

## FORM GI-1(A)

### Application for the Registration of a Geographical Indication in Part A of the Register, Section II (1), Rule 23(2)

**1. a) Name of the applicant/applicants:**

- 1) Wayanad Jilla Sugandha Nellulpadaka Karshaka Samithi, Wayanad
- 2) Kerala Agricultural University, Thrissur

**b) Address:**

- 1) Wayanad Jilla Sugandha Nellulpadaka Karshaka Samithi, Rural Agricultural Wholesale Market, Sulthan Bathery, Wayanad-673592, Kerala, India
- 2) Kerala Agricultural University, Kerala Agricultural University (PO), Thrissur Dist, Kerala-680656, India.

**c) List of Association of Persons /Producers:**

All rice farmers of Wayanad district cultivating *Gandhakasala* rice.

**d) Type of goods:**

*Gandhakasala* rice of Wayanad district and related rice products falling in **Class 30**

**e) Specification:**

*Gandhakasala* is the most popular traditional aromatic rice cultivar of Wayanad District. This scented (non-basmati) rice is famous for its characteristic fragrance and aroma. The grains are aromatic, short bold, awnless with a lemma and palea (hull) colour of straw. Grains have golden yellow colour. *Gandhakasala* rice differs from Basmati rice due to growth habit, areas of original cultivation, physico-chemical properties of grains and grain shape.

The grains are very short in size compared to other popular aromatic rice varieties like basmati as well as the common rice varieties of Wayanad and Kerala. The grains have an appealing golden yellow colour. The length of the rice grain ranges between 4 to 4.8mm coming to the international classification of short-bold. The rice colour is white with moderate pleasant aroma. The thousand grain weight is only 15 to 18.9 grams owing to small grains. The gelatinization temperature is high to intermediate indicating high to intermediate cooking time. The intermediary amylose content renders non stickiness to this rice. Other rice cultivars of Wayanad except *Gandhakasala* are non aromatic and hence are used for ordinary consumption

This paddy requires specialized mills with rubber hullers for getting high head rice (unbroken grains) recovery. *Gandhakasala* is a long duration variety with tall plants and has a low grain yield of 2.0 to 2.7 tonnes per hectare. It is mainly cultivated in the organic way. The total duration of the crop is 180-190 days.

The major grain characters are given below:-

1. Kernel length	4.0 mm - 5.0 mm
2. Kernel shape (l/b)	1.72 - 2.00 (Short bold)
3. Kernel colour	White
4. Aroma / flavour	Slight to moderate
5. Hull colour	Golden yellow
6. 1000 grain weight	15.0-18.90 gms
7. Volume expansion ratio	4.80-6.00
8. Kernel elongation ratio	1.56-1.90
9. Brown rice (%)	76.0-81.0
10. Total milled rice (%)	65.0- 75.0
11. Degree of milling (%)	86.0-90.79
12. Head rice recovery (%)	58.0-70.0
13. Gelatinization temperature	High to intermediate
14. Chalkiness	Less than 10%
15. Amylose content (%)	19.0-21.0

The average plant height of *Gandhakasala* cultivar is 150-155cm with lesser no. of tillers (average 6 to 8 tillers) and very long panicles (27-28.4cm) with 105 to 110 small, short bold, awnless golden yellow colored grains. The grains of Basmati, popular aromatic rice variety of India are slender and elongated when compared to this variety (The variety Basmati 370 has a kernel length of 6.0-6.8 mm).

The uniqueness of the product is maintained by adopting organic methods for cultivation. For better aroma, the crop is raised in the *Nancha* season (winter season) so that flowering coincides with the coldest months of November and December. It is mainly cultivated in *kundu vayals* (deep fields). The faunal diversity associated with paddy fields is rich and plays a significant role in controlling harmful insects and pests. Sixteen species of birds have been reported from these paddy fields. The diversity of fish is also reported to be high in *kundu vayals*.

Rouging is done periodically by removing off types to maintain varietal purity. Upon attaining physiological maturity, panicles are selected using strict quality standards pertaining to the morphological characteristics for the collection of seeds for the next season. As parboiling of paddy reduces the aroma and quality, the grains are marketed as raw rice.

**f) Name of the geographical indication and particulars:**

**Wayanad *Gandhakasala* Rice**



Nestled among the mountains of Western Ghats, lies Wayanad, one of the loveliest hill stations of Kerala. This green paradise located at a distance of 76 kms from the seashores of Kozhikode (Calicut) lies at a height of 700-2100 m above mean sea level. The geographical position of Wayanad is peculiar and unique. Nature has blessed this part of the country with mist clad mountains and sylvan valleys.

The name Wayanad is believed to be derived from the word *vayal nadu* meaning the "land of paddy fields". Vayal lands are essential for paddy cultivation. Of the different categories of *vayals*, *kundu vayals* are suited for cultivation of traditional varieties like *Gandhakasala*, *Jeerakasala*, *Mullan channa*, *Poothadi kayama* etc. *Kundu vayals* are flat fields located in the valley bottoms characterized by standing water throughout the rainy season. The soil is clayey loam and hence has better water retention capacity. Moreover water is retained here for a longer period due to lack of proper drainage facilities.

**Climate:** Wayanad is the land of hills and deep valleys. The altitude of Wayanad varies from 700 to 2100 meters above mean sea level. Wayanad has a salubrious climate. Annual rainfall of high rainfall areas in Wayanad like Lakkidi, Vythiri and Meppadi ranges from 3000-4000 mm. High velocity winds are common during the South –West monsoon and dry winds blow in March – April. High altitude regions experience severe cold. In Wayanad the mean maximum and minimum temperature for the last fifteen years were 27.3°C and 17.7°C respectively. This place experiences a high relative humidity, which goes even up to 95 percent during the South West monsoon period. The average annual rainfall of Wayanad is 1875mm.

**Average weather data of Wayanad district for the last 15 years**

Month	Min Temp. (°C)	Max Temp. (°C)	RH 1 (%)	RH 2 (%)	Rain fall (cm)	Wind speed (km/hr)
January	15.41	27.89	90.46	56.32	13.03	3.61
February	16.79	29.37	89.22	54.37	11.83	3.42
March	18.40	30.94	90.90	51.18	42.16	3.79
April	19.45	29.95	92.20	62.89	132.24	2.71
May	19.43	28.81	91.86	69.89	137.61	2.99
June	18.85	25.71	93.76	80.76	302.03	3.59
July	18.21	24.50	94.56	85.18	436.68	2.83
August	18.08	24.85	94.86	84.79	292.73	2.21
September	17.84	26.60	93.42	80.55	160.56	2.21
October	17.89	26.38	93.61	79.29	242.41	2.46
November	17.09	26.47	92.13	73.82	85.59	3.91
December	15.14	26.65	89.29	61.08	17.71	4.97

*Gandhakasala* is the famous non-basmati aromatic rice of Wayanad. *Gandhakasala* is suitable for transplanting during *Nancha (kharif)* season (May-June to Oct.-Nov.). The low temperature regime prevailing in this district encourages cultivation of scented rice varieties. The ideal average maximum temperature for expression of aroma in rice is 22°C- 26°C during flowering and dough stage of paddy. The maximum temperature recorded at Wayanad during this stage of paddy is 24.4°C to 26.8°C, which is ideal for expression of aroma in scented rice. Areas having an altitude up to 1000 m above mean sea level (MSL) is ideal for cultivation of *Gandhakasala*.

The region is biogeographically rich with significant landscape complexity and biological diversity in both flora and fauna. The flora of Wayanad is characteristic of the Western Ghats. Forty one percent of the area is under natural forests, ranging from tropical wet evergreen to tropical dry deciduous types. Wayanad offers a panorama of undulating hills and dales which are converted into paddy fields. The cool climate offered by high altitude favors development of aroma in rice and spice crops.

**Soil:** The soil of Wayanad District is mainly of the forest type which is well drained with rapid to moderate permeability. The soil has dark reddish brown to reddish brown, strongly acid, sandy loam to sandy clay loam A horizons and reddish brown to yellowish red, strongly acid to medium acid B horizons. The texture of upper layers of the subsurface horizon is sandy clay loam to sandy clay. These soils are formed on gneissic material on strongly sloping to steep side slopes of Wayanad. The lush and luxuriant growth of vegetation makes Wayanad clothed in uniform greenery.

The soil nutrient status is as follows

Nitrogen	-Medium (0.88% - 1.20%)
Phosphorus	-Low (7.3-8.5) kg/ha
Potassium	-Medium to high (230-535kg/ha)
Soil Reaction	-Strongly acid to medium acid

Almost entire Wayanad is drained by Kabani river and its tributaries, namely Panamaram, Mannanthavady and Thirunelli. The river Kabani, courses through the paddy fields. The east flowing rivers of Wayanad are in striking contrast to the majority of west flowing rivers of Kerala.

Details regarding water quality of the area are furnished herewith

Characteristics	Desirable limits	Sample code / rating	
		Sample I	Sample 2
PH	6.5 – 8.5	6.70 – medium	5.60 – low
Ec		0.207	0.212
Total hardness	300 mg/l	80 mg/l - low	42 mg/l - low
Calcium	75 mg/l	20 mg/l - low	8 mg/l - low
Magnesium	30 mg/l	7.3 mg/l - low	5.4 mg/l - low

#### g) Description of the goods:

The botanical name of rice plant is *Oryza sativa*. *Gandhakasala* is the traditional aromatic rice cultivar of Wayanad. The average grain yield of *Gandhakasala* is 2.0-2.7t/ha. This is a long duration (180-190days) tall variety with weak straw and is susceptible to lodging. The cultivar has tolerance to pests and diseases. The average plant height of *Gandhakasala* cultivar is 150-155cm with lesser no. of tillers (average 6 to 8 tillers) and very long panicles (27-28.4cm) with 105 to 110 small, short bold, awnless golden yellow colored grains.

*Gandhakasala* rice is valued for its pleasant flavour and aroma and hence fetches a premium price in the market. It is mainly used for preparation of special dishes like "Ghee rice"/fried rice or "neichoru" prepared for marriages and festivals and also for the preparation of sweet items like "Payasam". The grains are very short in size compared to other popular aromatic rice varieties like basmati as well as the common rice varieties of Wayanad and Kerala. The grains have an appealing golden yellow colour. The length of the rice grain ranges between 4 to 5.0mm coming to the

international classification of short-bold. The rice colour is white with moderate pleasant aroma. The thousand grain weight is only 15 to 18.9 grams owing to small grains. The gelatinization temperature is high to intermediate indicating high to intermediate cooking time. The intermediary amylose content renders non stickiness to this rice. This paddy requires specialized mills with rubber hullers for getting high head rice (unbroken grains) recovery. *Gandhakasala* is a long duration variety with tall plants and has a low grain yield of 2.0 to 2.7 tonnes per hectare. It is mainly cultivated in the organic way. The total duration of the crop is 180-190 days.

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#### **h) Geographical area of production and map:**

Wayanad lies (in the State of Kerala, India) between North latitude 11° 27' and 12° and East longitude 75° 46' and 76° 27'. The altitude of Wayanad varies from 700 to 2100 meters from mean sea level. It is bounded on the East by Nilgiris of Tamilnadu and Mysore District of Karnataka, on the North by Coorg District of Karnataka, on the South by Malappuram District of Kerala and on the West by Kozhikode and Kannur Districts of Kerala.

The total geographical area and population of Wayanad are 2126 sq.kms and 6,72,128 respectively. Its geographical position is peculiar and unique. Placed on the Southern tip of the Deccan plateau, the prime glory of Wayanad is the majestic Western Ghats, with lofty ridges interspersed with magnificent forests, tangled jungles and valleys. The hills are full of plantations like tea, coffee, pepper and cardamom while the dales have a predominance of paddy.

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Calcium	75 mg/l	20 mg/l - low	8 mg/l - low
Magnesium	30 mg/l	7.3 mg/l - low	5.4 mg/l - low

*Gandhakasala* rice is cultivated throughout Wayanad district, predominantly in 22 Panchayats (list provided as Annexure 1). Total area under rice cultivation in Wayanad is 11503 ha, and of this 4.2% account for the cultivation of traditional aromatic rice cultivars. *Gandhakasala* is cultivated in an approximate area of 327 ha.

Geographical map for area of production is provided separately.

#### i) Proof of origin:

Mention about the traditional tall *indica* aromatic cultivars like *Jeerakasala* and *Gandhakasala* are noted in the age old Malayalam books written on the basis of old verbal recitation in Malayalam called “Krishi Gita” describing the whole agricultural practices followed in *Malayalakkara*, during the 17<sup>th</sup> century.

‘*Krishigeetha- Chollum Vayanayum*’ is a folkloristic study of an 18<sup>th</sup> century traditional and primitive agriculture in *Malayalakkara*. This book is compiled by the *Nattarivu Padana Kendram*, Kanimangalam P.O., Thrissur (Ed. by T.T. Sreekumar, C. R. Rajagopalan and Vijayakumar Menon). In this book it is mentioned that in “Kattappattu” the *Pulluva* tribes in their festival rituals and songs praise all their favorite rice varieties including *Gandhakasala* (*‘Krishigeetha- Chollum Vayanayum*’, page 83, copy enclosed).

The rice variety *Gandhakasala*, is also mentioned in the book *Pulluvappattum Naagaaradhanayum, Paatukalum patanavum* (Pulluva songs and snake worship-songs and studies) published in 1977 where the author Sri.M.V.Vishnu Nambuthiri has compiled different rituals and songs sung by the *Pulluva* tribes during different occasions. This variety is mentioned in a particular song “*Kattappaattu*’ where the tribal singers go to rice fields awaiting harvest and sing this song. They get panicles in return [*Pulluvappattum Naagaaradhanayum (Paatukalum Patanavum)*, page 146-147].

There is mention about this variety in *Krishiyude Naattarivukal*, edited by Sri. V. K. Sreedharan, published by D. C. Books, Kerala in 2004. In this book it is also mentioned that in the “*Vithupolipattu*,” the song of seeds in the ritual “*Kothaamooriyattom*” in North Kerala done for good yield of crops and dairy in the

coming crop season, there is mention about *Gandhakasala* (*Krishiyude Naattarivukal*, page 31; copy enclosed).

Article written by scientists from M. S. Swaminathan Research Foundation, Kalpetta, Wayanad, Kerala about rice cultivation system of Wayanad and the culture of Kurichya and Kuruma tribal communities in Wayanad (*LEISA INDIA*, December 2004. pp.27-28).

Protection of Plant Varieties & Farmers' Rights Authority, Govt. of India honoured the Kuruma and Kurichya tribal communities of Wayanad district through "Plant Genome Saviour Community Award" 2008 for their contributions in the conservation of traditional rice varieties including *Gandhakasala* (The Hindu dt. 07/03/2009; copy enclosed).

### 1. Translation / transliteration of the non – English text

Translation of the fifth paragraph of the article *Uttarakeralathile Vithupaatukal* in the book *Krishiyude Nattarivukal* (page 31):

In this article author Sri M. V. Vishnu Nambuthiri mentions the seed songs or harvest songs (*Kattappaattu*) of North Kerala describing about hundred rice varieties like *Naron, Nagari, Thonnooran, Odachan, Palkazhama, Unnikaruka, Unikuruka, Kazhuvan, Chennellu, Chovala, Ittuzhichennellu, Kilikarichennellu, Pandinel, Pachanel, Pandikaruka, Balakaruka, Paranelvithu, Kavunginpoothada, Ponnariyan, Thavalakannan, Chitirathandan, Chemban, Amban, Irimban, Cheruvellari, Chowariyan, Mullari, Palkanni, Neerkannichennellu, Palkuruka, Pazhukuthuveeran, Kairali, Chitteni, Kuttanadan, Kozhivalan, Jeerakasala, Gandhakasala* etc. These harvest songs are mostly recited by Pulluva tribes in Kerala.

**Corresponding transliteration of the lines is given below**

**Kattappaattu....***enningane anekam vithinangalude perukal kattappatilundu. Naron, Nagari, Thonnooran, Odachan, Palkazhama, Unnikaruka, Unikuruka, Kazhuvan, Chennellu, Chovala, Ittuzhichennellu, Kilikarichennellu, Pandinel, Pachanel, Pandikaruka, Balakaruka, Paranelvithu, Kavunginpoothada, Ponnariyan, Thavalakannan, Chitirathandan, Chemban, Amban, Irimban, Cheruvellari, Chowariyan, Mullari, Palkanni, Neerkannichennellu, Palkuruka, Pazhukuthuveeran, Kairali, Chitteni, Kuttanadan, Kozhivalan, Jeerakasala, Gandhakasala thudangi noottonnu vithinangalude perukal Pulluvar paadi polippikkarundu".*

**Vithupolippaattu:**

*Karshikabhivruddhikkum gosamruddhikkum vendi thulamasam pathamudayam muthal nadathunna nadakeeyatha kalarinna oranushtanakalaa nirvahanamanu 'Kothamooriyaatam'. Godavari enna divyadhenuvinte sankalpathilulla oru veshavam athinte samrakshakareenna nilayilulla randu 'Paniyanmarum' (hasyathmakaveshangal) aanu athil aaduka. Godavariyaatathinu paadunna ganangalil "Vithupolippaatum ' adangunnu.*

*Chennellu vithu polikapoli chennellu vithu polika*

*Kunjikazhama polika poli kunjikazhama polika*

*thrichendan vithu polika poli thrichendan vithu polika"..*

*eningane aavarthana swabhvamullathanu aa pattu. Ennakuzhamban, Narakan, Mundavan, Ponkilivali, Navara, Kavungin poothada, Chitteni, Thazhuvan, Nalikan, Palkazhama, Unnikuruva, Koyivalan, Jeerakasala, Gandhakasala thudangi pathinettu vithukalude perukal cholli polikkanamennundu.*

References:

1. *Pulluvappattum Naagaaradhanayum (Paatukalum Patanavum)*. 1977. M.V.Vishnu Nambuthiri. National Book Stall, Kottayam. pp. 150-151.



2. *Krishigeetha- Chollum Vayanayum*. 1999. Editors- T.T. Sreekumar, C. R. Rajagopalan and Vijayakumar Menon. Nattarivu Padana Kendram, Kanimangalam, Thrissur. 97p.

3. *Krishiyude Naattarivukal*. 2004. Editor-V. K. Sreedharan, D. C. Books, Kerala. 143p.

4. *Vayals: a traditional classification of agricultural landscapes*. 2004. G.Girigan, N.Anil Kumar, V.Arivudai Nambi. *LEISA INDIA*. pp.27-28

5. Gene Bank for some unique Paddy seeds. The Hindu dt. 07/03/2009

#### **j) Method of production**

Rice is grown in the broad and extensive valley bottom in Wayanad and the low temperature regime prevailing in this area encourages cultivation of scented rice varieties.

*Gandhakasala*, the famous traditional aromatic cultivar of Wayanad is cultivated in *Nancha* season based on traditional knowledge about varieties, ecological and environmental factors, traditional belief and cultivation practices to have optimum use of resources. The livelihood and food security of tribes of Wayanad viz. Kurichiyas and Kurumas, mainly depends on paddy. *Gandhakasala*, being a long duration cultivar is mainly cultivated in *kundu vayals*. The faunal diversity associated with paddy fields is rich and plays a significant role in controlling harmful insects and pests. Sixteen species of birds have been reported from these paddy fields. The diversity of fish is also reported to be high in *kundu vayals*.

In Wayanad this variety is traditionally cultivated by the Wayanad *Chettis*, *Kurichiya* and *Kuruma* tribal group. These groups have a commitment for the conservation of these varieties as a gift to the coming generations. *Gandhakasala* is a variety that is traditionally grown as an organic crop to ensure the best quality of the product. The organic system of traditional rice cultivation in Wayanad is eco-friendly. This variety which has been in cultivation in Wayanad for many centuries is inherently resistant to pests and diseases owing to thin and tall stature of plants. Hence no chemical plant protection chemicals are applied to the crop. But the thin and tall feature of the plants makes them susceptible to lodging. In order to avoid lodging, chemical fertilizers are not applied to the crop. The manuring is done by raising green manure crops and leguminous crops and incorporating crop residues and farm yard manure as recommended by Kerala Agricultural University. A balanced manurial programme is followed. Maximum use of on farm resources and inputs is practiced to produce healthy and pollution free grains.

The temperature between 22°C and 26°C during flowering and dough stage of paddy are ideal for the expression of aroma in rice. The maximum temperature recorded at Wayanad from July- December ranges from 24°C to 26°C and hence is ideal for development of aroma/ flavour in *Gandhakasala*.

*Gandhakasala* is cultivated as a transplanted crop. Sowing is done in June-July months. Transplanting will be done after 35-40 days. The crop is mainly raised by organic way of cultivation using cow dung and green leaves as manures. Pest and disease incidence is very low. Harvesting of crop will be done after attaining physiological maturity.

The variety is cultivated as a transplanted crop adopting the following practices.

**Nursery:**

Fertile lands with irrigation and drainage facilities which receive good sunlight are selected for raising the nurseries. For transplanting, healthy seedlings are raised in seedbed. Sowing of the nursery is done in June-July months. The selected area is ploughed and harrowed two or three times until the soil is thoroughly puddled and levelled. Raised beds are prepared 5 to 10 cm high, 1 to 1.5 m wide and of convenient length with drainage channels between the beds. For each hectare of the main field, an area of about 1000 m<sup>2</sup> is taken as nursery area. Organic manure at the rate of one kg per m<sup>2</sup> of the nursery bed is mixed well with the soil at the time of preparation of the field. The nursery is raised by wet method. Germinated seeds are used for sowing in the well prepared nursery bed and adequate irrigation facilities are provided. The nursery bed is drained occasionally to encourage production of vigorous seedlings with short roots. Seedlings will be ready for transplanting thirty days after sowing.

**Main field:**

The field is ploughed thoroughly to prepare the main field. Weeds, straw and green manure crops are incorporated into the soil by ploughing. Organic manure will be applied @ 5t/ha. Chemical fertilizers are not applied for the crop. A smooth and level field for transplanting the seedlings is ensured. Transplantation is done 10-15 days after incorporating organic manure. Seedlings are transplanted @ 2-3 seedlings per hill in rows, at a depth of 3-4 cm. The crop has a long duration of 180-190 days. For better aroma, the crop is raised in the *Nancha* season (winter season) so that flowering coincides with the cold months of November and December. Hand weeding will be adopted twice or thrice to remove weeds. Rouging will be adopted to remove other varieties and off type varieties. As the crop is resistant to pest and diseases, plant protection chemicals are not used in cultivation.

**Harvesting:**

Harvesting periods & methods: Harvesting of crop will be done after attaining physiological maturity. This usually coincides with December – January months. Upon attaining physiological maturity, panicles are selected using strict quality standards pertaining to the morphological characteristics for the collection of seeds for the next season. After threshing manually, seeds are cleaned and dried in sunlight to a moisture level of 12 to 13 per cent.

**Storage and processing:**

After drying, the grains will be cleaned thoroughly and seeds will be stored in the traditional way. After drying to optimum moisture content, the raw grains are either hand pounded or milled in rice mills. Milling with rubber hullers gives better head rice (unbroken grains) recovery. Excessive drying will be avoided to reduce breakage of the grains. Parboiling of paddy reduces the aroma and quality and hence is not adopted.

**k) Uniqueness:**

***Gandhakasala* is the most popular traditional aromatic rice cultivar of Wayanad District. This scented, non-basmati rice is famous for its characteristic fragrance and aroma. The uniqueness of this rice is mainly attributed to particular climatic conditions prevalent in the area, together with varietal characters and system of rice cultivation, adding to the best expression of aroma and flavour in the product.**

Wayanad is the land of hills and deep valleys. The altitude of Wayanad varies from 700 to 2100 meters from mean sea level. Wayanad has a salubrious climate. The mean average rainfall in Wayanad is 2322 mm. Lakkidi, Vythiri and Meppadi are

the high rainfall areas in Wayanad. Annual rainfall in these high rainfall areas ranges from 3000-4000 mm. High velocity winds are common during the South –West monsoon and dry winds blow in March – April. High altitude regions experience severe cold. In Wayanad (Ambalavayal) the mean maximum and minimum temperature for the last five years were 29°C and 18°C respectively. This place experiences a high relative humidity, which goes even up to 95 percent during the South West monsoon period.

The region is biogeographically rich with significant landscape complexity and biological diversity in both flora and fauna. The flora of Wayanad is characteristic of the Western Ghats. Forty one percent of the area is under natural forests, ranging from tropical wet evergreen to tropical dry deciduous types. Wayanad offers a panorama of undulating hills and dales which are converted into paddy fields. The cool climate offered by high altitude favors development of aroma in rice and spice crops. Fragrance of aromatic rices and plantation crops like tea, pepper, eucalyptus etc. suffuses the very air in this fairy land.

Wayanad is ethnically diverse. Wayanad has the highest concentration of tribes in Kerala. The major tribe groups are Panyias, Kurichyas, Adiyans, Kurumas, Ooralis, Kadans and Kattunaickers.

The soil of Wayanad District is mainly of the forest type. It promotes a lush and luxuriant growth of vegetation, which makes Wayanad clothed in uniform greenery. Almost entire Wayanad is drained by Kabani river and its tributaries, namely Panamaram, Mannanthavady and Thirunelli. The river Kabani, courses through the paddy fields. The east flowing rivers of Wayanad are in striking contrast to the majority of west flowing rivers of Kerala.

Agriculture in Wayanad is equally divided between paddy and plantation crops. The hills are deep blue in bright sunlight and lie mist covered most of the time juxtaposed with the green of paddy fields.

The distinctive, exclusive and rare qualities of *Gandhakasala* could be the result of several factors including genotype, climate, soil and other ecological factors and system of cultivation based on traditional and tribal knowledge. The organic systems of traditional rice cultivation in Wayanad is eco-friendly. The temperature between 22°C and 26°C during flowering and dough stage of paddy are ideal for the expression of aroma in rice. The maximum temperature recorded at Wayanad from July- December ranges from 24.4°C to 26.8°C and hence is ideal for development of aroma in *Gandhakasala*. Grains have slight to moderate aroma and hence is ideal for preparation of specialty foods. Unlike basmathi, *Gandhakasala* have short bold grains.

*Gandhakasala* rice is valued for its pleasant flavour and aroma and hence fetches a premium price in the market. This aromatic rice is mainly used for preparation of special dishes like “Ghee rice”/fried rice or “neichoru” prepared for marriages and festivals and also for the preparation of sweet items like “Payasam”.

The grains of *Gandhakasala* are very short in size compared to other popular aromatic rice varieties like basmati as well as the common rice varieties of Wayanad and Kerala. The grains have an appealing golden yellow colour. The length of the rice grain ranges between 4 to 5.0mm coming to the international classification of short-bold. The rice colour is white with moderate pleasant aroma. The thousand grain weight is only 15 to 18.9 grams owing to small grains. The gelatinization temperature is high to intermediate indicating high to intermediate cooking time. The intermediary amylose content renders non stickiness to this rice. This paddy requires specialized mills with rubber hullers for getting high head rice (unbroken grains) recovery. *Gandhakasala* is a long duration variety with tall plants and has a low grain yield of

2.0 to 2.7 tonnes per hectare. It is mainly cultivated in the organic way. The total duration of the crop is 180-190 days.

The average plant height of *Gandhakasala* cultivar is 150-155cm with lesser no. of tillers (average 6 to 8 tillers) and very long panicles (27-28.4cm) with 105 to 110 small, short bold, awnless golden yellow colored grains.

*Gandhakasala* have 19-21 per cent amylose content and cooks moist and tender and does not become hard on cooling. *Gandhakasala* is used for the preparation of special food like Ghee rice, also called "*Neichore*," a delicacy of the Muslims of Kerala, and is a major Mappilah cuisine. In current days, not only Muslims, but all sections of the society have likings to such preparations leading to a growing demand for small grained aromatic rice. *Gandhakasala* rice is also used for the preparation of Uppuma, Payasam, Puttu and rice flakes (aval). Jains residing in Wayanad area use this rice in their daily food intake. Rice gruel (*kanji*) prepared from *Gandhakasala* is used in the diets of infants and invalids due to easy digestability. *Kanji* made out of *Gandhakasala* is locally known as 'Thambaikanji' meaning the Food of Gods. It is also used as a geriatric food. The organic way of cultivation adds to the quality of grains. The straw of this cultivar is highly relished by cattle.

#### **D) Inspection body:**

Inspection body will be constituted with the following members

1. Director of Research, Kerala Agricultural University, Thrissur
2. Co-ordinator, WTO Centre, Kerala Agricultural University, Thrissur
3. Convener, IPR Cell, Kerala Agricultural University, Thrissur
4. Associate Director of Research, RARS, Ambalavayal
5. Plant Breeder, RARS, Ambalavayal
6. Principal Agricultural Officer, Wayanad District
7. Asst. Principal Agricultural Officer, Wayanad District
8. President, Wayanad Jilla Sugandha Nellulpadaka Karshaka Samithi, Wayanad
9. Secretary, Wayanad Jilla Sugandha Nellulpadaka Karshaka Samithi, Wayanad
10. Agricultural Officer, Krishibhavan, Panamaram, Wayanad district
11. Agricultural Officer, Krishibhavan, Thirunelly, Wayanad district
12. Agricultural Officer, Krishibhavan, Noolpuzha, Wayanad district
13. Three farmer representatives cultivating *Gandhakasala* in Wayanad district

#### **m) Other:**

A current book on "A Treatise on the Scented Rices of India" co edited by Dr. R.K. Singh and Dr. U.S. Singh (Kalyani Publishers, New Delhi) suggests that in the WTO regime there is an urgent need for selecting pure traditional varieties of scented rice and registering them as Geographical Indications.

Dr. Ronald Cantrell, the former Director General of International Rice Research Institute, Philippines suggested that there is a growing demand for scented rice in the global market and hence there is a need for policy reform to promote the traditional aromatic varieties so that the farmers could get remunerative prices in the global market.

The monthly demand of aromatic rice in Wayanad district is more than 150 t. Similar is the case in all other districts of Kerala. At present the demand is met by bringing aromatic rice from neighboring states like Andhra Pradesh, Tamilnadu and Karnataka even though these are of lesser quality especially in the case of aroma.

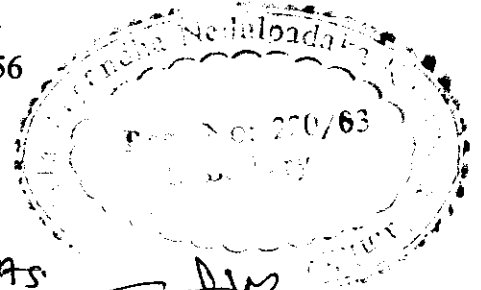
Along with the Statement of Case in Class 30 in respect of Wayanad Gandhakasala rice and rice products in the names of Kerala Agricultural University and Wayanad Jilla Sugandha Nellulpadaka Karshaka Samithi, Wayanad whose addresses are

1. **Wayanad Jilla Sugandha Nellulpadaka Karshaka Samithi,**  
Rural Agricultural Wholesale Market, Sulthan Bathery,  
Wayanad-673592, Kerala, India  
and
2. **Kerala Agricultural University, KAU P.O., Vellanikkara, Thrissur – 680 656, Kerala, India**

who claims to represent the interest of the producers of the said goods to which the geographical indications relates and which is in continuous use since time immemorial in respect of the said goods.

2. Other necessary particulars called for in rule 32(1) are given in the statement of case
3. All communications related to this application may be sent to the following address in India.

Director of Research  
Kerala Agricultural University  
KAU (P. O), Thrissur – 680 656  
Kerala, India



K.M. HARIDAS

1. Signature

SECRETARY

Name of the signatory in block letters

2. Signature

Dr. JOBI V PAUL  
Registrar,  
Kerala Agricultural University,

Name of the signatory in block letters

**Annexure 1.Details of area under cultivation for Gandhakasala rice**

BLOCK PANCHAYAT	GRAMA PANCHAYAT	APPROXIMATE AREA UNDER SCENTED RICE(ha)
Mannanthavady	1.Mannanthavady	23
	2.Vellamunda	12
	3.Thirunelly	60
	4.Thondarnadu	5
	5.Edavaka	26
	6.Thavinjal	5
	7.Panamaram	78
Sulthan Bathery	8. Meenangady	5
	9. Nenmeni	2
	10. Ambalavayal	3
	11.Poothadi	12
	12.Sulthan Bathery	6
	13. Noolpuzha	38
	14. Mullankolli	3
	15.Pulpally	15
Kalpetta	16.Kottathara	3
	17.Vengapally	-
	18.Muttil	5
	19.Pozhuthana	-
	20.Padinjarethara	3
	21.Meppadi	3
	22.Kaniyampetta	20

Total for District 327