

<b>Application Number</b>	717
<b>Geographical Indications</b>	<b>Ramnagar Bhanta (Brinjal)</b>
<b>Status</b>	<b>Registered</b>
<b>Applicant Name</b>	Kashi Vishwanath Farmer Producer Company
<b>Applicant Address</b>	Jairampur Saraiya No.2, District: Varanasi - 221 007, Uttar Pradesh, India
<b>Date of Filing</b>	04/11/2020
<b>Class</b>	31
<b>Goods</b>	Agriculture
<b>Geographical Area</b>	Uttar Pradesh
<b>Priority Country</b>	India
<b>Journal Number</b>	166
<b>Availability Date</b>	30/11/2022
<b>Certificate Number</b>	463
<b>Certificate Date</b>	31/03/2023
<b>Registration Valid Upto</b>	03/11/2030

**G.I. APPLICATION NUMBER – 717**

Application Date: 04-11-2020

Application is made by Kashi Vishwanath Farmer Producer Company at Jairampur Saraiya No.2, District: Varanasi – 221 007, Uttar Pradesh, India for Registration in Part A of the Register of **Ramnagar Bhanta (Brinjal)** under Application No. 717 in respect of Brinjal falling in Class – 31 is hereby advertised as accepted under Sub-section (1) of Section 13 of Geographical Indications of Goods (Registration and Protection) Act, 1999.

- A) **Name of the Applicant** : Kashi Vishwanath Farmer Producer Company
- B) **Address** : Kashi Vishwanath Farmer Producer Company, Jairampur Saraiya No.2,  
District: Varanasi – 221  
007, Uttar Pradesh, India

**Facilitated By:**

Department of Agriculture and Farmers Welfare, Government of Uttar Pradesh

- C) **Name of the Geographical Indication** :

**RAMNAGAR BHANTA (BRINJAL)**



- D) **Types of Goods** : **Class 31 – Brinjal**
- E) **Specification:**

The Ramnagar Bhanta is famous for their taste, quality, smoothness and color, weight, size. It is having high nutritive value and rich in vitamins and minerals. The Ramnagar Bhanta is very popular in Varanasi and surrounding area for its exclusive Chokha (Bharta). The size of Brinjal has growing much more and up to 2 Kg-2.5Kg or more in a single piece which is a very special characteristic and specification of this Bhanta. The color of big size Bhanta gradually change from green color to yellow color and the local farmers used this yellow color for the seed purpose as traditional seed. The fruits of Bhanta (Brinjal) are used in various ways of cooking, sauting, grilling, backing, frying and even 2 barbecuing in this geographical area.

Ramnagar Baigan (*Solanum melongena* L.) is a prostrate, semi-erect or erect, much branched perennial herb or sub-shrub, often with a strong bushy appearance} growing to a height of 100cm to 150cm. Although perennial in habit, it is cultivated as an annual.

The plants produce a strong tap root which penetrates quite deep into the soil. The leaves are large in size, alternate, exstipulate, simple, petiolate, ovate with slightly lobed margin, coriaceous and acuminate. Hie lower veins are more prominent than the upper ones.

A large number of cultivars differing in size, shape and colour of fruits are grown in India. Immature fruits are used in curries and a variety of dishes are prepared out of brinjal. Fruits are moderate sources of vitamins and minerals like phosphorous, calcium and iron and nutritive value varies from variety to variety.

The ovary is bilocular, each locule containing a large number of ovules borne on swollen axile placentae. The variation in the length of style is a noteworthy feature of flowers. It is large in Ramnagar Bhanta.

Inflorescence: number of flowers	1 to 3
Flower: size	Large
Flower: colour	White
Flowering Time (days afte seed sowing)	Medium (60-8- days)
Fruit: length	Medium (10-20cm)
Fruit: diameter	Large (>10cm)
Fruit: length/diameter ratio	Medium (1-2)
Fruit: general shape	Ovoid
Fruit: diameter of pistil scar	Small (<1cm)
Fruit: shape of apex	Indented
Fruit: colour of skin at commercial harvesting	Greenish white
Fruit: intensity of purple colour of skin	Light
Fruit: intensity of green colour of skin	Light
Fruit: stripes	Absent
Fruit: patches	Absent
Fruit: glossiness at harvest maturity	Weak
Fruit: size of calyx	Medium
Fruit: colour of calyx	Green
Fruit: intensity of colour of calyx	Medium
Fruit: spininess of calyx	Absent
Fruit: ribs	Absent
Fruit: creasing of calyx	Medium
Fruit: colour of flesh	Greenish
Fruit: length of peduncie	Medium (1-5cm)
Fruiting: pattern	Solitary
Fruit: colour of skin at maturity	Yellow (this yellow fruit has use for seed purpose)
Plant: growth habit	Erect
Plant: height	Tall (101-150cm)
Plant: spread (distance between two extremes leaf tips at widest point)	Medium (50-100cm)

## F) Description:

Ramnagar Bhanta (Brinjal) of Varanasi district, is winter crop a comparison of mean values of plants within the population of the variety of Ramnagar brinjal showed the mean values of plants differed significantly only in size of pollen grain of medium-styled and short-styled flowers. The differences of mean values of plants were no significant in length and breadth of the leaf, total number of flower buds per inflorescence diameter of flower and size of the pollen grain of long-styled flower.

**Ramnagar Bhanta** is very popular in Varanasi and surrounding area for its exclusive Chokha (Bhanta) is recognized by the local people and it is in high demand in the winter season/festive season when the time of Bati-Chokha has started.

**Leaves:** The leaf pattern is mostly opposite, large, single lobed and the underside of the most cultivars is covered with dense wool like hairs. The leaves may be with or without spines at the midrib portions. The leaf blade and tip angle are very acute to very obtuse. Inflorescence is often solitary but sometimes it constitutes a cluster of 2 - 5 flowers. This character is dependent on the variety or hybrid. The leaf length of Ramnagar Bhanta is large and it is about 20cm. The leaf width is medium between 10-20cm. The leaf covers entire plant. The leaf intensity of color of blade is medium. The leaf intensity of color veins medium.

**Flower:** The flowers are large, **white**-colored and either solitary or in clusters of two or more Flower is complete, actinomorphic and hermaphrodite. Calyx is five lobed, gamosepalous and persistent with or without spines depending on the cultivar types. It forms a cup like structure at the base. Corolla is five lobed gamopetalous with margins of lobes incurved. There are five stamens which are free and inserted at the throat of corolla. Anthers are cone shaped, free and with apical dehiscence. Ovary is hypogynous, bicarpellary, syncarpous and with basal placentation. Four types of flowers have been reported depending on the length of styles, viz. (i) long styled with big ovary, (ii) medium styled with medium sized ovary, (iii) pseudoshort styled with rudimentary ovary and (iv) true short styled with very rudimentary ovary.

**Fruit:** the fruit is pendent and is fleshy berry borne singly or in clusters. The shape of fruit varies from ovoid, oblong, obovoid, or long cylindrical. The colour of the mature fruit varies from monocoloured purple, purple black, yellowish, white, green and variegated types of purple with white stripes, green with light green / white stripes or even combination of three colours.

**Seeds:** The seeds are borne on the fleshy placenta and the placentae with the seeds completely fill the locular cavity. The number of seeds per fruit varies from few (50) to many. The seed color is white, light yellow, brownish yellow, brown to black brown for different varieties.

**Ramnagar Bhanta (Brinjal)– A local Landrace of Brinjal of Varanasi Region.**

**Botanical Name and Characteristics of Ramnagar Bhanta (-Brinjal):**

**Solanum Melongena L; Candidate variety Name – Ramnagar Bhanta;**

**Variety type – Landrace**

Local Cultivator of Varanasi; Seasons – Kharif – A long duration variety, Nursery developing for seedling started from rainy season mainly in August and after proper management of the plant with all appropriate measures including organic practices and traditional method, the fruiting has started from mid of October and the main

fruit has grown up in the peak winter season (December to February) and this is a specialty that when the Fog will start in the winter season, this Ramnagar Bhanta will growing in much bigger size. This Bhanta will go up to beginning of summer period as regular fruiting. After that the color of big size Bhanta has gradually changed green color to yellow

color and the local farmers used this yellow color Ramnagar Bhanta for the seed purpose as traditional seed.

**G) Geographical area of Production and Map as shown in page no:**

Varanasi region specially the gangetic plane area due to the special characteristic of soil and water, Ramnagar Bhanta is growing in this geographical area since very long time and the main concern area is Mirzapur, Varanasi, Chandauli and Sonbhadra district. The farmers has preserved this landrace and proudly growing it with the quality. The environmental condition is much favorable for this Bhanta in the surrounding.

**Varanasi** District is situated 83.00 E longitudes and 25.200 N latitude.

**Mirzapur** District - is situated 25.150 N Latitude and 82.580 E

longitude. **Chandauli** District is situated 26. 00 N latitude and 83.160

E longitude. **Sonbhadra** is situated 25.32° North Latitude & 82.72°

East Longitude

**H) Proof of Origin (Historical records):**

Ramnagar Bhanta (Brinjal) is an important solanaceous vegetable crop with distinct morphological forms, colours, and shape of the fruits. Limited genomic coverage of the crop is a major constraint to unfold the cause of morphological variations underlying the contrasting traits.

Brinjal is one of the most common tropical vegetables grown in India. It is known by different names like Baigan and Bhanta or Bhata in Varanasi, Ramnagar and nearby district of Uttar Pradesh. Baigan is most popular in North India.

Bhanta (Brinjal) is second major vegetable crop, it is grown almost throughout the country, covering an area of 5.30 lakh hectares with a total production of 87.03 lakh tons. It contributes 8.46 and 9.0% of the area and production respectively. In Uttar Pradesh it cultivated area is 20,000 ha and productivity of 30.65 t ha<sup>-1</sup>. The productivity can be increase by manipulating in various factors i.e. environment, soil, production technology and protection from insect-pest and diseases.

1. Ramnagar Giant a local cultivar restricted to Ramnagar and Varanasi regions of eastern Uttar Pradesh.
2. An experiment was conducted at Horticultural research farm, Allahabad Agricultural Institute- Deemed University, Allahabad during Rabi season 2007-08 to study the performance of ten varieties viz. Ramnagar Giant,
3. Plant height was found to maximum (86 cm) for cv. Banaras Giant were green, stripped and round in cv. Banaras Giant, green.
4. Fruits per plant from 5.42 (Ramnagar Giant) and fruit weight 3.03 kg (Ramnagar Giant).
5. Ramnagar Giant and KS-233 are the best varieties against Phomopsis blight and showed resistant to moderately resistant response at different stages of disease development. Two varieties viz., Ramnagar Giant and KS-233 showed moderate resistance to fruit rot.
6. The brinjal (*Solanum melongena* L.) is the third most important vegetable crop in India. It is a versatile crop adapted to different agro-climatic regions and can be grown throughout the year. Investigation was undertaken to study combining ability in respect of yield and its component traits in brinjal.

**I) Method of Production:**

Ramnagar Bhanta (*Solanum melongena* L.) ( $2n = 24$ ), also known as Bhanta is one such vegetable crop which belongs to the family Solanaceae, originated from India. The fruits of Bhanta

are used in various ways of cooking, sauting, grilling, backing, frying and even 2 barbecuing by both poor and rich in this geographical area. It is having high nutritive value and rich in vitamins and minerals.

**Soil:** Type of Soil in Varanasi There are three types of soil in Varanasi district. Soil is the most important factor of agriculture. Soil types decide crop pattern for cultivation. Sodic soil covers maximum (75894 ha) area in the Varanasi. Following table shows the details of soil types. Highest content of iodine in the Ramnagar soil and a significant correlation coefficient was calculated between iodine content in soil solution with represented vegetable. Geographical location contributes significant impact on iodine enrichment in plants. Ramnagar and its adjoining areas were located near. Ramnagar Bhanta producing area are situated at the Indo Gangetic Plane area like Varanasi, Mirzapur, Chandauli, Ganga River and having rich alluvial (sandy loam) soil which have highest capacity of iodine uptake. Enrichment of iodine in soils can enhance its uptake in plants and particularly leafy vegetables. Thus, soil having higher iodine content in soil solution, produce plants will richer in iodine.

#### **Soil Type in Varanasi –**

S.N.	Soil Type	Characteristics	Area in ha
1.	Sandy to sandy loam	Good for cultivated	34059
2.	Loam to clay loam	Water logged	63578
3.	Sodic soils/saline	Usar	75894

**Climate:** Ramnagar Bhanta is the warm and winter season crop with their speciality and uniqueness in the Gangetic plane area of Varanasi and nearby close districts like Chandauli, Mirzapur, Sonebhadra. It requires a long season, before fruit maturity. Optimum temperature is 32 to 060 C. Under very cool seasonal conditions, the ovaries are split leading to the development of abnormal fruits.

Ramnagar Bhanta can be grown on a wide range of soils. The ideal soils should be a deep, fertile and well drained. The pH should be not more than 5.5 to 6 for better growth and development. Light soils are good for a healthy crop but heavy soils are suited for higher yields. 18 Time of sowing: In plains crop is grown in three seasons, summer crop is sown during February - March and rabi crop is October to November.

**Seed rate:** seed rate varies from 375 to 500g per hectare.

**Nursery practices:** Ramnagar Bhanta nursery practices are easier. The nursery process starts in July and the transplanting of seed start in mid-August.

Seeds are shown in nursery bed and transplanted to main field after four weeks when it is 8 - 10 cm tall. Depending on growth of plant and seasons of cultivation, 300 to 3:500 g seeds are required for one hectare. Since Ramnagar Bhanta seedlings grow fast, sufficient care must be taken to sow seeds as thin or loose as possible. Hardened seedlings withstand transplanting shock better and establish well in main field.

**Transplanting:** Main field preparation and transplanting Proper drainage is essential for growth of Bhanta.

- Soil should be prepared to a fine tithe by 3 to 4 ploughings.
- Manure should be incorporated in soil at the time of final ploughing. Seedlings are transplanted in levelled land in plots of convenient size for irrigation.



- It may be grown on raised beds/ ridges during rainy season. In undulating land, in order to avoid soil erosion, small pits are dug at the point of planting and seedlings are planted.

- Spacing between plant are normally 75 x 75 cm. Spacing between the plant depend upon the fertility of soil and the distance of 45-60cm on either side are given. Distance of transplanting depends on soil fertility, climatic conditions. Ramnagar Bhanta is a landrace Round fruited variety of Varanasi region.
- In Ramnagar Bhanta paired row planting is advantages due to, easiness in harvesting and other cultural operations.
- Seedlings are of 8 to 10 cm height with 2 to 3 true leaves are ready for transplanting.
- Seedlings should be hardened before lifting for transplanting.
- Hardening of seedlings is achieved by withholding water for 4 to 6 days before transplanting. Light irrigation should be given on due day of nursery pulling.
- Seedlings are pulled without any injury to the root. At the time of transplanting soil around the seedlings is pressed firmly.

**Manuring:** Bhanta occupies the land nearly 6 to 8 months, about 25 to 30 tons of well decomposed compost is incorporated in the soil before transplanting. NPK @ 100, 80, 60 kg per ha is generally applied,  $\frac{1}{2}$  of nitrogen full quantities of P and K is applied at the time of transplanting while the remaining quantity of nitrogen may be applied either twice or thrice depending upon soil conditions at 30 days, 45 days after transplanting.

**Irrigation:** Ramnagar Bhanta cannot tolerate water logging, timely irrigation is essential especially for fruit set and development. In plains, irrigation is required at every third or 4th day during summer while in winter it should be at 10-15 days interval. During winter, care should be taken to keep soil moist to avoid crop loss due to frost injury. Being a row planted crop, drip irrigation is advantageous and water used in drip irrigation is only 24.47 cm compared to 69.18 cm under furrow method.

**Harvesting:** Ramnagar Bhanta fruits are harvested at immature stage after attaining full size, but before loosing its glossy appearance. Usually fruits are harvested along with its stalk with a slight twist by hand.

**Yield:** This landrace variety give the production of 200 to 500 Q per ha.

**Storage:** under ordinary conditions the fruits can be store under ordinary conditions the fruits can be stored for 1 to 2 days in summer, 3 to 4 days in winter at temperature of 7.20 C at 85 - 90% RH. This Bhanta fruits can be stored for around 10 - 15 days.

## J) **Uniqueness:**

This is a specialty that when the Foggy weather starts in the winter season, this Ramnagar Bhanta size increases in much bigger sizes up to 2 kgs. In due course of time, the color of big size Bhanta gradually change from green color to yellow color and the local farmers used this yellow color Ramnagar Bhanta for the seed purposes. The whole process is very traditional. The farmers are preserving their traditional seeds from the Bhanta, after ripening of the Bhanta in the month of end of March and April. When Ramnagar Bhanta ripened it looks very peculiar color and looks beautiful when it shines in sun.

- **Ramnagar Bhanta** is a local cultivar from Varanasi, the plants with dark green broad foliage bearing huge size rounded fruits of light green color with 3-4 fruits per plant and fruit weight 0.80-2.5 kg, and reported to possess moderate resistance to the Phomopsis blight of eggplant.
- The flowers are large, **white**-colored and either solitary or in clusters of two or more

Flower are complete, actinomorphic and hermaphrodite. The flower size of Ramnagar Baigan flowering time after showing of the seed is 60-80 days. Calyx is five lobed, gamosepalous and persistent with or without spines depending on the cultivar types. It forms a cup like structure at the base.

- Ramnagar Bhanta (Brinjal) is Round Green in the shape with their unique feature.

- Ramnagar Bhanta has very low in calories and fats but rich in soluble fiber content. 100g provides just 24 calories but contributes about 9% of RDA (recommended daily allowance) of fiber.
- Ramnagar Bhanta also assist in sharpening the brain as it is blessed with certain important phytonutrients which enhances the blood circulation as well. The skin of the Ramnagar Bhanta is constituted with these nutrients and offers proper nourishment altogether.
- Most of the efficient nutrients in the Ramnagar Bhanta remains in the skin, helps in removing bad cholesterol and providing effective blood circulation. Therefore, it should not be peeled off and consumed in its pure form.
- Ramnagar Bhanta are enriched with bioflavonoids, which are known for controlling high blood pressure and reduces stress.
- Scientific studies have shown that in Ramnagar Bhanta has antioxidants which have potential health effects against cancer, aging, inflammation, and neurological diseases.
- It contains good amounts of many essential B-complex groups of vitamins such as pantothenic acid (vitamin B5), pyridoxine (vitamin B6) and thiamin (vitamin B1), niacin (B3). These vitamins are essential in the sense that body requires them from external sources to replenish and required for fat, protein and carbohydrate metabolism.
- Ramnagar Bhanta is also an excellent source of minerals like manganese, copper, iron and potassium. The antioxidant enzyme, superoxide dismutase utilizes manganese as a co-factor. Potassium is an important intracellular electrolyte that helps counter pressing (hypertension) effects of sodium.
- Ramnagar Bhanta supplies the basic minerals, vitamins and iron a body require to keep on rolling. The nutrients it has maintains the body's requirement of the same and that too a yummy dish being served in lots of form.
- It has high fibre content thereby provides healthy digestion. It has been a proven fact that regular consumption of brinjal prevent from colon cancer.
- Moreover, the cholesterol level of the body is also maintained, resulting to healthy heart and avoiding heart diseases.
- The capillaries get strengthened due to the presence of vitamin k and bioflavonoids in the Ramnagar Bhanta, henceforth preventing blood clots. The remedy of diseases is many but precaution always sustains for a long run and it is simply possible by inhibiting such multi nutritional veggies into our routine diet.
- Ramnagar Bhanta have also proved its high fibre content and low soluble carbohydrate, which helps in maintains a healthy heart and controlling diabetes. However, the high fibre content fills the stomach contributing to diet maintenance.

**K) Inspection Body:**

1. One Representative from District Administration.
2. One Representative from NABARD, Uttar Pradesh
3. One Representative from Department of Agriculture and Horticulture, Government of Uttar Pradesh having office at Varanasi and concern geographical area.
4. One Representative from Traders and Exporters of GI Product.
5. Representative of related FPO (Farmers) and concern NGO.
6. Representative of related Producers / cultivators / farmers and related Awardees.

**L) Others:**

Varanasi has very old tradition with the diversified cultures in many diversified food product and due to this, the Ramnagar Bhanta which is much famous in the surrounding for their taste, quality, smoothness and color, weight, size and with the specialty of making Chokha of this Bhanta.

Lota-Bhanta Mela (fair) with the gathering of more than 1 lakh people in a place at a time for cooking of Bati-Chokha is known as Lakha Mela in Varanasi. It is very famous and it has religious importance. This Mela is organized every year at Ramnagar, Rameshwar and Panchkosi parikrama path of Varanasi. Those people who are elder, children, daughter-in-laws who are unable to reach in the fair make Bati chokha at their residence because of importance of this religious date (subh muhurt). During this period, Ramnagar Bhanta has high demand in the society. At the time of world famous Ramnagar Ramlila, nearly 10 - 25 thousand people come together every day to watch the Ramlila and the most favourable dish is Bati-chokha.





**BOUNDARIES:**  
INTERNATIONAL.....  
STATE.....  
DISTRICT.....  
TAHSIL.....

**HEADQUARTERS:**  
STATE.....  
DISTRICT.....  
TAHSIL.....

JPN - JYOTIBA PHULE NAGAR  
GBN - GAUTAM BUDDHA NAGAR  
KRN - KANSHIRAM NAGAR  
AMB - AMBEDKAR NAGAR  
SID - SIDDHARTH NAGAR  
SKN - SANT KABIR NAGAR  
KUS - KUSHINAGAR  
SRNB - SANT RAVIDAS NAGAR (BHADOHI)

Geographical area of Production of Ramnagar Bhanta  
Varanasi District is situated 83.00 E longitudes and 25.200 N latitude.  
Mirzapur District - is situated 25.150 N Latitude and 82.580 E longitude.  
Chandauli District is situated 26. 00 N latitude and 83.160 E longitude.  
Sonbhadhra is situated 25.32° North Latitude & 82.72° East Longitude

- |                     |                         |
|---------------------|-------------------------|
| 1 - Chandausi       | 12 - Chauri Chaura      |
| 2 - Garhmukteshwar  | 13 - Tamkuhi Raj        |
| 3 - Sikandra Rao    | 14 - Bhatpar Rani       |
| 4 - Bakshi Ka Talab | 15 - Nizamabad          |
| 5 - Chakarnagar     | 16 - Ghosi              |
| 6 - Ramsanehighat   | 17 - Madhuban           |
| 7 - Sirauli Gauspur | 18 - (Maunath Bhanjan)  |
| 8 - Sohawal         | 19 - Muhammadabad Gohna |
| 9 - Domariyaganj    | 20 - Belthara Road      |
| 10 - Shohratgarh    | 21 - Sikanderpur        |
| 11 - Campierganj    | 22 - Mohammadabad       |

Where the district name differs from its headquarters name, the latter is given within brackets.