibly healthy, not lacking in vigour or affected by any pest or disease.
- 3. The planting material shall not have been subjected to any chemical or bio-physical treatment unless the PPV&FR Authority allows or requests such treatment. 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 normally be at least two independent similar growing seasons with two consecutive plantings, the second being a replanting with same plant material
- 2. The tests shall normally be conducted at two test locations. If any essential characteristics of the candidate variety are not expressed for visual observation at these locations, the variety shall be considered for further examination at another

appropriate test site or under special test protocol on expressed request of the applicant.

- 3. The field tests shall be carried out under conditions favouring normal growth and expression of all test characteristics. The size of the plots shall be such that plants or parts of plants could be removed for observation and measurement without prejudicing the other observations on the standing plants until the end of the growing period. Each test plot shall include at least a total of 80 plants in the plot size (3m × 3m) and planting space specified below across three replications. Separate plots for observation and for measurement can only be used if they have been subjected to similar environmental conditions. All the replications shall be sharing similar environmental conditions.
- 4. Test plot design:

| Bed size: | $9.0m^2 (3m \times 3m)$ |
|-----------------------------------|-------------------------|
| Number of rows: | 4 |
| Row length: | 3m |
| Row to row distance: | 70cm |
| Plant to plant distance: | 12 -15cm. |
| Number of plants per replication: | 80 |
| Number of replications: | 3 |

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

IV. Methods and observations

- 1. The characteristics described in the Table of characteristics (see section VII) shall be used for the testing of varieties for their DUS.
- For the assessment of Distinctiveness and Stability, observations shall be made on 30 plants or parts of 30 plants, which shall be equally divided among three replications (10 plants per replication).
- 3. For the assessment of Uniformity, a population standard of 5% with an acceptance probability of at least 95% shall be applied.

- 4. For the assessment of all colour characteristics, the latest Royal Horticultural Society (RHS) colour chart shall be used.
- 5. Unless otherwise indicated, all observation on the plant, the leaf and the stem shall be made before the end of the growing phase and during the full expression time. Unless otherwise indicated, all observations on the shoot shall be made on the main shoot (tallest).

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 vary only slightly within a variety and which in their various states of expression are fairly evenly distributed across all varieties in the collection are suitable for grouping purposes.
- 2. The following characteristics shall be used for grouping Menthol mint varieties:
 - a) Plant: height (Characteristic 2)
 - b) Crop duration: days to maturity (Characteristic 16)
 - c) Essential oil: Menthol content in essential oil (Characteristic 18)

VI. Characteristics and symbols

- 1. To assess Distinctiveness, Uniformity and Stability, the characteristics and their states as given in the Table of characteristics (section VII) shall be used.
- 2. Notes (1 to 9) shall be used to describe the state of each characteristic for the purpose of digital data processing.
- 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 phenological characteristic or by the environmental conditions of the testing region. Under such exceptional situation, adequate explanation shall be provided.

- (+) See explanation of the characteristic 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.
- 4. The optimum stage of plant growth for assessment of each characteristic is given in the sixth column of the table of characteristics.
- 5. Types of assessment of characteristics indicated in column seven of table of characteristics is as follows:
 - MG: Single measurement of a group of plants or parts of plants
 - MS: Measurement of number of individual plants or parts of plants
 - VG: Visual recording of single observation of a group of plants or parts of plants
 - VS: Visual recording by observation of individual plant or parts of plants

| S. No | Characteristics | States | Note | Example Varieties | Stage of observation | Type of assessment |
|-----------|--|-------------------------|------|--|---|--------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. (+) | Plant: growth habit | Erect | 1 | Kalka, Shivalik, Gomti, Kosi, Himalaya | At early stage of growing | VG |
| | | Semi-erect | 3 | Sambhav, MAS-1, Saksham, Kushal | phase (50 days after planting) | |
| | | Spreading | 5 | | | |
| 2. (*) | Plant: height (cm) | Short (<50cm) | 3 | Kalka, MAS-1 | At the end of the growing phase (90 | MS |
| (+) | | Medium (51- 70cm) | 5 | Sambhav, Kushal, Saksham, Kosi, Himalaya | days after planting) | |
| | | Tall (>70cm) | 7 | Shivalik, Gomti | | |
| 3. | Plant : number of branches on main shoot | Low (<15) | 3 | MAS-1, Kalka | At the end of the growing phase (90 | MS |
| | | Medium (16-20) | 5 | Sambhav, Kushal, Saksham | days after planting) | |

VII. Table of Characteristics

| | | High (>20) | 7 | Gomti, Kosi, Himalaya | | |
|-------------|----------------------------------|---------------------------------|---|--|--|----|
| Anthocyanin | | Light | 1 | MAS-1, Kalka, Gomti, Kosi Kushal, | At middle of the growing | VG |
| | pigmentation | Medium | 3 | Sambhav, Himalaya | phase (60-70 days after planting) | |
| | | Dark | 5 | Shivalik, Saksham | 1 0/ | |
| 5. (+) | Leaf: stem fresh weight ratio | Narrow (< 1.0) | 3 | Himalya, Gomti | At the time of harvesting (100-110 | MS |
| | | Medium (1.1-1.5) | 5 | MAS-1, Shivalik, Kosi, Kushal | days after planting) | |
| | | High (>1.5) | 7 | Kalka, Sambhav, Saksham | | |
| 6. (+) | Leaf: blade length (cm) | Short (<4.0cm) | 3 | Sambhav, Himalaya | Full expansion of leaves | MS |
| | | Long (>4.0 cm) | 7 | Kosi, Saksham, MAS-1, Kalka, Shivalik, Gomti, Kushal | achieved (90 days after planting) | |
| 7. | Leaf: Blade width (cm) | Narrow (<2.5 cm) | 3 | MAS-1, Kalka, | Full expansion of leaves achieved (90 | MS |
| | | Broad (>2.5 cm) | 7 | Sambhav, Himalaya, Kosi Kushal, Saksham, Gomti, Shivalik | days after planting) | |
| 8. | Leaf: Leaf area | Low (>10cm ²) | 3 | Shivalik | Full expansion of leaves | MS |
| | | Medium $(10 - 12 \text{ cm}^2)$ | 5 | Gomti, Sambhav, Himalaya, Saksham | achieved (90 days after | |
| | | High (>12cm ²) | 7 | Kalka, MAS-1, Kosi, Kushal | planting) | |
| 9. (*) | Leaf: hairiness (upper side) | Absent | 1 | MAS-1, Kalka, Saksham, Sambhav | Full expansion of leaves | VG |
| | | Present | 9 | Shivalik, Damroo, Gomti, Kosi, Kushal, | achieved (90 days after | |

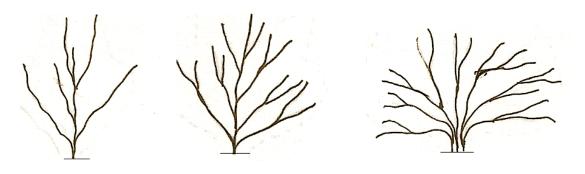
| | | | | Himalaya | planting) | |
|------------|---|--------------------------|--------|--|--|----|
| 10. (*) | Leaf: intensity of hairiness (lower side) | Weak | 3 7 | MAS-1, Kalka, Sambhav, Shivalik, Kosi, Saksham Gomti, Himalaya, Kushal, Damroo | Full expansion of leaves achieved (90 days after | VS |
| | | | - | | planting) | |
| 11. (*) | Leaf: intensity of green color | Light Medium | 3 5 | MAS-1, Kalka Himalaya, Kushal, | Full expansion of leaves | VG |
| | | Dark | 7 | Gomti, Samhav, Saksham Damroo, Kosi, Shivalik | achieved (80- 90 days after planting) | |
| 12. | Leaf: | Weak | 1 | MAS-1, Kalka | Full | VG |
| 12. | anthocynin colouration of veins (Lower side) | Medium | 3 | Shivalik, Gomti, Himalaya, Kosi, Kushal | expansion of leaves achieved (80- | VU |
| | (Lower side) | Strong | 5 | Saksham, Damroo | 90 days after planting) | |
| 13. | Leaf: anthocynin colouration of | Absent | 1 | MAS-1, Kalka, Sambhav | Full expansion of leaves | VG |
| | margins | Present | 3 | Shivalik, Gomti, Himalaya, Kosi, Kushal, Saksham | achieved (80- 90 days after planting) | |
| 14. | Leaf: lamina | Dentate | 1 | MAS-1, Damroo | Full | VG |
| (+) | margins | Serrate | 3 | Kalka | expansion of leaves achieved (80- | |
| | | Sinuate | 5 | Shivalik, Gomti, Himalaya, Kosi, Kushal, Saksham, Sambhav | 90 days after planting) | |
| 15. | Leaf.: Shape of | Acute | 3 | MAS-1, Kalka | Full | VG |
| (+) | apex | Obtuse | 5 | Himalaya, Gomti, Saksham Kushal, Samhav, Kosi | expansion of leaves achieved (80- 90 days after | |
| | | Rounded | 7 | - | planting) | |
| 16. (*) | Crop duration: Days to maturity | Short (< 110 days) | 3 | MAS-1, Sambhav | At the end the growing phase at | VG |
| | | Medium | 5 | Himalaya, Kosi, | maturity | |

| | | (120 | | Saksham, Kushal | (100-120 | |
|-----|---|---------------------|---|-------------------------------------|---|----|
| | | days) | | | days after | |
| | | Long | 7 | Kalka, Gomti, Shivalik, | planting) | |
| | | (> 120 | , | Damroo | | |
| | | days) | | | | |
| 17. | Essential oil: | Low | 3 | Gomti | At the end | MG |
| (*) | Content (%) | (<0.5) | | | of the | |
| (+) | | Medium (0.5-0.8) | 5 | MAS-1, Kalka, Shivalik, Sambhav, | growing phase after distillation of | |
| | | High (>0.8) | 7 | Kushal, Saksham, Kosi, Himalaya | herbage (100-120 days after planting) | |
| 18. | Essential oil: Menthol content in essential oil | Low (<70%) | 3 | Shivalik, Gomti, Damroo | At the end of the growing | MG |
| | (%) | Medium (70-75%) | 5 | Sambhav, Kushal, Kalka, Saksham | phase after distillation of herbage (100-120 | |
| | | High (>75%) | 7 | Kosi, Himalaya, MAS-1 | days after planting) | |

VIII. Explanations for the table of characteristics

Characteristic 1. Plant: Growth habit

Plant growth habit should be observed at early stage of the growing phase.



(a) Erect

(b) Semi-erect

(c) Spreading

Characteristic 2. Plant: Height

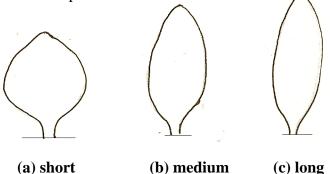
Plant height shall be measured from the soil level to the tip of the top leaf of the main shoot. Average of 10 plants shall be taken from single replication.

Characteristic 5. Leaf: stem fresh weight ratio

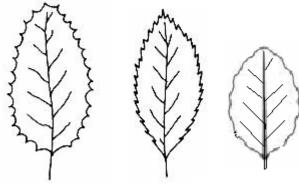
Leaves and stem portions of fresh weight (100g) material will be weighed separately in 5 replications at the time of harvesting (100-120 days after planting)

Characteristic 6 Leaf: blade length (cm)

Value of upper fourth leaf of the main shoot (with petiole) shall be taken. Average of 10 leaves shall be taken from each replication.



Characteristic 14. Leaf: Lemina margins



(a) Dentate

(b) Serrate

(c) Sinuate

Characteristic 15. Leaf: Shape of apex



(a) Acute

(b) Obtuse

Characteristic 17. Essential oil: content (%)

Essential oil content shall be measured by hydro-distillation of 1Kg sample of fresh herbage from each replication in a Clevenger apparatus.

Characteristic 18. Essential oil: Menthol content in oil (%)

Menthol content in the essential oil shall be measured by Gas Liquid Chromatography using standard procedures. (Singh AK, Raina VK, Naqvi AA, Patra NK, Kumar B, Ram P and Khanuja SPS, 2005. Essential oil composition and chemoarrays of menthol mint (*Mentha arvensis* L. *F. piperascens* Malinvaud ex. Holmes cultivars. Flavour Fragr. J. 20: 302-305).

IX. Literature

Singh BM, Mahajan RK, Srivastav and Pareek SK. (2003) Minimal Descriptors of Agri-Horticultural Crops. Part IV: Medicinal and Aromatic Plants. National Bureau of Plant Genetic Resources, Pusa Campus, New Delhi (INDIA).

X. Names of DUS testing centers

| Nodal Center | Other Center |
|---|---|
| Central Institute of Medicinal and Aromatic Plants (CIMAP), Lucknow- 226015 | CIMAP Resource Center (CRC), Pantnagar, Uttrakhand |

PUBLIC NOTICE

Corrigendum

It is hereby informed that a few printing errors have crept in the passport data of the candidate variety 30V92 of Maize (Application No. E12 ZM31 07 138) notified in the Plant variety Journal of India Vol.-5, No.- 4, April 01, 2011 and a corrigendum to that extent is given below.

| S. No. | Page | Location of | Incorrect text or figure | To be read as |
|--------|--------|--|--|---|
| | number | Text or Figure | | |
| 1. | 145 | Application No. 05: Passport data of the variety 30V92 | Name of Parental Material: M096F x M082R Name of Reference Varieties: 7686 and 7688 | Name of Parental Material: 9JM x 7PH Name of Reference Varieties: 30B07 |
| 2. | 156 | fp= 05% eDclR% 0 oh 92 Figure 05: Maize: 30V92 | fp= 05: तुष तथा दानों का सामान्य दृश्य Figure 05c: General view of glume and grain | fp= 05% तुष तथा दानों का सामान्य दृश्य Figure 05c: General view of glume and grain |

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.1,500/- (Rupees One Thousand and Five Hundred Only) by way of Demand Draft drawn in favour of "The Registrar, 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

01. Application No. E13 SB21 07 100 filed on 14/06/2007 by JK Agri Genetics Ltd., 1-10-177, 4th Floor, Varun Towers, Begumpet, Hyderabad – 500016, A.P., India on behalf of ------NA------ for a extant (Variety of Common Knowledge) of crop Sorghum [*Sorghum bicolor* L.] having denomination JKSH-434, the specification includes its drawing and or photograph(s) of which are given below, has been accepted and given registration number -----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 JKSH-434:

| Applicant | : JK Agri Genetics Ltd. | | | | | |
|--|--|--------------------|----------|---------------|--|--|
| Address of the Applicant | : 1-10-177, 4 th Floor, Varun Towers, | | | | | |
| | Begumpet, Hyderabad – 500016, A.P., India | | | | | |
| Nationality of Applicant | : Indian | | | | | |
| Application details | | - | | | | |
| a. Number | : E13 | SB21 | 07 | 100 | | |
| b. Date of receipt | : 14/06/2 | 007 | | | | |
| c. Date of acceptance | : 10/05/2 | 011 | | | | |
| Crop (Taxonomical Lineage) | : Sorghur | n [<i>Sorghur</i> | n bicolo | <i>r</i> L.] | | |
| Denomination | : JKSH-4 | 34 | | | | |
| Type of Variety : Extant (Variety of Common Knowledge) | | | | on Knowledge) | | |
| Classification of Variety | : Hybrid | | | | | |
| Previously proposed | | | | | | |

| denomination | : Not applicable |
|-----------------------------|----------------------|
| Name of Parental Material | : JKMS-3A x JKR-1844 |
| Name of Reference Varieties | : JKSH 22 and CSH-9 |

Variety Description:

| A. Group Characteristics | Remarks measured values, example varieties, etc. |
|--|--|
| Kharif or Rabi adaptation | Kharif |
| Plant: Time of panicle emergence (50% plants with complete spike emergence) | Medium [CSH-16] |
| Plant : Total height at maturity | Medium [RS 673] |
| Panicle : Shape | Symmettic [CSH 9] |
| Caryopsis: Colour after threshing | Yellow white [Pant Chari 5] |

B. Distinct Characteristics:

JKSH-434 has distinguishing characters like white leaf mid rib colour, very broad width of blade, semi compact panicle density at maturity, symmetric panicle shape, very short neck of panicle and long flower length.

C. Reference varieties:

1. JKSH 22: It has distinguishing characters like yellow green leaf mid rib colour, broad width of blade, loose panicle density at maturity, panicle broader in lower part, short neck of panicle and medium flower length.

2. CSH-9: It has distinguishing characters like white leaf mid rib colour, medium width of blade, compact panicle density at maturity, symmetric panicle shape, very short neck of panicle and medium flower length.

| D. Date of commercialization of the variety | Commercialized since 19/05/2002. |
|--|----------------------------------|

E. Photograph (s): (See figures 01)

| 02. Application No. | E14 | SB23 | 07 | 108 | filed on 14/06/2007 by JK Agri |
|---------------------|-----|------|----|-----|--|
| 11 | | | | | • 0 |

Genetics Ltd., 1-10-177, 4th Floor, Varun Towers, Begumpet, Hyderabad – 500016, A.P.,

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 JKSH-234:

| Applicant | : JK Agri Genetics Ltd. | | | |
|----------------------------------|--|--------------------|-------------|---------------------|
| Address of the Applicant | : 1-10-177, 4 th Floor, Varun Towers, | | | |
| | Begumpet, Hyde | erabad – 5 | 500016, A.I | P., India |
| Nationality of Applicant | : Indian | | | |
| Application details | | | -1 | 7 |
| a. Number | : E14 SB23 | 07 | 108 | |
| b. Date of receipt | : 14/06/2007 | | | |
| c. Date of acceptance | : 10/05/2011 | | | |
| Crop (Taxonomical Lineage) | : Sorghum [Sorghum bicolor L.] | | | |
| Denomination | : JKSH-234 | | | |
| Type of Variety | : Extant (Variety of Common Knowledge) | | | |
| Classification of Variety | : Hybrid | | | |
| Previously proposed | | | | |
| denomination | : Not applicable | | | |
| Name of Parental Material | : JKMS-3A x JKR-613 | | | |
| Name of Reference Varieties | : JKSH 22 and CSH-9 | | | |
| Variety Description: | | | | |
| A. Group Characteristics | | Remarl varietie | | red values, example |

| Kharif or Rabi adaptation | Kharif |
|--|-----------------------------|
| Plant: Time of panicle emergence | Medium [CSH-16] |
| (50% plants with complete spike emergence) | |
| Plant : Total height at maturity | Medium [RS 673] |
| Panicle : Shape | Pyramidal [SSG 59-3] |
| Caryopsis: Colour after threshing | Yellow white [Pant Chari 5] |

B. Distinct Characteristics:

JKSH-234 has distinguishing characters like orange red colour of dry anther, medium width of blade, semi loose panicle density at maturity, pyramidal panicle shape, short neck of panicle and long length of flower.

C. Reference varieties:

1. JKSH 22: It has distinguishing characters like grayed orange colour of dry anther, broad width of blade, loose panicle density at maturity, panicle shape broader in lower part, short neck of panicle and medium length of flower.

2. CSH-9: It has distinguishing characters like orange red colour of dry anther, medium width of blade, compact panicle density at maturity, symmetric panicle shape, very short neck of panicle and medium length of flower.

| D. Date of commercialization of the variety | Commercialized since 31/05/2000. |
|---|----------------------------------|
| - | |

E. Photograph (s): (See figures 02)

| 03. Application No. | E204 | GH29 | 08 | 255 | filed on 02/04/2008 by M/S |
|---------------------|------|------|----|-----|--|
|---------------------|------|------|----|-----|--|

Lakshmikumaran & Sridharan, B 6/10, Safdarjung Enclave, New Delhi – 110 025 on behalf of Maharashtra Hybrid Seed Company Limited, Resham Bhavan, 4th Floor, 78, Veer Nariman Road, Mumbai – 400 020, India for a extant (Variety of Common Knowledge) plant variety of crop Tetraploid Cotton (*Gossypium hirsutum* L.) having denomination MRC 6304 Bt, the specification including 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 MRC 6304 Bt:

| Applicant | : Maharashtra Hybrid Seed Company Limited |
|--------------------------|--|
| Address of the Applicant | : Resham Bhavan, 4 th Floor, 78, Veer Nariman Road, |
| | Mumbai – 400 020, India |
| Nationality of Applicant | : Indian |

Application details

| a. Number | : E204 | GH29 | 08 | 255 | |
|----------------------------------|------------|--------------|----------|------------|-------|
| b. Date of receipt | : 02/04/2 | 008 | | | |
| c. Date of acceptance | : 09/05/2 | 011 | | | |
| Crop (Taxonomical Lineage) | : Tetraplo | oid Cotton (| Gossypiu | m hirsutur | n L.) |
| Denomination | : MRC 63 | 304 Bt | | | |
| Type of Variety | : Extant (| Variety of C | Common | Knowledg | ;e) |
| Classification of Variety | : Transge | nic Hybrid | | | |
| Previously proposed denomination | : Not app | licable | | | |
| Name of Parental Material | : C 5185 | x C 5187 B | t | | |
| Name of Reference Varieties | : RCH 1 | 34 Bt and Ll | HH 144 | | |
| Variety Description: | | | | | |

| A. Group Characteristics | Remarks, | measured | values, | example |
|--------------------------|----------|----------|---------|---------|
| | | | | |

| | varieties, etc. |
|-----------------------|---------------------------------|
| Species | Gossypium hirsutum L. |
| Leaf: Shape | Palmate (Normal) [LRA 5166 (H)] |
| Flower: Petal colour | Yellow [Laxmi (H)] |
| Flower: Pollen colour | Cream [LRA 5166 (H)] |
| Boll: shape | Ovate [Surabhi (H)] |
| Fibre: length | Long [Supriya (H)] |

B. Distinct Characteristics:

MRC 6304 Bt has distinguishing characters like sparse leaf hairiness, palmate (normal) leaf shape, tall plant height, medium time of flowering, yellow petal colour, large weight of seed cotton/boll and bold seed index.

C. Reference varieties:

1. RCH 134 Bt: It has distinguishing characters like sparse leaf hairiness, palmate (normal) leaf shape, very tall plant height, late time of flowering, cream petal colour, medium weight of seed cotton/boll and medium seed index.

2. LHH 144: It has distinguishing characters like medium leaf hairiness, semi digitate leaf shape, tall plant height, early time of flowering, cream petal colour, very large weight of seed cotton/boll and bold seed index.

| D. Date of commercialization of the | GEAC approvals vide letter No. 10/7/2004-CS dated |
|--|---|
| variety | 25/03/2005. Commercialized since 19/04/2005. |

E. Photographs: (See figure 03a and b)

Hkjrh; iksk fdLe tjuy [ks1 05] val - 06] 01 tw 2011 ea

vf/W fpr if; k W fdLeledsfp=

Photograph of candidate varieties notified in Plant Variety Journal of India, Vol. 5, No.- 06, June 01, 2011

fp= 01%

Figure 01: Pearl millet: JKSH-434



fp= 01% Figure 01: General view of crop **fp= 02%** Figure 02: Pearl millet: JKSH-234



fp= 02% Figure 02: General view of crop

fp= 03%

Figure 03: Tetraploid Cotton: MRC 6304 Bt



fp= 03d% Figure 03a: General view of flower

