

G.I. APP. NO. 609



Dr. G. N. Hazarika  
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No. 7(G.I)/16/DRA(T)/PT/2017-18/ 19914

Dated 22-12-17

To

The Registrar,  
Geographical Indications Registry,  
Intellectual Property Office Building,  
Industrial Estate, G. S.T. road  
Guindy, Chennai-600 032

Sub: Application for Geographical Indications registration of "Assam lemon".

Sir,

With reference to the subject cited above I am submitting herewith the application for GI registration of "Assam lemon" – an agricultural good of Assam. CRS-NA-DIHING NEMU TENGA UNNAYAN SAMITY a registered NGO of Tinsukia, Assam is the applicant and Assam Agricultural University is facilitating the registrations process.

Thanking you.

Yours truly

  
(G. N. Hazarika)

Enclo:

1. Demand Draft of Rs. 5000.00 (No. "0638885" date 31-11-17)
2. Application form GI- 3 copies
3. Affidavit by CRS-NA-DIHING NEMU TENGA UNNAYAN SAMITY, a registered NGO of Tinsukia, Assam
4. Form GI-10B
5. Authorization form GI-10B
6. Statement of the case – 3 copies.
7. Additional representation - 5 copies.
8. Historical evidence – 3 copies.
9. Logo of "Assam lemon" - 5 copies.
10. By laws/sub rules of CRS-NA-DIHING NEMU TENGA UNNAYAN SAMITY
11. Certificate of registration of CRS-NA-DIHING NEMU TENGA UNNAYAN SAMITY
12. List of producers
13. Map- 4 copies





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

Received Rs. 5000 in cash/  
Cheque/DD No. 51218  
vide entry no. 3403 in the  
Register of valuable  
D.D.O.  
Cashier

*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*

**FORM GI-1**

<b>A</b>	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)	<div style="border: 1px solid blue; padding: 5px;"> <b>APPLICATION No.</b>   <span style="font-size: 2em; color: red;">609</span> </div>
<b>B</b>	Application for the registration of a geographical Indication in Part A of the Register from a convention country Section 11(1), 84(1), Rule 23(3) Fee : Rs.5,000 ( See entry No.1 B of the First Schedule)	

1. Application is hereby made by for the registration in Part A of the Register of the accompanying geographical indication furnishing the following particulars : -

Name of the Applicant :	CRS-NA-DIHING NEMU TENGA UNNAYAN SAMITY
Address :	Diramukh Thepabari, P. O. – Hahkhati, P. S.- Dhola, Dist. Tinsukia, Assam
List of association of persons/producers/organization/authority:	Annexed in a separate sheet
Type of goods:	Class 31 – Agricultural goods-fruits (Assam lemon)
Specification:	<p>Assam lemon is the principal lemon cultivar of North Eastern region. Assam lemon fruit is widely used for culinary, beverages, industrial and medicinal uses. It is an indigenous Lemon variety of Assam.</p> <p>Assam Lemon is unique in its characteristics. The Assam lemon is comparatively larger than the regular lemon. The sour citrus fruit is widely used in culinary, beverages, industries and medicines. They have a tendency of cluster bearing habit commonly producing seedless fruits with 9-12 segments. Flower color varies from purple to slightly reddish.</p>

Other important characters include-

- Assam Lemon produces fruits all round the year having two peak seasons in a year.
- Flavor of Assam lemon is different from other Lemon varieties.
- Unique aroma of “Lemon”
- The uniqueness of the fruit lies in its bearing habit. Even if it gets ripened it doesn't fall from the tree up to a very long period. Fruit are born in clusters on new shoots.

Particulars of Assam lemon:

Parameters	Range
Plant height	2.0-3.5 m
Leaf length	7-10 cm
Leaf width	3-5 cm
Branching habit	Sparsely well branched
Average plant age	20-25 years
No. of fruits/plant (age 5-15 years)	300-500
Yield (t/ha)	20-30 t/ha
Fruit weight	60-100 g
Rind thickness	0.48-0.73 cm
Juice content per fruit	15-26 ml
Juice(%) by weight	20-43%
TSS	6.9 – 8.03° Brix
Citric acid	1.08 – 2.10 g/100ml
Ascorbic acid	30-40 mg/100 ml juice
Oxalic acid	3 mg/100ml
D-malic acid	47mg/100ml
Tartaric acid	44 mg/100ml
Fruit shape	Long elliptic to oblong obovate
Fruit colour	Green to greenish yellow

Name of the geographical indication [and particulars]

Assam lemon

<p>Description of the goods :</p>	<p>Assam lemon is the principal lemon cultivar of North Eastern region. Assam lemon fruit is widely used for culinary, beverages, industrial and medicinal uses. It is an indigenous Lemon variety of Assam.</p> <p>Assam Lemon is unique in its characteristics. The Assam lemon is comparatively larger than the regular lemon. The sour citrus fruit is widely used in culinary, beverages, industries and medicines. They have a tendency of cluster bearing habit commonly producing seedless fruits with 9-12 segments. Flower color varies from purple to slightly reddish.</p> <p>Other important characters include-</p> <ul style="list-style-type: none"> <li>• Assam Lemon produces fruits all round the year having two peak seasons in a year.</li> <li>• Flavor of Assam lemon is different from other Lemon varieties.</li> <li>• Unique aroma of “Lemon”</li> <li>• The uniqueness of the fruit lies in its bearing habit. Even if it gets ripened it doesn’t fall from the tree up to a very long period. Fruit are born in clusters on new shoots.</li> </ul>
<p>Geographical area of production and map :</p>	<p>Assam lemon is produced in almost all districts of Assam (Area, production data and certified copy of map is enclosed).</p>
<p>Proof of origin [Historical records] :</p>	<p>The variety Assam Lemon (<i>C. limon</i>) has originated as a chance seedling raised in the citrus station, Burnihut from the progeny of variety collected under the name China-kaghi from the village Hashara, in the district of Sivasagar. This has been propagated by vegetative means as a clonal horticultural variety and named as Assam Lemon (Bhattacharyya and Dutta, 1956).</p> <p>Bhattacharyya, S. C. and Dutta, S. (1956). Classification of Citrus Fruits of Assam. New Delhi, (Monogr. No. 20, Ind. Counc. Agr. Res.).</p> <p>The origin of the word “Assam lemon” itself is a strong supporting evidence of the proof the origin of the fruit Assam lemon.</p>

<p>Method of Production :</p>	<p>Assam lemon can be propagated by stem cutting, leaf- bud cutting, air layering and planted during May- August in pit size of 0.5m x 0.5m x 0.5m made 3m apart and refilled with soil and FYM at 1: 1 ratio.</p> <p><b>Soil and climate</b> Loamy soil with uniform texture up to a depth of 3 m is ideal for cultivation. It thrives well in humid sub tropics of the region. Water logging should be avoided.</p> <p><b>Propagation</b> Assam lemon can be propagated by the following means.</p> <p><b>Stem cutting:</b> The cuttings are usually prepared from fully matured stem. The size of cutting is 18-20 cm in length with a pencil thickness. The upper cut is made 1 cm above the node and lower cut close below the node in slanting manner. The cuttings are planted with a spacing of 30cm x30cm in a slanting position in the nursery. The bed is prepared with a mixture of 1: 1: 1 decomposed cow dung, soil and sand, respectively.</p> <p><b>Leaf- bud cutting:</b> Leaf bud cutting should be taken from the branch having healthy well-developed bud and actively growing leaves. The cuttings consist of a leaf blade and short piece of the stem measuring 2 cm.</p> <p><b>Air layering:</b> The first step in air layering is to remove completely a strip of bark 3 cm in width at a point 15 cm or more below the tip end scraping the exposed surface to ensure complete removal of the phloem and cambium is desirable to retard healing. The cut portion is covered with moss or mud pudding with a mixture of well decomposed cow dung, soil and sand with a ratio of 1: 1: 1, respectively. Then a piece of polythene sheet 15-20 cm wide is wrapped carefully around the branch so that the moss and mud is completely covered. Both end of polythene is tied firmly.</p> <p><b>Planting System</b> Before monsoon, pit size of 0.5m x 0.5m x 0.5 ml should be prepared at 3 m apart and refilled the pit with soil and FYM at 1: 1 ratio. The time of planting of Assam lemon is May to August.</p>
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**Pruning and Training:**

In the nursery stage, pruning should begin soon after the seedling start sprouting from the Stem cutting or Leaf bud cutting or Air layering. After planting in the main field, up to 50-60cm from the ground level all side branches should be removed keeping only single main trunk. Above 50-60cm, pruning is confined to training to develop mechanically strong trees with well spread scaffold limbs before the onset of fruit setting. At the bearing stage, during winter when bearing of tree is low, the branches touching the ground should be cut close to the laterals without leaving any stub. All diseased, injured, criss-cross branches and water sprouts should be removed.

**Manures and Fertilizers**

Year	FYM	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
<i>A. Plain Zone</i>				
1 <sup>st</sup> yr.	5kg	150g	100g	140g
2 <sup>nd</sup> yr.	10kg	300g	200g	290g
3 <sup>rd</sup> yr.	15kg	450g	300g	430g
4 <sup>th</sup> yr.	20kg	600g	400g	580g
<i>B. Hill Zone</i>				
1 <sup>st</sup> yr.	10kg	100g	100g	100g
2 <sup>nd</sup> yr.	10kg	100g	100g	100g
3 <sup>rd</sup> yr.	10kg	100g	100g	100g
4 <sup>th</sup> yr.	20kg	100g	100g	100g

This mixture is to be applied in two split doses i.e. during February-March and October-November. Fertilizer should be applied leaving about 15-45cm space around the trunk and well beyond the canopy spread. It should be incorporated into the soil by light hoeing.

**Micronutrient:** Spray 0.2% (2 ml per litre of water) of Polymax or Multiplex during new flushes.

**Orchard Management:** Intercultural operation like weeding should be done frequently at monthly interval, mulching with paddy straw or black polythene can also be used to control weeds.

**Intercropping**

Seasonal vegetables and leguminous crops can be grown within the rows of lemon orchards. Papaya and pineapple can also be grown in between the rows to get additional income during pre-bearing stage.

**Care of the Plant**

- Weeding at regular interval to reduce crop-weed competition
- Pruning of old shoots to encourage new growth for increasing production
- Removal of shoots emerging from main trunk up to 30-45 cm from ground
- Regular removal of dried, undesirable and diseased shoots
- Avoid deep digging around the young bearing plants
- Use of organic or plastic mulch for water stressed months and for proper weed control
- Paste the trunk with Bordeaux paste during winter up to 45-60 cm from the ground.

**Diseases and Insect Pests**

Assam Lemon is attacked by different disease and pests like-

Pest/diseases	Protection measures
Leaf miner	1. Spray Fenvelerate or Cypermethrin flush period and repeat at 10-15 days interval 2. Spray Neem seed cake (2%) is also effective 3. Monocrotophos@ 2.5 g/litre of water (Rogor) @ 1.5 ml/litre of water
Leaf mining beetle	1. Monocrotophos@ 2.5 g/litre of water (Rogor) @ 1.5 ml/litre of water
Trunk borer/ Bark eating caterpillar	1. Prune and burn affected shoots 2. Inject petrol in holes and plug with mud
Psylla & aphids	1. Spray Phosphamidon (0.5 ml/litre) flush period or Quinalphos 1ml/litre of water at regular interval.
Anthracnose /Dieback/ Twig blight	The affected portion should be cut and pasted with Bordeaux paste. Spraying with 1 % Bordeaux Oxychloride@ 2.5 g/L during March, June and September is effective against this disease.

Precautionary measures to tackle pest and disease problems:

- Use of disease free planting materials (budded or grafted) from certified sources.
- Remove lichens and mosses regularly.

Avoid water stagnation around the tree trunk.

	<p><b>Harvesting:</b> Assam lemon produces two distinct flowering flush in a year viz. Spring (Feb- March) and autumn (Sep-Oct) besides sparse flowering round the year. Fruits should be harvested when they attain full size, develop attractive green to little yellow colour. Fruits are ready for harvesting during the month of June to July and December to January. From 3<sup>rd</sup> year-old tree about 40-50 fruits may be harvested.</p> <p><b>Benefit : Cost ratio:</b> 3.50 after 4years and 7.80 for full bearing plants (Package of practices for Horticultural crops of Assam,2010)</p> <p><b>Post Harvest Management</b> Fruits remain marketable for weeks when stored at ambient temperature, but weight loss occurs due to transpirational loss of moisture and thus fruit texture also deteriorates along with its freshness. Individual shrink wrapping of Assam lemon fruit stored at ambient temperature (30-32° C and 80-85% RH) has been found to be beneficial because it helps extending the shelf life without deterioration of quality of fruit. It retains freshness, color and firmness of the fruit up to 1 month without decay.</p> <p>The packaging materials should be environment friendly, cost effective, easily printable and stable during the entire distribution chain. It should have sufficient strength in compression and against impact and vibrations. Consumer appeal is another important aspect of packaging. The ideal packaging materials for Assam Lemon are –</p> <ul style="list-style-type: none"> <li>• Wood – boxes, bins, trays, barrels, pallets</li> <li>• Paper and card board – liners, boxes, trays</li> <li>• Plastic – Rigid - crates, pallets, trays</li> <li>• Flexible – films (single &amp; multi layered)</li> <li>• Polystyrene boxes / trays.</li> <li>• Combined materials – CFB and plastic.</li> </ul>
<p>Uniqueness :</p>	<p>Assam Lemon is unique in its characteristics. The Assam lemon is comparatively larger than the regular lemon. The sour citrus fruit is widely used in culinary, beverages, industries and medicines. They have a tendency of cluster bearing habit commonly producing seedless fruits with 10-12 segments. Flower colour varies from purple to slightly reddish.</p> <p>Other important characters include-</p> <ul style="list-style-type: none"> <li>• Assam Lemon produces fruits all round the year having two peak seasons in a year.</li> </ul>



	<ul style="list-style-type: none"> <li>• Flavour of Assam lemon is different from other Lemon varieties.</li> <li>• Unique aroma of “Lemon”</li> </ul> <p>The uniqueness of the fruit lies in its bearing habit. Even if it gets ripened it doesn't fall from the tree up to a very long period. Fruit are born in clusters on new shoots.</p> <p><b>Relationship/Impact of climate on Assam Lemon:</b></p> <p>Loamy soil with uniform texture up to a depth of 3 m is ideal for cultivation. In most of the areas of Assam, the soil is loamy, fertile and vast biological diversity which is the best suited for cultivation of Assam Lemon. Therefore, this crop thrive well without much care.</p> <p><b>Climate:</b> It thrives well in humid sub tropics of the region. The highest flowering takes place in the spring (February – March), besides sparse flowering throughout the year. During this period, the minimum temperature of the state is 15-16<sup>0</sup>C and maximum is 25-26<sup>0</sup>C, which is ideal for flowering of Assam Lemon. After that, the monsoon starts in the state which is essential for setting of fruits. The temperature during growth of the fruis is 30<sup>0</sup>C to 35<sup>0</sup>C with 85 -90% humidity, which is very much conducive for growth of the fruits as Assam Lemon fruits require high temperature during fruit growth stage.</p>
Inspection body	<ol style="list-style-type: none"> <li>1. Director of Research (Agri), Assam Agricultural University, Jorhat or his nominee.</li> <li>2. Chief Scientist, Citrus Research Station, AAU, Tinsukia, Assam</li> <li>3. District Agriculture Officers in concerned districts</li> </ol>
Others	

Along with the Statement of Case in Class<sup>b</sup> .....<sup>b</sup> .....in respect of<sup>c</sup> Assam Lemon in the name(s) whose address is ..... 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 and on demand throughout the year and by all classes of consumers.

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

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

**Director of Research (Agri), Assam Agricultural University (AAU), Jorhat 785013, Assam**

4. In the case of an application from a convention country the following additional particulars shall also

be furnished. **Not applicable**

(a) Designation of the country of origin of the Geographical Indication.

(b) Evidence as to the existing protection of the Geographical Indication in its country of origin, such as the title and the date of the relevant legislative or administrative provisions, the judicial decisions or the date and number of the registration, and copies of such documentation.

*Sri Sobul Boruah*

Signature with Name and seal

**President**  
**CRS-Na-Dihing Nemu Tengra**  
Manupur Samity

*Amgany 22/12/18*

Director of Research (Agri.)  
Assam Agricultural University  
Jorhat-785013



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

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Date : 05/01/2018

TO

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DIRECTOR OF RESEARCH (AGRI),  
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JORHAT,  
ASSAM,  
785013,  
INDIA

### C B R Details :

Application No	Form No	Class	No of Class	Name of GI	Goods Type	Amount Calculated
609	GI-1A	31	1	Assam Lemon	Agriculture	5000

### Payment Details :

Payment Mode	Cheque/DD /PostalNO	Bank Name	Cheque/DD/Postal Date	Amount Calculated	Amount Paid
DD	063885	State Bank of India	30/11/2017	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 \*\*\***

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**DEMAND DRAFT**

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मांगे जानेपर THE REGISTRAR OF GEOGRAPHICAL INDICATIONS\*\*\*\*\*

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STATE BANK OF INDIA

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कोड नं. / CODE No: 009356

प्राधिकृत हस्ताक्षरकर्ता  
 AUTHORIZED SIGNATORY

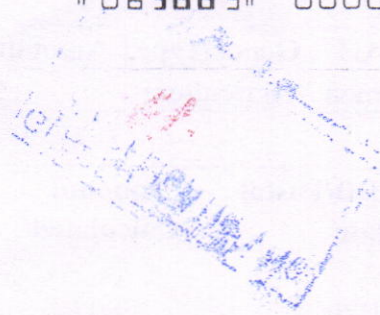
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