

Ref No: KASAM/GI/2018/61

Date :11.01.2018

To,
The Registrar
Geographical Indication
INTELLECTUAL PROPERTY OFFICE BUILDING
G.S.T Road, Guindy, Chennai-600032

Sub : Filing of application for "Kandhamal Haladi(Turmeric)" for Geographical indication Registration.

Sir,

We take the opportunity to submit our application along with necessary documents and a Demand draft of Rs 5000/- towards fee vide its no 204427 dated 06.01.2018 from ICICIBANK Bank as per requirement for " KANDHAMAL HALADI(TURMERIC)"GI registration tag in the name of **KANDHAMAL APEX SPICES ASSOCIATION FOR MARKETING (KASAM)**,Phulbani.

We have taken the technical support and facilitation service for preparing our application and documentation from MSME -IPFC of Central Tool Room & Training Centre, Bhubaneswar.

We request your good self to kindly acknowledge the receipt of application and process for the registration.

Yours faithfully,

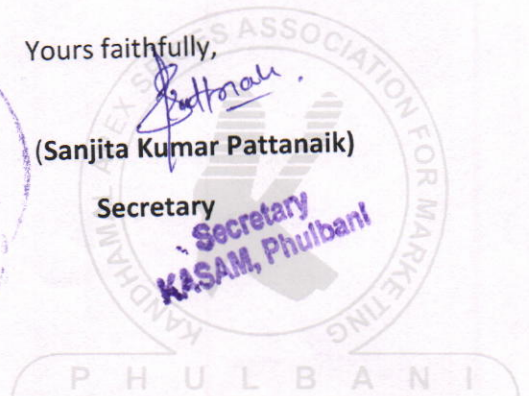
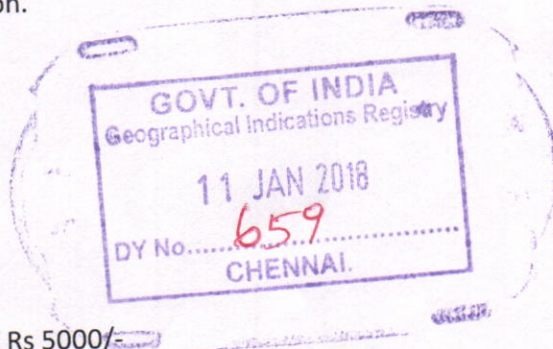
(Sanjita Kumar Pattanaik)

Secretary

Secretary
KASAM, Phulbani

Enclosures :

- 1) DD of Rs 5000/-
- 2) Annexures A to M





सेन्ट्रल टूलरूम एन्ड ट्रेनिंग सेन्टर, भुवनेश्वर
CENTRAL TOOL ROOM & TRAINING CENTRE, BHUBANESWAR

भारत सरकार की सोसाइटी, सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय
Government of India Society, Ministry of Micro, Small & Medium Enterprises



ISO 9001, 14001, 50001 & 29990
OHSAS 18001 & AS 9100

GI APPLICATION No.

610

Ref No: CTTC/BBSR/IPFC/GI/2422

Date :11.01.2018

To,

The Registrar

Geographical Indication

INTELLECTUAL PROPERTY OFFICE BUILDING

G.S.T Road, Guindy, Chennai-600032

Sub : Filing of application for "Kandhamal Haladi(Turmeric)" for Geographical Indication Registration.

Sir,

We are in great pleasure to intimate you that IPFC-MSMEs is established by O/o DCMSME, Ministry of MSME, Govt. of India at Central Tool Room & Training Centre (CTTC), Bhubaneswar. IPFC for MSMEs at CTTC has taken the opportunity to provide technical support, guidance and facilitation services to **M/s KANDHAMAL APEX SPICES ASSOCIATION FOR MARKETING (KASAM)**, Phulbani for preparing the application and necessary documentation for GI registration filing at your esteemed office.

In view of this, it is requested that you may kindly consider for writing the name of **MSME-IPFC, Central Tool Room & Training Centre, Bhubaneswar, (MSME Technology Centre), Ministry of MSME, Government of India**, as **facilitator** in the final certificate of registration.

Thanking You,

Yours faithfully,


(Dr.S.K.Kar)

Head IPFC

Dr. S. K. Kar
HOD (Quality) Consultancy
Central Tool Room & Training Centre
Bhubaneswar
Ministry of MSME, Govt. of India

Mail: ipr@ctic.gov.in

Ph: +91-9003522986

Name: P. Karthikeyan

IPR & Incubation In-charge

MSME Technology Centre, Bhubaneswar

Ministry of MSME, Govt. of India.

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ANNEXURE - A

(PAGE NO: 1708)

Bathman
Secretary
KASAM, Phulbani



GI APPLICATION No.

610

THE GEOGRAPHICAL INDICATIONS OF GOODS
(REGISTRATION AND PROTECTION) ACT, 1999

FORM GI-1

Received Rs. 5000 in cash/
Cheque/DD/MO on 11.01.2018
vide entry no. 3408 in the
register of valuables
Cashier D.D.O.

A	Application for the registration of a geographical indication in Part A of the Register Section 11 (1), Rule 23(2) Fee: Rs.5,000 (See entry No.1A of the First Schedule)
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Application is hereby made by "**Kandhamal Apex Spices Association for Marketing (KASAM)**" for the registration in Part A of the Register of the accompanying geographical indication furnishing the following particulars : -

(a) Name of the Applicant : **Kandhamal Apex Spices Association for Marketing (KASAM)**

(b) Address : **Netaji Subash Bose Road, Phulbani - 762001, Kandhamal, Odisha, India, kasam.organic@gmail.com**

(c) List of association of persons/producers/organization/authority: **KASAM**

1. Type of goods: **TURMERIC under Class 30 of spices authority**
2. Specification: Botanical Name- *Curcuma Longa L.* Syn
Family Name- Zingiberaceae
Colour- Golden Yellow
Curcumin content- 3.2-4.2%
Taste - Pungent & Unique
Special Medicinal value
Cultivation in organic manner
Economic Part: Under Ground fleshy root i.e. Rhizomes
Value Added Products: Curcumin, Oleoresin, Volatile Oil & Turmeric powder
Uses: Condiment, Cosmetic, Medicinal, & Natural yellow colour i.e. Curcumin

(d) Name of the geographical indication [and particulars]: "**Kandhmal Haladi (Turmeric)" Spices under class 30**

(e) Description of the goods:

Kandhamal Turmeric is a member of the *Curcuma* botanical group, which is part of the ginger family of herbs, the Zingiberaceae. Its botanical name is *Curcuma longa*. All curcumas are perennial plants native to southern Asia and require temperatures between 20 and 30°C (68–86°F) and a considerable amount of annual rainfall to thrive. Plants are gathered annually for their rhizomes and propagated from some of those rhizomes in the following season. When not used fresh, the rhizomes are boiled in water for about 30–45 minutes and then sun dried, after which they are ground into a deep-golden-yellow powder commonly used as a coloring and flavoring agent in many Asian cuisines, especially for curries, for facial, medicinally as well as for dyeing. Turmeric powder has a warm, bitter-like flavor and earthy. Although long used in Ayurvedic medicine to treat various diseases, there is little high-quality clinical evidence for use of turmeric or its main constituent, curcumin.



Kandhamal Haladi (Turmeric)

Turmeric has been used in Asia for thousands of years and is a major part of Ayurveda, Siddha medicine, Unani, and traditional Chinese medicine. It was first used as a dye, and then later for its medicinal properties. The origin of the name is Curcuma and is derived from the Sanskrit kumkuma, referring to both turmeric and saffron, used in India since ancient times.

Kandhamal is the centrally located District of Odisha pre dominantly in habituated by SC & ST population about 60% of the geographical area is hilly and with forest cover. The bounties of nature have blessed this area with a congenial agro-climatic condition for cultivation of various spices mainly turmeric, ginger, mustard and tamarind etc. The turmeric is the main cash crop of the Tribals, which is being grown from time immemorial. The following statement of Mr. L. S. S. O. Mally (Annual District Gezzettier 1908) indicates the ancientness of turmeric, cultivated by the Tribals.

“The growth of turmeric is almost a religious rite with these wild people and it was to improve its colour and output that human sacrifices used to be performed. It is their chief source of income as they export it in large quantities, bartering it for grain and salt to drivers of pack-bullocks who come from Ganjam, Sambalpur, Puri and tributary states”.

Annually about 14900hct of turmeric is grown in the district with a production of about 34270MT. Kandhamal stands 2nd in the district wise coverage of turmeric in the country next to Karimnagar district of Andhra Pradesh. Turmeric is the main cash crop of the poor Tribal farmers of this district. The local variety grown from time immemorial is having 3.2 – 4.2% curcumin, 12.15% of oleoresin and 5.3% of volatile oil. The most valuable aspect of Kandhamal turmeric is that these are produced “*ORGANICALLY*” without use of any chemical fertilizer and pesticide.

(f) Geographical area of production and map : **Separately Enclosed in Annexure**

(g) Proof of origin [Historical records] : **Separately Enclosed in Annexure**

(h) **Method of Production** :

Seed Materials Planting Methods:

As a general practice the farmers used their owned seed material preserved from the previous crop or borrowing from the neighbors the mother rhizome as well as Fingers kept for next season as planting material. However Mother Rhizome are treated as the best planting Material because they give 50% more yield then finger rhizome. For backyard cultivation mother rhizomes are used for planting but for medium and large size of cultivation both mother and finger rhizomes are used for planting. Local seeds procured from the farmers in small quantity are also distributed through Govt. Schemes for area

It has been observed that farmers are planting rhizomes on raised beds and also on ridges during April-May which is the most favorable planting time. Some of the farmers of Kandhamal districts are planting rhizomes in furrows for which they make furrows with the help of small spade and applied farm yard manure @ 10 t/ ha. After that rhizomes are planted in the furrows at the spacing of 30 cm and covered with soil. The mother rhizome are planted whole where as the finger rhizomes are cut into 4 - 5 cm long pieces. Well developed healthy and disease free rhizomes are selected for planting. At the time of planting some farmers applied 25 gm neem cake powder and mixed well with the soil in each pit taken at a spacing of 20-25 cm within and between rows. Small pits are made with a hand hoe in the beds in rows with spacing of 25 cm x 30 cm and covered with soil or cattle manure. The optimum spacing in furrows and ridges is 45-60 cm between rows and 25 cm between plants.

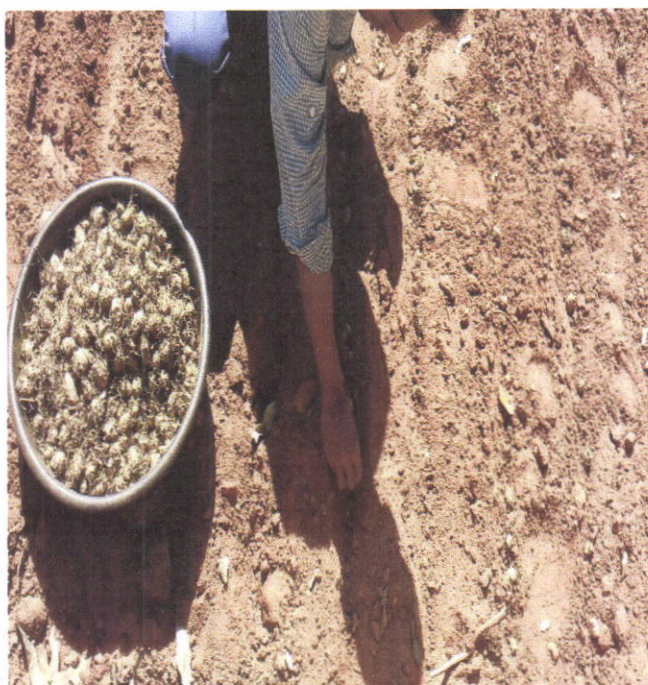


Fig-1: Shows the planting material of turmeric before planting in soil



Fig-2 Shows the finger sets at rest in soil



Fig3: Shows the Finger Sets at the time of harvesting

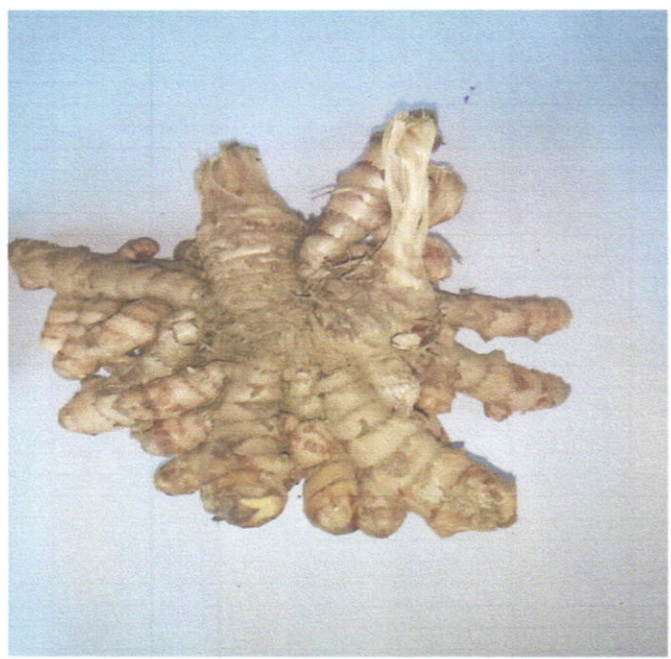


Fig-4: Shows Turmeric rhizomes after harvesting



Fig-5 : Shows the Cultivated Plant area

Mulching

The rhizomes are mulched immediately after planting with sal leaves at the rate of 12-15 t/ha. Mulching (green leaves) is also applied @ 7.5 t/ha at 45 and 90 days after weeding. Farmers reported that mulching in turmeric beds with green leaves is an essential to enhance germination of seed rhizomes and to prevent washing off of soil in rainy season. It also helps to add organic content to the soil and conserve moisture during the later part of the cropping season. Farmers are also applying glyrecedia (*Glyrecedia sepium* Jacq.) leaves rich in nitrogen content, phosphorus content like acalypha (*Acalypha indica* L.) and potassium content like calotropis (*Calotropis gigantea* L.) as mulch. Farmers believed that mulching would increase germination; reduce weed growth and soft rot. It has been observed that organic content of the soil helps to check the multiplication of nematodes. It has been seen that small farmers poured cow dung slurry on the bed after mulching to enhance microbial activity and nutrient availability. In Kandhamal district sal (*Shorea robusta* Gaertner f.) leaves are collected by women during February and March and stake at the field for mulching purposes.

Germplasm Management:

As the plant is propagated vegetatively, through rhizomes, the germplasm of the varieties are retain cent percent in the subsequent crops. Thus the quality of the produce remains unaltered.

Nutrient Requirement:

The cultivators of Kandhamal District are Organic by default. All of the Turmeric crops in Kandhamal District are grown organically without application of chemical fertilizers. Organic manure like farm made manure is used to meet the nutrient requirement of the plants. The leaf mulching applied to the crop also provides compost to the soil after decomposition in subsequent periods.

Management of Pests and Diseases.

The Turmeric crop is less prone to diseases and pest attack due to its characteristics. However Shoot borer (*Conogethes punctiferalis* Guen.) is the most important pest of turmeric larvae bore into the pseudostem and feed on the growing shoot resulting in yellowing and drying of the infested shoots. The farmers in this state have been followed indigenous pest and disease management practices. Some farmers plant rhizomes just after burning the field to avoid soil borne disease and insect damage. The adult of shoot borer after emergence from the soil settle on the tree and farmers collected and destroyed them. Farmers reported that spraying neem oil @ 0.5 per cent during July-October (at 21 day intervals) is effective against the shoot borer. Leaf blotch a fungal disease caused by *Taphrina maculans* appears as small oval rectangular brown spots on either side of the leaves. They soon become dirty yellow or dark brown. Tribal farmers removed mud from bottom of diseased plant to expose to the roots to the sun. This practices found to reduce disease (rhizomes rot) infestation. Progressive farmers are also deep ploughed their field during summer to reduce the disease. Rotten plant roots scratched by farmers in Kandhamal applied wood ash as well as vermicompost @2 t/ha in field to manage the incidence. Farmers are applying *Trichoderma viride*,

Beauveria bassian, and pseudomonas to control rhizome rot. Farmers in Kandhamal district planted turmeric in red soil and under the shade of tree like sal, mango and jackfruit to reduce rhizomes diseases. It has been observed that progressive farmers used own seeds for planting change seed source every 2-3 yrs to reduce the spread of seed borne diseases. Turmeric planted in the red soil was found less incidence of insect pest and diseases during storage period.

Water Management:

Kandhamal Turmeric is mostly grown as a rain fed crop. The field preparation and planting of the turmeric rhizome is done during pre monsoon period i.e. during April and May by utilizing the sporadic rain falls receives during this period. Soon after planting the field are covered with leaf mulch which preserved the moisture by checking the evaporation loss of the moisture from the land. This enables proper germination of the seed rhizomes during pre monsoon period. The main vegetative growth phase of the plant is June to October during which it gets ample rain water due to monsoon and post monsoon rains. Due to this the plant attend vigorous vegetative growth and the rhizome expansion also starts. During the month of November and December the cool climate along with frost accumulation during night help the plant to meet the water requirement and rhizome development occurs rapidly. During January the crop attends maturity stage and hence no irrigation is required.

Harvesting:

The crop is harvested in about nine months from January-April. The main harvest season begins from first week of January and extends up to end of March. Turmeric is harvested when leaves turn yellow and start drying up. In harvesting, the whole clump is lifted out with the dry plant, then the leafy tops are cut off, the roots are removed, all the adhering mud particles are removed and the rhizomes are then washed well with water. Harvesting of turmeric is done after a unseasonal rain.. After rains soil is become loose and digging of turmeric rhizomes is easy. It has been noticed that farmers are harvesting turmeric every year but some farmers do harvest in a delayed manner (by in situ method) according to market demand and allow the rest of rhizomes remain in the field for maintain its curcumin content. Harvesting of turmeric is done by the farmers with the help of small spade. Usually the land is ploughed and the rhizomes are gathered by hand. The average yield of fresh turmeric were recorded 10- 16 t/ha at farmers field. The finger rhizomes are separated from the mother rhizomes by men and women and kept in shade for 2-3 days. The mother rhizomes are kept for seed purpose and finger rhizomes are cured for selling.

Postharvest Management and Value Addition:

Curing And Drying

In traditional method of curing, rhizomes of turmeric are boiled in aluminum pots with 20 kg capacity along with water for 45- 60 minutes, depending on the quantity. The pots are covered with a lid. Boiling process is continued till white froth appears with a special quality flavor. Cooking process is completed when rhizomes become soft and inner colour turns yellow. Over cooking spoils the colour of the final

product while under cooking renders the dried product brittle. Mother and finger rhizomes are cured separately. Boiled rhizomes are dried in the sun by spreading them in 5-7 cm thick layers on bamboo mats or ground floor for 10- 15 days. The rhizomes are stirred 2-3 times to ensure uniform drying. Improper drying results in the rhizomes become hard or brittle. A thinner layer is not desirable, as the colour of the rhizomes adversely affected. During night time, the rhizomes are heaped and covered with sal and turmeric leaves. This method of processing is adopted by tribals Kondha.

Storage

The cured rhizomes are stored by farmers in pits of 4 x 3 x 2 m size. Pits are dug in elevated place and sun dried for one week; bottom and sides of the pits are thickly lined with grass or Palmyrahmats. Subsequently cured produce is filled in pits and is covered with mats and finally with earth. The seed rhizomes are stored for 3-4 months from harvesting to planting by spreading them thinly under a cover of turmeric leaves. For storage seed rhizomes are also stored by heaping them under the shade of trees. Heaps are covered with turmeric leaf and plastered with soil and cow dung mixture. It has been noticed that rhizomes are treated with bavistin fungicide @ 2gm/L of water solution for 15 minutes before storage to avoid fungal diseases during storage. It can be left undisturbed for 2 - 3 months until sowing. In Kandhamal district, farmers stored turmeric in the field and also in backyard under the shade of mango (*Mangifera indica* Linn), jackfruit (*Artocarpus heterophyllus* Lam.). As tree protect rhizomes from heat and rains and also create micro environment to enhance the shelf life and reduce the losses. For that purpose pits are dug about 1 m size and place the rhizomes of turmeric 40- 80 kg and covered by sal (*Shorea robusta* Gaertner f.) and turmeric (*Curcuma longa* Linn) leaves. Farmers said that sal and turmeric leaves were found effective for control of termites. The traditional practices and control of post harvest losses by traditional methods of storage has also been obtained in turmeric.

Processing And Value Addition:

The dried turmeric finger which is primarily processed and stored at farmers level is procured by Kandhamal Apex Spices Association for Marketing (KASAM) and brought the product to the Block level godown situated in five blocks namely Daringbadi, K.Nuagaon, Phiringia, G. Udayagiri and Raikia. Sometimes farmers bring their produce to the Block level godown by their own. From there the raw product is brought to the central godown located at the processing unit of KASAM at Bandhagad, Phulbani. There the turmeric is processed as follows.

Processing of Turmeric

Turmeric Finger and Powder:

Preliminary process begins with pre cleaning of turmeric fingers.

- **De stoning:**In the pre-cleaning process, the turmeric fingers are checked & that they are free from any harmful insects or pests & are grade before entering into any further processes. Then, after this pre-cleaning process, the de stoner plays the function of extricating or separating if there is any metal trash or any other type of stones from the Turmeric fingers. This is done by

means of air and the difference of density between them. It yields maximum returns. Then the Turmeric fingers are graded manually and are sent for the further process.

- **Polishing:** In this method, all the turmeric fingers are kept in one drum then they are rolled 1 to 1.5 hours continuously. Due to this rolling process, there is a friction between the Turmeric fingers and thus they get needed shine and also become ash-free. Maximum quantity will sold out as polished turmeric finger and the rest are send for grinding.
- **Pulverising:** After polishing of Turmeric fingers, they are sent for the grinding process. Machines are setup to carry out this process. These machines are called Pulverisers. After pulverizing the powder is sieved through different mesh screens until uniform fine powder is obtained.

Packaging: Turmeric powder is packed in moisture proof, air tight H.D.P.E. poly liner and Paper liner packages.

- (i) Uniqueness : **Seperately Enclosed in Annexure**
- (j) Inspection Body : **Seperately Enclosed in Annexure**
- (k) Other: **Seperately Enclosed in Annexure**

SIGNATURE

NAME OF THE SIGNATORY
(IN BLOCK LETTER)

SANJITA KUMAR PATTNAIK

Secretary
KASAM, Phulbari

GI APPLICATION No.

610

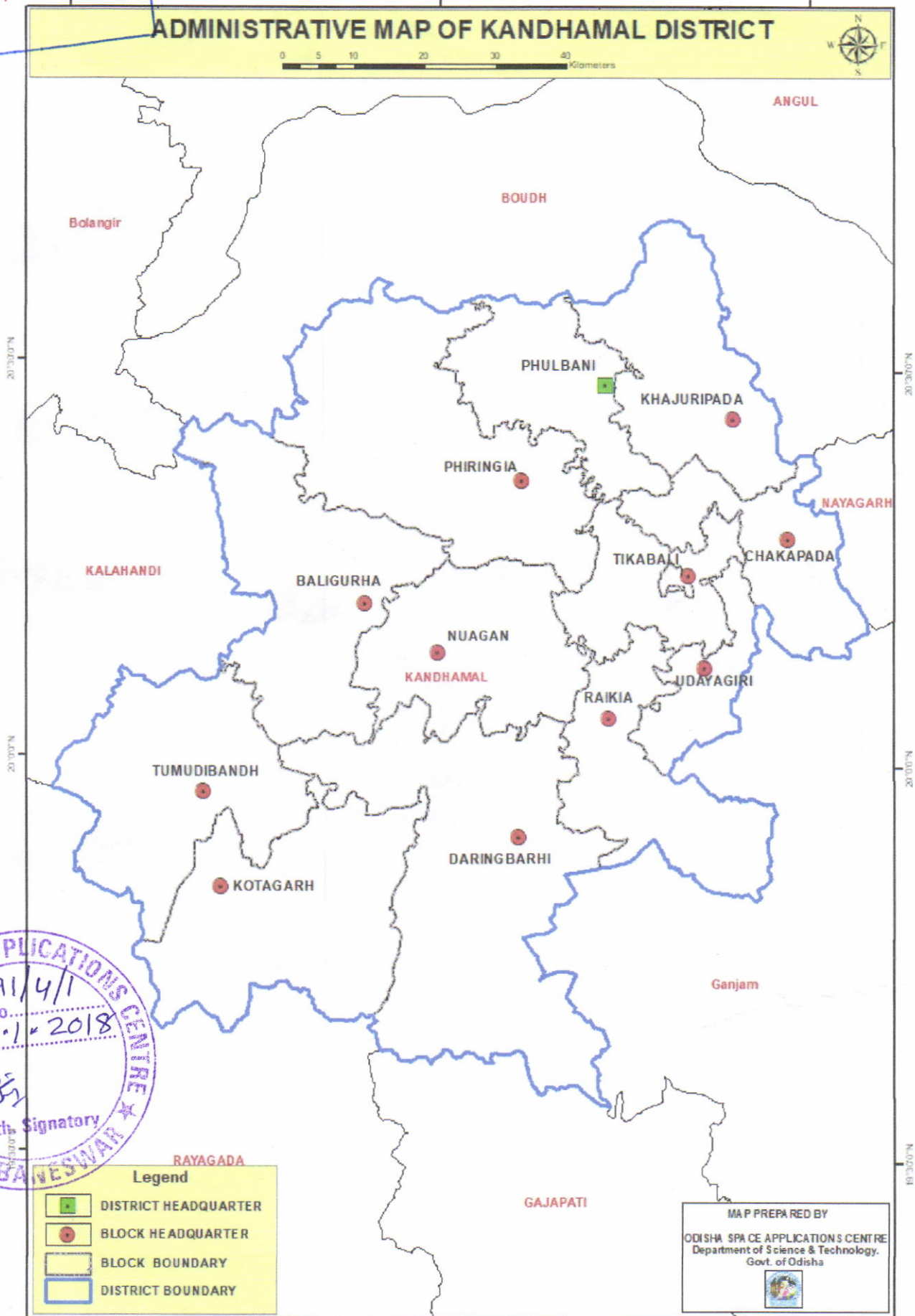
83°30'0"E

84°00'0"E

84°30'0"E

ADMINISTRATIVE MAP OF KANDHAMAL DISTRICT


0 5 10 20 30 40 Kilometers



1891/4/1
 Map No.
 Date 3.1.2018
 Auth. Signatory
 BHUBANESWAR

Legend	
	DISTRICT HEADQUARTER
	BLOCK HEADQUARTER
	BLOCK BOUNDARY
	DISTRICT BOUNDARY

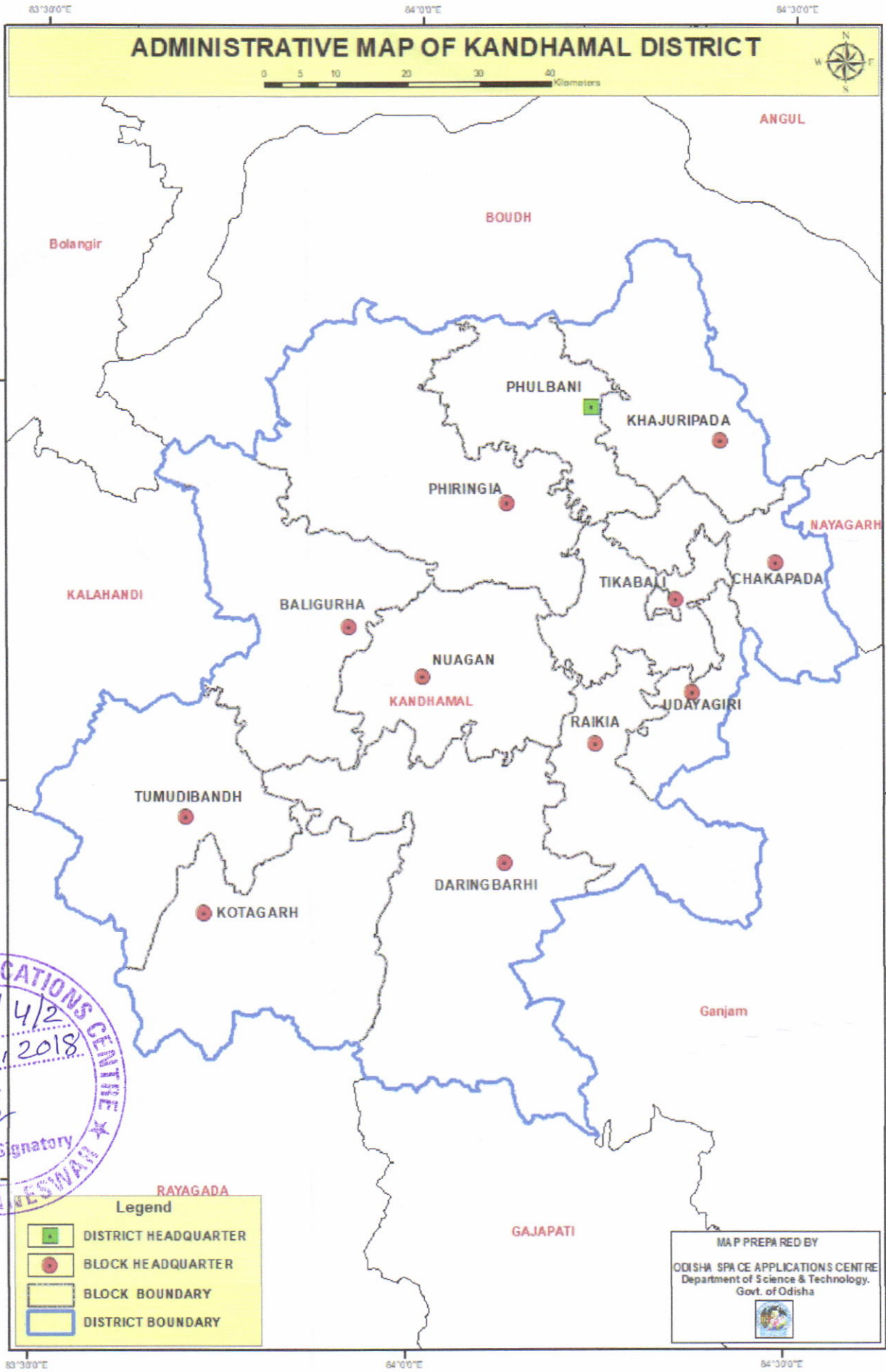
MAP PREPARED BY
 ODISHA SPACE APPLICATIONS CENTRE
 Department of Science & Technology,
 Govt. of Odisha



83°30'0"E

84°00'0"E

84°30'0"E



ADMINISTRATIVE MAP OF KANDHAMAL DISTRICT

0 5 10 20 30 40 Kilometers



N. 20° 0' 0" E

N. 20° 0' 0" E

83° 30' 0" E 84° 0' 0" E 84° 30' 0" E

ODISHA SPACE APPLICATIONS CENTRE
 1891/4/2
 Map No.
 Date 3.1.2018
 Auth. Signatory
 BHUBANESWAR

Legend	
	DISTRICT HEADQUARTER
	BLOCK HEADQUARTER
	BLOCK BOUNDARY
	DISTRICT BOUNDARY

MAP PREPARED BY
 ODISHA SPACE APPLICATIONS CENTRE
 Department of Science & Technology,
 Govt. of Odisha





सत्यमेव जयते

Geographical indications Registry

Intellectual Property Building,
G.S.T. Road, Guindy, Chennai - 600 032

Phone: 044-22502091 & 92 Fax : 044-22502090

E-mail: gir-ipo@nic.in



INTELLECTUAL
PROPERTY INDIA

Receipt

CBR NO :3408

Date : 11/01/2018

TO

Generated by
:RATHIMEENA

KANDHAMAL APEX SPICES ASSOCIATION FOR MARKETING (KASAM),
NETAJI SUBASH BOSE ROAD, PHULBANI,
KANDHAMAL,
ODISHA,
762001,
INDIA

C B R Details :

Application No	Form No	Class	No of Class	Name of GI	Goods Type	Amount Calculated
610	GI-1A	30	1	Kandhamal Haladi (Turmeric)	Agriculture	5000

Payment Details :

Payment Mode	Cheque/DD /PostalNO	Bank Name	Cheque/DD/Postal Date	Amount Calculated	Amount Paid
DD	204427	ICICI Bank	06/01/2018	5000	5000

Total Calculated Amount in words : Rupees Five Thousand only

Total Received Amount in words : Rupees Five Thousand only

*** This is electronically generated receipt, hence no signature required ***



A/C PAYEE ONLY

(6020) CHENNAI MAIN
Drawee Branch 204427

0 5 0 VALID FOR THREE MONTHS ONLY

DATE

REGISTRAR OF GEOGRAPHICAL INDICATIONS
D D M M Y Y Y Y

ON DEMAND PAYE THOUSAND Only

OR ORDER

RUPEES

***** 5,000.00

₹

TT/5/4 Not Above 5,000.00

FOR VALUE RECEIVED

0778DDCENPAY
PHULABANI

Handwritten: Gouri Dash 30/8/50

Issuing Branch

Authorised Signatory

Authorised Signatory

Please sign above

⑈ 204427⑈ 000229000⑈ 000778⑈ 16