WinLexis
Legal Consultants – Corporate

Uttarakhand ka Tejpat

Applicant : **TEJPAT UTPADAK SAMITI**

Address : **Parmar Bhawan, Mandir Marg**
Gopeshwar, District Chamoli
UTTARAKHAND

ZAHEDA MULLA

ADVOCATE

K – 03, Ground Floor
31 / 63 'Krishna Apts.'
16th Cross, Off Sampige Road
Malleswaram, Bangalore – 560 003
Tel: + 91 80 2356 8084 *Email:* mail@winlexis.co.in

GI APPLICATION No.
520

WinLexis
Legal Consultants – Corporate

January 23, 2015

To,
The Registrar
The Geographical Indications Registry
Intellectual Property Office Building
G. S. T. Road, Guindy
Chennai - 600 032

Re: Filing of Geographical Indication Application ('Uttarakhand ka Tejpat')

Respected Sir,

This is with regard to the matter under reference.

We hereby submit the GI application for the purpose of registering the Geographical Indications 'Uttarakhand ka Tejpat' with the Geographical Indications Registry at Chennai, for and on behalf of the applicant, '**TEJPAT UTPADAK SAMITI**', situated at Parmar Bhawan, Mandir Marg, Gopeshwar, District Chamoli, Uttarakhand, India, under Class 30 under the Fourth Schedule as per Geographical Indications Rules, 2002.

In this regard, the details of the documents enclosed herewith are mentioned below:

1. Three (3) sets of **Form GI – I** alongwith Annexures for the registration of 'Uttarakhand ka Tejpat';

2. Five (5) sets of the **Additional Representations** for the registration of 'Uttarakhand ka Tejpat'; and

3. DD of Rs. 5,000/- (Rupees Five Thousand only), bearing No. 026815 dated November 18, 2014 payable by Canara Bank, Bangalore in favour of 'The Registrar of Geographical Indications', payable at Chennai.

Request you to accept the above mentioned documents relating to the said GI application and acknowledge the receipt of the same. In this regard, we shall be glad to provide any additional information and / or documents.

Thanking You.

Yours Sincerely,

Zaheda Mulla.
Advocate
Encl: As above.

For WinLexis
Authorised Signatory

GOVT. OF INDIA
Geographical Indications Registry
27 JAN 2015
DY No. 984
CHENNAI.

K – 03, Ground Floor
31 / 63 'Krishna Apts.'
16th Cross, Off Sampige Road
Malleswaram, Bangalore – 560 003
Tel:+ 91 080 2356 8084 *Email:* mail@winlexis.co.in

GI APPLICATION No.
520

केनरा बैंक Canara Bank हेब्बाल, बेंगलूर
HEBBAL, BANGALORE - 560 024 (0425)

यह लिखत जारी करने की तारीख से तीन महीने तक वैध है।
Valid for three months only from the date of instrument

CB 1811 2014

THE REGISTRAR OF GEOGRAPHICAL INDICATION

042513043117 26815

मांगने पर On Demand Pay **S**

को या उनके आदेश पर Or Order प्राप्त मूल्य के लिए

रूपये Rupees **FIVE THOUSANDS ONLY**

₹ **********5000.00

अदा करें For Value Received

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कृते केनरा बैंक For Canara Bank

केनरा बैंक Canara Bank

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एक OC

CHENNAI ACCOUNTS SECTION (1760)

प्राधिकृत हस्ताक्षर कर्ता AUTH. SIGNATORY	नाम NAME	पदनाम DESIGNATION	ह.अ.सं. S.P. No.
			48827

प्राधिकृत हस्ताक्षर कर्ता AUTH. SIGNATORY	नाम NAME	पदनाम DESIGNATION	ह.अ.सं. S.P. No.

₹ एक लाख और उससे अधिक डीमांड ड्राफ्ट के लिए दो प्राधिकृत हस्ताक्षरकर्ता की हस्ताक्षर च
Demand Drafts of ₹ 1 Lakh and above require signature of two authorised signa
Please sign above

DRAWEE BRANCH, D.P. CODE **14CTDMC**

⑈026815⑈ 000015000⑆ 420425⑈ 16

GI APPLICATION No.
520

The Geographical Indications of Goods (Registration and Protection) Act, 1999

(To be filled in triplicate along with the Statement of Case accompanied by five additional representation of the Geographical indication)

One representation to be fixed within the space and five others to be send separately

Received Rs. 5000 in cash/ Cheque/DD/MO on 27-1-2015 vide entry no. 2528 in the register of valuables
Cashier D.D.O.

FORM GI – 1 (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.1 A of the First Schedule)

Application is hereby made by **TEJPAT UTPADAK SAMITI** of Uttarakhand for the registration in Part A of the Register of the accompanying geographical indication furnishing the following particulars: -

1. **Name of the Applicant:** **TEJPAT UTPADAK SAMITI**

2. **Address:** **Parmar Bhawan**
Mandir Marg
Gopeshwar
District Chamoli
Uttarakhand

3. **List of Association of Persons / Producers / Organisation / Authority:** Shall be provided at the earliest.

4. **Type of goods:** Class 30 (Fourth Schedule) Spice (Bay Leaf)

5. **Specification:**

'Uttarakhand ka Tejpat', can be described as a '*Tejpat*' (Indian Bay leaf) found in Himalayan region, from 500 m to 2400 m altitude in the State of Uttarkhand.

The botanical name of 'Tejpat' is *Cinnamomum Tamala* (*Lauraceae*) (Buch – Ham) Nees & Eberm.

Tejpat belongs to genus Cinnamoum belonging to the family Lauraceae. The etymology is derived from the Greek word "Kinnamomon" meaning 'spice'. The Greeks borrowed the word from Phonenicians, indicating that they traded with the East from early times, the specific epithet '*tamala*' is after a local name of the plant in India. It is also called as 'Indian Cassia' or 'Bay leaf'.

The Uttarakhand ka Tejpat primarily belongs to chemotype known as '*Cinnamaldehyde*' type. Due to the presence of 'Cinnamaldehyde', this variety of Tejpat from Uttarakhand is best known as '*Meetha Tejpat*', and it is predominately used in manufacture of 'chavanprash' and other medicines and also in spice industry.

Uttarakhand ka Tejpat is collected from both wild and cultivated plantations.

Botanical description / Scientific Classification of 'Uttarakhand ka Tejpat' is:

Kingdom	:	Plantae
Family	:	Lauraceae
Genus	:	Cinnamomum
Species	:	C. tamala
Botanical name	:	*Cinnamomum Tamala* (Buch – Ham) Nees & Eberm.

PLANT DESCRIPTION:

Tree:	It is a perennial or small evergreen tree, attaining 8 – 12 meters height and a girth of 110 - 150 cms. Central trunk of 30 – 40 cms, Diameter at Breast Height (DBH) when mature. Tree longevity is very long and at times, some are over 100 years old, and they continue bearing in old age.
Stem :	Rough with grey – brown, mucilaginous
Bark :	Dark brown / blackish, blaze 13 cms., slightly rough, soft wrinkled, which produces mucilage, pinkish or reddish brown with whitish streaks towards the exterior.
Bud :	Terminal and small, sericeous, 2 bud scale
Leaf / Leaves :	Large, 12 – 20 cms long and 5 – 8 inches by 2 - 3 inches; Broad, dark green / olive green, acute, ovate – oblong, lanceolate, thick leathery, acuminate, the acumen often falcate, coriaceous, glaborous, shining green above and glaucous beneath, opposite, sub – opposite or alternate and short

	stalked, nerved from the base, the mid-rib dividing some distance above the base into 3 longitudinal nerves from close above the base almost to the apex, long pointed, joined by distinct reticulate veins; short stout petiole slender 0.8 – 1.8 cms. Long; panciles shorter than leaves; The young leaves are lanceolate, acute and initially slightly pinkish tinged.
Flowering :	Bisexual flowers, but on the same plant (monoecious); Flowers – 7.5 mm long, pale whitish / yellowish, numerous, small, in axillary cymes and terminal lax silky pubescent, breaking off transversely below the middle after flowering; panicles 5 – 15 cms. long, pedicels are as longs as calyx; perianth – lobes 6, oblong, perfect stamens 9, filaments villous. Bloom in the last week of March or first week of April, commonly pollinated by insects such as honey bees.
Fruit :	It is small, pulpy and is ellipsoidal drupe. Quantitatively, the fruit grows in an alternative manner (one year more and next year less). Ripe fruits are dark purple in colour and contain a single brown seed.
Seed :	It requires 1 (one) year to attain maturity.
Fruiting Time :	Fruit ripens after 1 (one) year during March – April. It is due to this reason that the new flowers which belong to the previous year and those of the same year, can be seen at a single time. Therefore, flowers and fruits co-exist from April to May.
Harvesting time:	Collection starts from October – December or upto February – March, during dry periods.
Yield (annual) :	From a tree, 9 - 25 kgs., leaves can be collected.

Other Characteristics:

Odour / Aroma / Fragrance of leaves	Fragrance and intensity varies with chemotype – sharp, strong clove like taste to mild sweetish; faintly pepper like odour and long lasting
Taste of leaves	Leaf taste also has wide variations; bitter, sweetish, oriental spicy; heating, alexiteric, sharp; useful in 'vata'
Bark	Coarser and less aromatic
Bark Oil	It possesses the delicate aroma of the spice and sweet and pungent taste
Leaf Oil	The leaves yield an essential oil on distillation. It is pale yellow and it contains 70 – 85 % *cinnamaldehyde*. It has a warm, spicy, but rather harsh odour and it is called as 'Tejpat oil'.
Active Components	Leaves contains Linalool, Limonene, Cymene, kariyophylene and Cinnamaldehyde

Macroscopic and Organoleptic Characters:

Characters	**C. Tamala**
Size whole leaf (cm)	8 – 18 x 2.3 – 4.5
petiole (mm) shape	7.5 – 13 Elliptic lanceolate to ovate lanceolate
Base	Acute
Tip	Acute - acuminate
Texture	Glabrous smooth and shining above, slightly rough and pubescent below
Venation	Lateral nerves not reaching the tip, insertion basal to suprabasal, secondary veins distinct sub-parallel
Petiole	Slightly corrugated, moderately hairy, upper surface flat
Colour	Brownish – green above, pale below
Taste	Astringent, sweetish to slightly pungent
Odour	Aromatic

'Uttarakhand ka Tejpat' is described as a spice in the region of Uttarakhand. It is a dried leaf of *Cinnamomum Tamala* (Lauraceae). The chemotype of this particular leaf is of *cinnamalchyde* rich type.

It is used for hundred of years as a medicinal and culinary supplement.

6. Name of the Geographical Indication [and particulars]:

UTTARAKHAND KA TEJPAT

7. Description of the Goods:

'Uttarakhand ka Tejpat', described as a spice, is found in Himalayan region, from 500 m to 2400 m altitude.

The botanical name of 'Uttarakhand ka Tejpat' is *Cinnamomum Tamala* (*Laurecease*) (Buch – Ham) Nees & Eberm.

It is basically Indian *Cassia*, also called as the 'Indian Bay Leaf'.

Vernacular names in different Indian languages:

Arabic (1)	:	Zarnab
Assamese (3)	:	*Tejpat / Mahpat / Dopattip*
Bengali	:	*Tejpata*
Gujrati (1)	:	*Tamalpatra*
Hindi (20)	:	*Barahmi / Dalchini / Dalchunu / Darchini / Khikhelu / Kikoa / Kirkiria / Silkanti / Sinkami / Tajkalam / Tajkalmi / Tajpat / Talispatar / Talispatri / Tamal Patra / Tej patra / Tējapattā / tejpatta / Tezpat / Tomal Patra*
Kannada (6)	:	*Dalchini / lavangadapatti / lavangaparthri / lavangapatri / lavangapatte / Patraka*
Malyalam (4)	:	*Ilavannam / Karuntoli / Paccila / Talispatram*
Marathi (6)	:	*Daalchinitiki / Dalchinitiki / Ranachadal / Sambhraapana / Tamalpatra / Tejpat*
Oriya (1)	:	*Tejpatra*
Punjabi (2)	:	*Tejpatra / Tezpatta*
Tamil (2)	:	*Talishappattiri / Katu kurrnap*
Telugu (8)	:	*Biryani aaku / bagharakku / Patta akulu / Talisha / Talisha – Patri / Tallishapatri / Thaalishapathri / Telisapatri*
Urdu (3)	:	*Sazaj Hindi / Tez pat / Zarnab (telispattar)*

Sanskrit (42)	:	*Ankusha / Chhadana / Coca / Dala / Dalavhaya / Gandhajata / Gomedha / Gopana / Ishtagandha / Kalaskandah / Lasha / Nagakesaran / Nalika / Naluka / Pakranjana / Palasha / Patra / Patraka / Patrakhya / Patram / Roma / Romasha / Shitarasa / Sukumaraka / Suranirgandha / Surasa / Tamal / Tamala / Tamalaka / Tamalapatra / Tamalpatram / Tapasa / Tapiccha / Tejapatra / Tespatra / Tvak / Tvakapatra / Tvakpatra / Twak / Vasa / Vasanavhya / Vastra*
In Kumaon & Garhwal region	:	*Kirkiriya / Dalchini*
Medical Literature	:	*Folia malabhathri*

PLANT DESCRIPTION:

Tree:	It is a perennial or small evergreen tree, attaining 8 – 12 meters height and a girth of 110 - 150 cms. Central trunk of 30 – 40 cms. DBH when mature. Tree longevity is very long and at times, some are over 100 years old, and they continue bearing in old age.
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	slender 0.8 – 1.8 cms. Long; panciles shorter than leaves; The young leaves are lanceolate, acute and initially slightly pinkish tinged.
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Taste of leaves	Leaf is bitter, sweetish, oriental spicy; heating, alexiteric, sharp; useful in 'vata'
Bark	Coarser and less aromatic
Bark Oil	It possesses the delicate aroma of the spice and sweet and pungent taste
Leaf Oil	The leaves yield an essential oil on distillation. It is pale yellow, and contains 70 – 85 % *cinnamaldehyde*. It has a warm, spicy, but rather harsh odour and it is called as 'Tejpat oil'.
Active Components	Leaves contains Linalool, Limonene, Cymene, kariyophylene and Cinnamaldehyde

Uses:

Industrial Uses:

* Leaves are widely used as a spice in the flavouring industry particularly for meats, fast food seasonings and savoury snacks, sausage, sauces and pickles, baked goods, confectionery, beverages, cola – type drinks, tobacco flavours. It is also used as a natural food preservative for pineapple juice;

* Leaf oil and bark oil used as an analgesic in dental preparations (due to the presence of eugenol) and in pharmaceutical industries

* Bark is also used as a spice for flavouring food;

* Leaves / bark / oil is used in perfumery;

* Essential oil is used in the flavouring and formulation of liquors and confectionaries;

* Oil extensively used as fragrance component in soaps, detergents, cosmetics, toothpastes, insecticides, insect repellent and industrial fragrances;

* Used as a clarifier with *Emblica officinalis* fruits for tanning and dyeing leather;

* Used as food, fodder, medicine and timber;

* Provides excellent habitat for a large number of frugivorous birds and small mammals, which facilitate its regeneration in turn.

Non Industrial Uses:

The Indian Bay leaves are a popular spice in households across the country. In Northern India, it is an essential ingredient of Mughal Cuisine along with cloves and cardamom. It is generously used in a food preparation called 'biryani' and hence, is also known as '*Biryani* leaf', locally in some parts of the country.

In Uttarakhand's cuisine and cuisine of Terai, which is milder than North India, bay leaf forms an important ingredient. The sweet chemotype of Uttarakhand ka Tejpat, adds to the mildness and deep flavour the leaves impart.

This important cuisine ingredient is also exported to many countries in the world such as UK, USA, Japan, Europe, Australia, Russia, Sub continent countries such as Pakistan, Sri Lanka, Middle East, etc.

Medicinal Properties:

Leaf / leaves:

* Astringent
* Digestive
* Stimulant
* Forms an ingredient of many formulations prescribed for gastro - intestinal disorders
* Carminative
* Anti – flatulent, anti oxygenic, anti inflammatory, acaricidal, anti – dermatophytic, anti – hyper cholestrolaemic, anti – ulcer, anti – carcinogenic,
* Diuretic
* Used to cure colic pain, diarrhoea, rheumatism, irritation, boils, conjunctivitis, itching (scabies), anorexia, bladder disorders, dryness of mouth, coryza, nausea and spermatohoea.
* For a part of many *Ayurvedic* / herbal preparations like *Sitopaladi, churna, Sudarshan churna, Talisadi churna, Khodirarishta, Chandraprabhavati, Chavanprash, Ashwagandharishta*, Spy cream (Serotex – marketed to treat poor erection, impotency and premature ejaculation) etc. and many weight loss capsules
* Hepatoprotective
* Diseases of the anus and rectum, 'tirsdosha', piles, heart problems, ozoena, bad taster (*Ayurveda*)

* Tonic to the brain, anthelmintic, good for the liver and spleen, useful in inflammation, sore eyes, stops salivation

Leaf Oil:

* Carminative
* Anti – flatulent
* Anti – fungal
* Anti – microbial
* Diuretic
* Cardiac disorders
* Fever, fractures, eye disease, foul odour of body, diseases of oral cavity, dropsy, herpes, and in disorders of breast milk
* C. *tamala* is one of the three ingredients of '*trijata*' with *Cinnamomum zeylanicum* (*tavak* or *dalchini*) and *Elettaria cardamom*, mentioned by *Bhavaprakasa*. (*Trijata* is commonly used in *Ayurvedic* pharmacy in *asava* and *arista* preparation to augment the fragrance and to promote the appetite and digestion.

Bark:

* Treatment of Gonorrhoea
* Anti dermatophytic
* Anti microbial
* Anti bacterial
* Inhibit growth of 2 ringworm fungi
* Exhibit potent activities against *Bacillus subtitis*, *Escherichia coli* and *Saccharomayces cerevisiae*, *Streptococcus pyogenes* and *Staphylococcus aureus*
* Anti hyper glycaemic and anti *hyper lipidemic*
* Acaricidal

The ease with which essential oils can be obtained from this plants materials, make it ideal for cash crop farming, with less of environmental risks.

Ayurvedic Properties:

Rasa → Katu (pungent), tikta (bitter), madhur (sweet)

Guna → Laghu (light), ruksha (dry), tiksna (sharp)

Vipak → Katu (pungent)

Virya → Ushna (hot)

GC – MS (Gas Chromatography – Mass Spectrometry) Test Results for Bay Leaf Oil form India:

(*Cinnamomum tamala* were collected from 16 trees from the Najmola valley in District Chamoli of Uttarakhand) *

Component Name	Low Altitude (%)	High Altitude (%)
α – pinene	1.37	1.41
Camphene	0.55	0.26
Benzaldehyde	0.32	0.54
β – pinene	0.74	0.71
L – phellandrene	0.56	0.37
P – cymene	0.99	1.20
DL – limonene	0.32	2.08
1,8 cineole	0.27	0.30
Linalool	50.40	34.82
3 – phenyl propanal	0.43	0.91
α – terpineol	0.39	0.60
Cinnamaldehyde	**34.12**	**46.87**
Bornyl acetate	1.11	0.59
Trans – caryophyllene	0.89	0.87
Cinamyl Acetene	0.43	1.16
Spathulenol	0.13	0.67
Caryophylene oxide	0.49	0.73
Total	**93.51**	**94.09**

* [From the article 'Essential Oil from Bay Leaves in India and Nepal: an analysis for quality oriented value chain development', writers: Dyutiman Choudhary, S. P. Kala, N. P. Todaria, S. Dasgupta, G. Kinhal, M. Kollmair, Int. J. Med. Arom Plants, ISSN 2249 – 4340, Vol. 3, No. 1, pp 11 – 17, March 2013.]

Chemo – Taxonomic:

The chemical composition of C. *tamala* oils is of *cinnamaldehyde* type and this is found to be the highest.

8. Geographical area of Production and Map:

Geographical distribution of Uttarakhand Tejpat:

Sl. No.	Name of District	Tahsils included	Tahsils excluded
1	Almora	Bhikiasain, Ranikhet, Almora, Salt, Chaukhutia, Someshwar, Dwarhat, Bhanoli, Jainti	
2	Bageshwar	Kapkot , Bageshwar, Garud, Kanda	
3	Chamoli	Joshimath, Chamoli, Pokhari, Karnaprayag , Tharali , Gairsain	
4	Champawat	Champawat, Pati, Poornagiri, Lohaghat	
5	Dehradun	Chakrata, Vikasnagar, Kalsi	Dehradun, Rishikesh, Tyuni
6	Haridwar		Whole district
7	Nainital	Kosyakutoli, Nainital, Dhari, Haldwani, Ramnagar, Kaladhungi, Betalghat.	Lalkuan
8	Pauri Garhwal	Srinagar, Pauri, Thali, Dhoomakot, Lansdowne, Kotdwara, Yamkeshwar, Chaubattakhal, Satpuli	
9	Pithauragarh	Munsyari, Dharchula, Didihat, Gangolihat, Pithoragarh, Berinag	
10	Rudraprayag	Ukhimath, Rudraprayag, Jakholi	
11	Tehri	Ghansali, Devprayag, Pratapnagar, Narendranagar, Jakhnidhar, Dhanaulti	
12	Udham Singh Nagar	-	Whole district
13	Uttarkashi	Purola, Rajgarhi, Dunda, Bhatwari, Badkot, Mori, Chinyalisaur	

9. Proof of origin [Historical records]:

Cinnamomum Tamala – Tejpat, a common shrub in Kumaun belonging to the natural order Lauraceae, of which the bark and leaves are exported for culinary purposes and for use in medicinal preparations. The average annual export of the bark of this tree from Kumaon forest division alone amounts to 25 tons and of the leaves to 35 tons.

Tejpat trees are available in plenty in the forests of Uttarakhand. The leaves are long and pointed (like the crown on the head); these are aromatic.

Historically, it is one of the oldest known and used spices. C. tamala which is an evergreen tree up to 8 m in height, is also cultivated. Natural habitat is in the tropical and sub - tropical Himalayas at altitudes of 500 – 2400 m. Due to its aroma, the leaves are kept in clothes and also chewed to disguise bad mouth odour. Its dried leaves are used as a common ingredient of Indian cooking. The leaves of this tree have a clove like taste and a faintly pepper like odour. The specific epithet '*tamala*' is after a local name of the plant in India. This plant is frequently mentioned in various Ayurvedic literatures for its various medicinal values. It is also used in Indian system of traditional medicines. Leaves and bark have aromatic, astringent, stimulant and carminative qualities and used in rheumatism, colic, diarrhoea, nausea and vomiting. Ancient literature has revealed that in the first century A.D., dried leaves and bark of this plant were prescribed for fever, anemia and body odour. Its seeds were crushed and mixed with honey or sugar and administered to children for dysentery or cough.

Cinnamomum Tamala Nees and Eberm, called 'Bay leaf tree' and '*Tejpatta*' in India and Nepal, belongs to family Lauraceae, is a moderated sized evergreen tree which occurs in the wild and are cultivated as well. Its natural habitat is the tropical and subtropical Himalayas at altitudes of 500 to 2400 meters. In India, it is found in Uttarakhand and Himachal Pradesh along the Western Himalyas, and also in Sikkim, Assam, Mizoram and Meghalaya and is cultivated in Nainital (Uttarakhand), Kangra (Himachal Pradesh) and North East India for its leaves and bark.

In India, Cinnamomum (family Lauraceae) is represented by twenty species (1 - 2). *Cinnamomum tamala* Nees et Eberm. is a medium sized tree, up to 8 m high, and frequently occurs in the north western Himalaya, Sikkim, Assam, Mizoram and Meghalaya regions (2). Apart from this, *C. tamala* is the sole species cultivated for its Tejpat leaves in the whole region of Kumaon for the production of spice and related products (3). The essential oil isolated from the leaves, known as Tejpat oil, is medicinally used as carminative, antiflatulent and diuretic.

Distribution:

C. tamala is native to India and is reported to have originated in the Himalayas. Indian cassia is distributed in the Indian sub continent, Indo - China region, Bangladesh and Nepal. In tropical and sub-tropical Himalayas, it is distributed upto an altitude of 900 - 2500 metres. Occurs in the north western, eastern and Sikkim Himalayas. It is also found in Meghalaya (Khasi Hills and Jaintia Hills), Assam (North, Cachar Hills); Jammu and Kashmir (Basantgarh and Rajouri); Himachal Pradesh (Drang

Forest in Dauladhar ranges, Hamirpur, Shimla, Kangra, Chamba, Mandi, Solan, Nahan, Palampur) and Uttar Pradesh (Jaunsar, Tehri Garwal and Kumaon). Commercial cultivation of *C. tamala* is, very limited and is reported in certain parts of the country. Plantations occur in Khasi and Jaintia Hills, Garo Hills, Mikir Hills, Manipur and Arunachal Pradesh, and in limited areas in Nainital district (U.P) and Kangra district (Himachal Pradesh).

Indian bay leaves might still have been available during the early Middle Ages; some medieval recipes for beer brewing mention *folia*, but the identification is really unclear. In any case, at some point of time between late antiquate and High Middle Ages, they fell victim to the multitude of new spices then available, and were forgotten. They were rediscovered only in the Age of Exploration, when Western scholars for the first time arrived in India and studied its products. In the 16th Century, Garcia de Orta encountered the leaves while travelling in India and identified them with the spice known only from ancient records.

Today, Indian bay-leaves are a spice used almost exclusively in the kitchens of Northern India, especially in the famous Moghul cuisine that was developed at the Imperial courts in Delhi and Agra. In accordance with the origins of the Moghul dynasty, Moghul cooking contains elements derived from Arabic and Persian cooking.

In Moghul cooking style, much use is made of sweet and aromatic spices; besides Indian bay leaves, cinnamon, cloves and cardamom are considered the most important spices for delicious rice dishes (like *Biryani*). Indian bay leaves are found not only in *biryanis*, but also in Moghul *kormas*, for which today the Northern Indian city of Lucknow is famous.

Indian bay-leaves also form part of the Northern Indian spice mixture called '*garam masala*', which is almost the only time when they are used in ground form.

In the everyday cooking of Northern India, Indian bay-leaves are one of the most common spices, and even more widely used than most other aromatic spices. They appear in almost every slow-cooked food of the North and are particularly loved in Muslim-style meat curries. In South India, they are much less known; sometimes, they get replaced by similar leaves like cinnamon or allspice, but this is not standard.

10. Method of Production:

(i) Cultivation Process:

* Selection of site and soil:
* Filling of Pits : For cropping holes of size 45 x 45 x 45 cms.;
* Plotting and Spacing :
* Planting : Plant to plant distance must be 10 cms. x 10 cms. feet /
* 3 x 2 m. or 3 x 3 m.;
* Plant Number: If a distance of 10 cms. x 10 cms. is kept then, 1100 plants per hectare are required;
* Irrigation : *Tejpat* needs irrigation at a time period of twice a week, because it needs high moisture content. After cropping for 8 years, weed control and harrowing is required;
* Fertiliser requirements : The fields are usually not manured;
* Pruning and Trimming : Large trees are generally pruned. Cutting of old branches is usually done when the plants have attained a height of about 4 – 6 mts.;
* Weeding : This is repeated 2 – 3 times, when the trees are 3 – 5 yrs. Old; but for the older plants, weeding is done every once a year.

(ii) Agro – Climatic Conditions :

Soil :
Loamy soil and with high moisture content. At times, these also grow in poor and degraded soils.

Altitude:
Tejpat cultivation place must be at 500 - 2200 meters ASL.

Climate:

Temperature 15 - 30 degree Celsius, with humidity content 150 - 250 cm is ideal for its cultivation.

(v) Distribution:

It is also often been cultivated as an ornamental also.
C. tamala is native to India. It is an important species in the transitional evergreen broad-leaf forest between 500 – 2400 m MSL. It commonly occurs in moist – shady ravine slopes, distributed in tropical and sub – tropical Himalayas. Natural stands of C. *tamala* are mostly found in shady moist habitats, especially bordering the streams.

(vi) Pollination:

Commonly pollinated by insects such as honey bees.

(vii) Propagation:

Propagation of 'Uttarakhand ka Tejpat' can be done from both vegetative cuttings and seed; however seed method is most commonly used for propagation. The success rate from cutting method is only 10 – 15 %, whereas seeds produce plantlets with 75 – 80 % success rate.

Seed collection and sowing:

For getting elite quality of seeds, disease free plants of mid age are selected, which are further used to have seeds during months of March - April.

Ripen seeds are collected during March – April. After collection of seeds, apicarp of seed is removed by rubbing between palms and after that they are dried in sunshine for 4 - 5 days. The viability of seeds is approximately for 3 (three) months. After drying, its immediate sowing is recommended.

Also, it is advised to farmers / growers, not to use previous year old seeds.

For sowing, 15 April - 15 May, is the ideal time, just before the onset of monsoon.

Most farmers / growers collect seeds from nearby forest areas. A common practice well known as passed down information is mentioned below –

The farmers / growers let the birds eat the seeds of CT. Most part of the seed is not digested by bird's digestive system and this results in the outer hard covering of the seed being softened. The undigested seed(s) is expelled out with bird excreta and these are used by farmers for sowing.

Germplasm Management:

After 20 - 25 days of sowing, the seeds start germinating; seedlings appear 30 - 45 days after sowing.

Seed Propagation:

The seeds are primarily dispersed by frugivorous birds, which feed on them for the nutritious pulp and digest the seeds intact. In addition, strong winds, hail storms and sometimes arboreal mammals such as primates may help in mechanical dispersal of fruits. Seeds are also secondarily dispersed by rodents and other small mammals.

Vegetative Propagation:

5000 ppm Indole Butyric Acid is commonly used with a success rate of 10 - 15 %. Due to less success rate this method is less preferred by farmers.

(viii) Planting:

Upon germination, the plant upon its growth, should be transplanted 4 - 5 years later.

Sufficient shade is provided in the early stages of growth. Thereafter, shade trees that are planted or trees, are retained in new clearings for the first 8 – 10 years.

Transfer of seedlings:

For transfer of seedlings, July is the ideal time during this period. During this period, a seedling posses 3 - 4 leaves. For planting, 300 cc root trainers or 6 x 4 inch polythene bag, must be preferred.

In case of polythene bag, it is filled with forest soil, farm year manure (FYM) and sand (3:3:1) and kept in a nursery till they attain sufficient growth.

However, it has been reported that plants growing in poly bags, gives a better yield, in comparison to those growing in root trainers.

(ix) Required Nutrients:

The fields are usually not manured or otherwise cared for, but undergrowth is occasionally removed.

(x) Management of Pests / Diseases:

* Very few diseases have been reported on C. tamala.
* Rust caused by *Aecidium cinnamomi* occurs during the onset of the south west monsoon attacking leaves and young twigs;
* Leaf blight caused by *Glomerella cingulata;*
* *Exobasidium cinnamomi* Petch and *colletotrichum gloeosporioides* cause leaf spot;
* *Pestalotia cinnamomi Petch* and *Cerdospora sp.* cause shot holes and leaf spot disease on plants grown in shaded and crowded situations.

(xii) Bearing Age / Age of Cultivar:

Tejpat is perennial crop, but only after 3 - 4 years, harvest can be collected for the next 50 - 60 years.

(xiii) Yield:

Depends upon the age of the plant and also the size of the tree. The productions from small and big trees range from 30 – 40 and 55 – 65 kg. / tree / harvest, respectively.

(xiv) Harvesting:

Stage of Maturity:

Trees are usually not harvested for bark, and the first leaf harvest is around 3 – 4 years of age and continues annually until the tree dies.
Time of Harvesting:

Harvesting can be done when the trees have put on sufficient vegetative growth.

Leaves are harvested after the main monsoon rains have ceased, in dry and mild weather from October (*Ashoj*) – December or upto February (*Magh*) - March during dry periods, as rain reduces the aroma of the leaves and depresses the oil content and thus, their value as a spice.

Timely collection of leaf is important since early and late collection may result in poor quality of the leaves or essential oil.

Method of harvesting:

Mature leaves are collected from October to March i.e., before flowering stage / during budding stage. Timely collection of leaf is important, since early and late collection may result in poor quality of the leaves or essential oil.

The leaves and stems are harvested after a gap of 1 (one) year and an average 15 year plant, usually yields 20 – 25 kgs. of dry leaves.

Leaves are collected very year from vigorous plants and in alternate years, from old and weak ones.

Post Harvest Management:

Collection:
Normally, it is collected from the wild and traded. However, it is now cultivated to a limited extent in certain parts of Uttarakhand.

Factors such as age and height of tree and leaf collection time are considered for leaf harvesting. The leaves are usually collected every year from healthy branches.

Under the former system, the whole branches were cut and the bark was stripped, thus endangering not only the trees but also putting their long term income at risk. This resulted in the trees in the forest being infected and lower mortality and lessened the availability of raw material.

Now there is a lot of emphasis on collection of the leaves by using diverse sustainable practices, such as cutting only small twigs, gathering leaves from alternative branches, and restricting the number of collectors to 1 (one) per household and only 1 (one) headload per day.
In most cases, hand picking is preferred for leaf collection because the tools could injure the trees.

Drying:
Small branches with leaves and the collected leaves, are shade dried during sunlight on a tarpaulin / cement floor for 3 – 4 days and protect them from fog and frost, so that a green colour of leaves could sustain.

Packing:
Upon drying, these are then tied up in bundles and put in gunny bags.

Storage:
The packed gunny bags are stored in well aerated place like storage depots, to avoid fungal attack.

Sorting:
As per conventional practice, the leaves are sieved on a long standing sieve. The whole / broken dried leaves get filtered from the extraneous matter (which would include stones, dust, other dirt and all organic and vegetable matter not of Tejpat origin).

Grading and Standards:
The leaves are graded / sorted in the following manner:

* Shrivelled, damaged and discoloured (Shrivelled, damaged and discoloured would mean leaves that are damaged or discoloured or not properly developed which materially affect the quality; shrivelled leaves do not include small and tender leaves),
* Cut leaves (cut leaves would mean which are broken and are not wholesome),
* Insect bored and diseased leaves (Insect bored and diseased leaves would mean that are partly / wholly bored or eaten by insects or diseased which materially affect the quality),
* Twigs and leaf stalk (Twigs and leaf stalk would mean small branches and stalks attached with the Tejpat leaves),
* Moisture content.

The quality is checked to see that the dried leaves are free from: musty colour, off – flavour, mould growth, insect infestation, fungus contamination, deleterious substances, rodent contamination and other impurities, and undesirable / obnoxious smell.

Grade I – this would be dried leaves (without stalk) which need to be clean, wholesome, fresh and generally conform to the shape, size, colour, aroma according to the characteristics of the leaves.

Grade II – this would be (with stalk) and also includes that which are not wholesome, but free from extraneous matter, as mentioned above.

Marketing:
Uttarakhand is very significant for the marketing of Tejpat in the country. Most of the produce from Uttarakhand region comes to Tanakpur in Chamoli Dist. where the produce is sent off to its major export destinations to Gujarat and Maharashtra. A sizeable quantity of Tejpat is routed through Tanakpur. It is from here that the leaves are sent out to markets elsewhere including the big market players located at Delhi.

As a traditional practice, the packed gunny bags are taken to '*mandis*' which are the market places for the purpose of auctioning.

The main supply / value chain that exists presently is via mediators known as 'AADTI', a person trading in wholesale at the local *mandi*. The farmers / growers have a long term contacts with these '*aadtis*', who inform the farmers in advance by giving the required demand of the quantity along with the requisite quality.

The *Aadti* further sells the purchased produce to various buyers like pharma companies, local shopkeepers and other small traders.

TOOLS USED FOR HARVEST & PROCESSING:

* Sickle / cutter (for trimming branches),
* Tarpaulin (for drying),
* Gunny bags (for packing).

GENERAL PRACTICES FOR COLLECTION OF LEAF TRADE:

* Leaves are collected when it becomes dark green and thick,
* After collection, twigs and branches are removed,
* The fresh plucked leaves, are bundled in gunny bags,
* But the packed leaves are not to be stored for long time,
* Leaves are shade dried in sunlight by spreading them generally on the ground on a tarpaulin / cement floor; it is to ensured that they are not dried directly on ground (soil) and under the direct sunlight,
* Storage / shelf life details: this would depend on the material dried and the storage place.

11. Uniqueness:

* In 'Uttarakhand ka Tejpat', the Cinnamaldehyde is the main constituent of the essential oil content in the leaves, which has a higher concentration vis-à-vis linalool.

* The 'Uttarakhand ka Tejpat' is used in spice industry, as the strong cinnamomum odour in the leaves, seem to influence the preference of the spice industry in India.

* The taste of the leaves is sweetish, sharp and spicy.

* It is used in Ayurvedic preparations including '*tridosha*' / '*trijata*', *chavanprash, chandraprabhavati*.

* It possesses a delicate spicy aroma, which is both pungent and sweet.

12. **Inspection Body:**

To regulate the use of GI in the Geographical Area, a committee is being formulated consisting of following members:

* 1 (one) representative from the National agency on Medicinal and Aromatic Plants;
* 2 (two) representatives from State agency on Medicinal and Aromatic Plants;
* 2 (two) representatives from Educational Institutions on Medicinal and Aromatic Plants;
* 2 (two) farmers of the growers association of 'Uttarakhand ka Tejpat';
* 1 (one) trader of 'Uttarakhand ka Tejpat';
* 1 (one) representative from a NGO of National or International repute;
* 1 (one) representative from the State Forest Department.

13. Others:

Along with the Statement of Case in Class[b] 30 (Schedule 4) in respect of[c] Spice (Bay Leaf) in the name(s) of[d] **TEJPAT UTPADAK SAMITI** whose address is **Parmar Bhawan, Mandir Marg, Gopeshwar, District Chamoli Uttarakhand**, who claims to represent the interest of the producers of the said goods to which the Geographical Indication relates and which is in continuous use since in respect of the said goods.

The Application shall include such other particulars called for in Rule 32 (1) in the Statement of Case.

All communications relating to this application may be sent to the following address in India:

ZAHEDA MULLA - Advocate
Winlexis - Legal Consultants (Corporate)

For WinLexis
Authorised Signatory

K 03, Ground Floor
31 / 63, 'Krishna Apts.'.
16th Cross, Off Sampige Road
Malleswaram, Bangalore – 560 003

Tel: 080 2356 8084
Email: mail@winlexis.co.in