

**G.I. APPLICATION NUMBER – 819**

Application Date: 24-01-2022

Application is made by Khatiya Wheat Bangra Producer Company Limited at Mohalla Devri Ranipur, District: Jhansi – 284 205, Uttar Pradesh, India for Registration in Part A of the Register of **Bundelkhand Kathiya Gehu (Wheat)** under Application No. 819 in respect of Wheat 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** : Khatiya Wheat Bangra Producer Company Limited
- B) **Address** : Khatiya Wheat Bangra Producer Company Limited, Mohalla Devri Ranipur, District: Jhansi – 284 205, Uttar Pradesh, India

**Facilitated By:**

1. Department of Agriculture, Government of Uttar Pradesh
2. NABARD, Uttar Pradesh

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

**BUNDELKHAND KATHIYA GEHU**



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

Kathiya Gehu (Wheat) of Bundelkhand region is wonder of Nature.

In technical terms Kathiya wheat is "Triticum Durum" (Durum in Latin means "hard", and the specie is the hardest of all wheat varieties). It is also called Durum wheat and is better known as Dalia, pasta wheat or macaroni wheat. It is the second most cultivated species of wheat after common wheat, although it represents only 5% to 8% wheat production.

Kathiya Wheat is a variety that is specific to areas where water is scarce, it can easily grow in unfriendly and harsh climatic conditions that's why in Bundelkhand Region. Sometimes not even a single watering is done, whatever grows, grows on the strength of the soil and seed, making it impossible to apply any fertilizer or nutrient additions / input.

- Being a hardy variety it is also resistant to many common diseases such as Powdery mildew, Brown rust, Loose smut, Stripe rust and dreaded Karnal bunt etc.
- Bio Fertilizer being applied on Kathiya Wheat before watering.

- The Kathiya wheat absorbs more water while kneading than normal wheat. Dough made from its flour is weak or "soft". Despite its high protein content, Kathiya is not a strong wheat in the sense of giving strength to dough through the formation of a gluten network.
- There is virtually no elasticity in Kathiya wheat as is found in white wheat when Rotis are made with rolling pin and board. Thus Rotis made from Kathiya wheat are crispier and get softer and more brittle on storage and thus become tastier than white wheat Rotis which lose all taste on getting cold.
- It has been found that Kathiya has better shelf life both in dry and dough form as compared to popular white wheat.
- Nutritionally too, Kathiya wheat contains Vitamins A, B and E, Beta Carotene and iron content, besides calcium, phosphorus, zinc, copper etc.
- It is known for being especially high in fibre which is essential for healthy living, and for a well-functioning digestive system.
- A high-fibre diet also lowers cholesterol levels and helps maintain a healthy weight. Studies have shown that fibre can also help manage blood sugar levels, making it key in the prevention and management of diabetes.

#### F) Description:

##### **Kathiya Daliya Description**

- Kathiya Daliya is made with Kathiya Gehu or durum wheat, grown in the Bundelkhand region of the country. Kathiya wheat is one of the hardest wheat known to mankind.
- The kernels of this wheat are larger and amber-colored as compared to others. It is one of the most cultivated wheat species after common wheat.
- It is also known as red wheat dalia and is primarily used in the manufacturing of Macaroni. This is the major reason for its increasing demand in the International Market.
- Kathiya Daliya is highly nutritious and contains various micronutrients required by our body for overall growth and development.
- It contains: Vitamin A, B and E, Protein, Beta Carotene, Iron, Calcium, Phosphorous, Zinc, Copper and high Dietary Fiber contents.
- It provides ample amounts of nutrition single handedly, i.e., without the help of any other ingredient in its recipes. All these properties of Kathiya Daliya make it a healthier and wiser choice for the health conscious people.
- This variety of wheat absorbs more water while kneading than normal wheat and this makes rotis light, fluffy and yummy. Its high fiber content helps in maintaining healthy digestive system and prevents constipation.
- The daliya grains are light and easy to chew which makes it easier for consumption by people of all age groups. Now, let us see some of the health benefits of Kathiya Daliya which make it a must have in our diets.

Yield (approx. 20-30 quintal/hectare) is not much important, but as a commercial crop, it is recognize for the Dalia and other related product due to their nutritional value and long shelf life.

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

Geographical Area of production of Kathiya Gehu (Wheat) of Bundelkhand region is whole Bundelkhand Region of Uttar Pradesh & Madhya Pradesh falling under following districts:

District /Location	Latitude	Longitude
Jhansi District-UP	25° 54' N	79° 11' E
Jalaun District-UP	26° 13' N	79° 47' E
Lalitpur District-UP	24° 65' N	78° 47' E
Hamirpur District-UP	25° 58' N	80° 12' E

Mahoba District-UP	25° 40' N	79° 83' E
Banda District-UP	25° 45' N	80° 54' E
Chitrakoot District-UP	25° 11' N	81° 07' E
Datiya District-MP	25° 39' N	78° 27' E
Tikamgarh District-MP	24° 45' N	78° 53' E
Chhatarpur District-MP	24° 72' N	79° 56' E
Panna District-MP	24° 48' N	80° 18' E
Sagar District-MP	23° 50' N	78° 50' E
Damoh District-MP	23° 50' N	79° 29' E

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

The Bundelkhand region is located between 23°20' and 26°20' N latitude, and 78°20' and 81°40' E longitude. Geographically, it falls in central India and is a semi-arid plateau that includes the Bhamder plateau and the Kaimur hills. It is physically located in the central Hindi belt south of the Yamuna River, between the fertile Gangetic plain stretching across northern Uttar Pradesh (UP) and the southern highlands of central Madhya Pradesh (MP). Geographically, it also works as a gateway between North and South India.

### References Bundelkhand Kathiya Gehu (wheat):

1. **The Imperial Gazetteer of India By W.W. Hunter, CIE, LLD., Volume-V, 1881** - Jhansi in the nature of its soil, the character of its people, the poor means of irrigation, and the want of good communications, The chief Rabi products were wheat in 104205 acres.
2. **Imperial Gazetteer of India, Provincial Series, United Provinces of Agra and Oudh, Vol.I, 1908, Page No.54, 55, 58, 59, 60** – In the Bundelkhand, the system of cultivation of wheat is grown in the winter, usually after a rain crops in the preceding year. It is sown at the end of October or the beginning of November, and harvested in March and April.
3. **Probable Agricultural Biodiversity Heritage Sites in India: X. The Bundelkhand Region Anurudh K Singh Department of Genetics, MD University, Rohtak 124001, Haryana, Asian Agri-History Vol. 15, No. 3, 2011** - The Bundelkhand region of central India, lying south of the Yamuna river, The region can be credited with traditional agriculture, where field agriculture has an effective integration with pastoral agriculture, which plays a major role in agricultural activities, starting from the use of draft in sowing, irrigation, transport of goods and passengers and even the use of dung as fuel and manure, and for generating additional income from selling of milk, to improve the rural economy. Geographically, it also works as a gateway between North and South India. Administratively, the region comprises thirteen districts – seven districts of UP (Jhansi, Jalaun, Lalitpur, Hamirpur, Mahoba, Banda, and Chitrakoot) and six districts of MP (Datia, Tikamgarh, Chhatarpur, Damoh, Sagar, and Panna). However, traditionally, some other districts of MP (Satna, Morena, Sheopur, Bhind, Shivpuri, Guna, and Ashoknagar) are also considered as part of larger Bundelkhand. Gwalior, Jabalpur, and even Bhopal have the cultural influence of Bundelkhand.
4. **Indian J. of Agroforestry Vol. 20 No. 1 : 85-90 (2018), Response of three popular varieties of wheat to arbuscular mycorrhizae grown in two common soil types of central India** By Neha Chakravarty, Ashok Shukla, Anil Kumar and Sudhir Kumar ICAR-Central Agro forestry Research Institute, Gwalior Road, Jhansi, Page No.85,87,89 - The study was conducted at ICAR-Central Agro forestry Research Institute, Jhansi (25°27' N latitude, 78°35' E longitude and 271 m above mean sea level), which consisted of 11 treatments. Maximum plant height was recorded in WH 147, dry shoot weight in LOK-1 and dry root weight in Kathiya. Maximum yield was recorded in LOK-1, which was at par with WH 147. These values were significantly higher than the value recorded in Kathiya. AM inoculations significantly increased plant height, dry shoot weight, dry root weight and yield. Values of studied growth parameters (plant height, dry shoot weight and dry root weight) were significantly higher in plants grown in alfisol than in vertisol. Maximum root: shoot ratio was recorded in Kathiya, which was significantly more than other two varieties.

5. **Original Research Article Plant Genetic Resources, Characterization of wheat germplasm** conserved in the Indian National Genebank and establishment of a composite core collection B.S. Phogat<sup>1</sup>, Page No.604 and 617
6. **International Journal of Current Microbiology and Applied Sciences** ISSN: 2319-7706 Volume 6 Number 9, Growth and Instability in Wheat Production: A Region Wise Analysis of Uttar Pradesh, India Harshita Tewari<sup>1</sup>, H.P. Singh and Usha Tripathi, Department of Agricultural Economics, Institute of Agricultural Sciences, Banaras Hindu University, Varanasi, - The productivity of wheat in western region was found to be highest followed by central, eastern and Bundelkhand region.

#### I) **Method of Production:**

**Kathiya wheat cultivation is very old traditional practice in Bundelkhand region of Uttar Pradesh.** Kathiya Gehu is a hard variety of wheat; therefore it has more drought resistant capacity.

Therefore, it required only 3 irrigations due to which 45-50 kg/ha yield is obtained and in unirrigated and semi irrigated condition its production is definitely 30-35 kg/ha. The Kathiya Gehu is a complete with bran, husk and endosperm.

**Tools:** Hal-wedge of wood with an iron cutter, Dakhar-bullock-hoe, Kudal / Fauda – spade / spud, or Hasua or Darati- sickle

#### **Field Preparation**

Kathiya Gehu required a well pulverized and compact seed bed for good and uniform germination. 3 or 4 ploughings in the summer, repeated harrowing in the rainy season, followed by 3 or 4 cultivations and planking immediately before sowing produce a good firm seed bed.

The plough used by cultivators is substantially a **wedge of wood with an iron cutter** in front: its size depends on the strength of the local cattle. It stirs the soil without inverting it, and is well adapted to produce a thorough, but shallow, tilth. Where deep tillage is required the land is usually dug up with a spade. In Bundelkhand a rough **bullock-hoe (dakhar)** is often used in place of a plough for breaking up the soil and eradicating weeds. For harrowing, a heavy beam or cylindrical roller or two parallel beams joined together are used; for weeding and hoeing, the hoe, **spade/spud**, or **sickle** is employed. The agricultural implements are of the simplest,

#### **Seed and Sowing:**

**Sowing Time:** Kathiya Gehu sowing time is Swati nakshatra which come nearly last week of October or first week of November and harvested in March and April. The production cycle of Kathiya gehu is 120 – 125 days.

**Method of Sowing Seed rate (kg/ha)** Line sowing behind plough 90-100 Sowing by kera/pora method 80-100 Sowing by dibbling 25-30 Late sowing by seed drill 125-155 Broadcasting Method 100-120 c)

**Spacing:** For normal sown crop, 15 - 22.5cm.(Row spacing), and the planting

**Depth:** depth should be between 1 – 1.5cm and 2 -3 seed each spot.

**Seed treatment:** The seed of loose smut-susceptible varieties should be given solar or hot-water treatment. If the wheat seed is used only for sowing, it can be treated with Vitavax, thiram 2.5 gm/kg seed.

Method of sowing: Wheat is sown by the following traditional methods.

- a- Broadcast.
- b- Behind the plough.

Application of Mannures and Fertilizer: It is desirable that 2 to 3 tonnes of farmyard manure per hectare or some other organic matter is applied 5 or 6 weeks before sowing.

Total quantity of Phosphorus and potash and half the quantity of nitrogen should be applied at the time of sowing. Remaining quantity of Nitrogen should be applied at the time of crown root initiation. For the late sown irrigated wheat crop, the NPK fertilizer dose recommended as - N @ 60-80 kg/ha. P<sub>2</sub>O<sub>5</sub> @ 30-40 kg/ha. K<sub>2</sub>O @ 20-25 kg/ha. In this wheat, less fertilizer is required because the farmers are using manure for better quality and taste, which is much important to the consumers.

**Water Management:** In Kathiya Gehu cultivation, irrigation requirement depends on various factors viz. type of soil, variety grown etc. but 2 – 3 maximum irrigation is sufficient for Kathiya Gehu.

**Harvesting:** The Kathiya Gehu crop is harvested when the grains become hard and the straw becomes dry and brittle. The harvesting is mostly done by sickle. The Kathiya wheat crop is usually harvest when the grains become hard and the leaves become dry and brittle. The crops are threshed by treading with cattle on the threshing floor or by power driven thresher.

**Storage:** Kathiya Gehu should be thoroughly dried before storage. The storage life of the grain is closely related to its moisture content grains with less than 10 percent moisture store well. The storage pits, bins or godowns should be moisture proof.

#### J) Uniqueness:

1. Kathiya wheat cultivation is very old traditional practice in Bundelkhand region. It has mentioned in many Gazetteers, regarding the practices in Bundelkhand region.
2. Kathiya Wheat is cultivated in the farms of Bundelkhand region and is specific to this land's soil. It has favorite of this region and farmers from Bundelkhand have been growing it from as far back as their memory goes.
3. This special wheat stand out in the market is the nutrition value of the wheat. It has high nutrition value along with a high fibre value.
4. This is produced on a small scale by the farmers. The rarity of the seed, water scarcity in the region and the low scale production makes it rare and popular among the masses who are health conscious and require a high nutrition diet.
5. Maximum shoot ratio was recorded in Kathiya, which was significantly more than other varieties. It has been found that Kathiya has better shelf life both in dry and dough form as compared to popular white wheat.
6. There is virtually no elasticity in Kathiya wheat as is found in white wheat when Rotis are made with rolling pin and board. Thus Rotis made from Kathiya wheat are crispier and get softer and more brittle on storage and thus become tastier than white wheat Rotis which lose all taste on getting cold.
7. Kathiya Gehu (wheat) possesses high nutritional value, high protein and is rich in fibre. The wheat is super healthy to consume. Kathiya Gehu is high in Iron and Zinc.
8. It comes with amazing digestive properties that enhance the immunity of a person.
9. It is highly recommended for people with heart conditions and diabetes.
10. It also helps people who have difficulty in digesting heavy foods. Daily consumption of this rare variety of wheat leads to better immunity and a healthy lifestyle.
11. Kathiya Wheat and its products like Kathiya Daliya are highly recommended for women post-pregnancy for a swift recovery. It helps with maintaining the metabolism in kids. It also helps with improving the immune system in the elderly.
12. Kathiya wheat is considered for good for industrial and medical use. It is disease prone variety. It is quickly digestible. Variety of dishes are prepared from Kathiya Gehu like – Dalia, Pizza, Spaghetti, Vermicelli, Noodle, Vermicelli etc. are made from Simolin / Rava made from it.

13. Due to its high anti disease ability, it has more potential for export. The farmers and producers of Kathiya Gehu are practicing mix farming for Kathiya Gehu cultivation and for mix cropping they prepare Alsi and Chana as mix crop.
14. This mix cropping improved the production of Gehu as well as chana and alsi, improve the soil quality and support to wheat crop as nutritional value in soil. Some cultivators prefer individual and specific Kathiya gehu farming.
15. Kathiya Gehu is a hard variety of wheat, therefore it has more drought resistant capacity.
16. The Kathiya wheat absorbs more water while kneading than normal wheat. Dough made from its flour is weak or "soft". Despite its high protein content, Kathiya is not a strong wheat in the sense of giving strength to dough through the formation of a gluten network.
17. There is virtually no elasticity in Kathiya wheat as is found in white wheat when Rotis are made with rolling pin and board. Thus Rotis made from Kathiya wheat are crispier and get softer and more brittle on storage and thus become tastier than white wheat Rotis which lose all taste on getting cold.
18. It has been found that Kathiya has better shelf life both in dry and dough form as compared to popular white wheat.
19. Nutritionally too, Kathiya wheat contains Vitamins A, B and E, Beta Carotene and iron content, besides calcium, phosphorus, zinc, copper etc.
20. It is known for being especially high in fibre which is essential for healthy living, and for a well-functioning digestive system.
21. A high-fibre diet also lowers cholesterol levels and helps maintain a healthy weight. Studies have shown that fibre can also help manage blood sugar levels, making it key in the prevention and management of diabetes.

**K) Inspection Body:**

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

**L) Others:**

Kathiya wheat cultivation is very old traditional practice in Bundelkhand region of Uttar Pradesh. It is disease prone variety. Kathiya wheat is considered for good for industrial and medical use. It is quickly digestible. Variety of dishes are prepared from Kathiya Gehu like – Dalia, Pizza, Spaghetti, Vermicelli, Noodl, Vermicelli etc. are made from Simolin / Rava made from it. Due to its high anti disease ability, it has more potential for export. The farmers and producers of Kathiya Gehu are practicing mix farming for Kathiya Gehu cultivation and for mix cropping they prepare alsi and chana as mix crop. This mix cropping improved the production of Gehu as well as chana and alsi. Some cultivators prefer individual and specific Kathiya gehu farming.

**Health Benefits of Kathiya Daliya**

- Kathiya Daliya is made from the hardest wheat of all times. But, the fact that it is highly packed with nutrition remains intact.
- It has high amounts of Protein which helps in weight management. Being a rich source of fiber, it helps in keeping us away from heart diseases and also maintains healthy blood sugar level. It is a good choice for gluten intolerant people.

- It has almost zero fat content and thus, prevents the growth of bad cholesterol in our body. There are tons of mind blowing health benefits of Kathiya Daliya and here are some of the most promising ones:

### **Good for Digestive System**

- Kathiya Daliya, being rich in dietary fibers, helps in preventing constipation. It is easy to digest and allows the bowels to function properly. It also helps in preventing colon inflammation and cancer. It helps in maintaining a healthy digestive system.
- Immunity Booster.
- Nutrients and Minerals like Vitamin B, Calcium and Zinc present in Kathiya Daliya provides us energy and stamina to fight various diseases. Hence, it results in boosting the immunity of our body.

### **Gluten-Free**

It is non-glutinous and therefore, is highly recommended for gluten intolerant people and with Type-2 Diabetes patients.

### **Improves Blood Circulation in Body**

Being rich in Iron, it helps in maintaining a good blood circulation in body and promotes the growth of red blood cells. This also helps in improving the ability of blood to carry oxygen to various parts of the body.

### **Regulates Our Metabolism**

The high Protein content of Kathiya Daliya provides energy and stamina to the body which results in regulating our metabolism. Thus, it will make sure that all the functions of our body are working optimally.

### **Healthy Recipes of Kathiya Daliya**

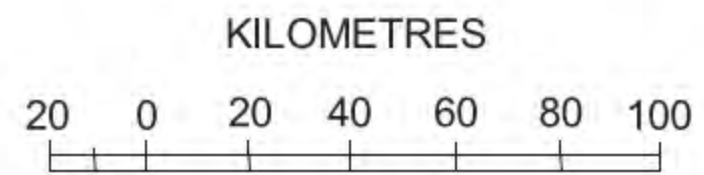
Kathiya Daliya is among the most prominent forms of wheat that Indians use because it contains nutrition and provides a wholesome diet, and so, here we present the 2 Most Common Recipes of Kathiya Dalia.

**Cooked Kathiya Daliya:** By boiling the daliya on medium flame for about 8-10 minutes. Then we can add milk and sugar according to taste or tadka in boiled dalia to eat it in salty form.

**Kathiya Daliya Khichdi:** People can make this recipe by boiling Kathiya Daliya with Moong Daal, turmeric and salt, then adding tadka to it. Further, people can add some veggies to make it much tastier than before.

# GEOGRAPHICAL AREA OF PRODUCTION OF BUNDELKHAND KATHIYA GEHU

**UTTAR PRADESH**  
ADMINISTRATIVE DIVISIONS 2011



- 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)

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

- HEADQUARTERS:**
- STATE..... ★
  - DISTRICT..... ●
  - TAHSIL..... ●

Jhansi District is located at latitude 25° 54' N, & Longitude at 79° 11' E  
 Jalaun District is located at latitude 26° 13' N, & Longitude at 79° 47' E  
 Lalitpur District is located at latitude 24° 65' N, & Longitude at 78° 47' E  
 Hamirpur District is located at latitude 25° 58' N, & Longitude at 80° 12' E  
 Mahoba District is located at latitude 25° 40' N, & Longitude at 79° 83' E  
 Banda District is located at latitude 25° 45' N, & Longitude at 80° 54' E  
 Chitrakoot District is located at latitude 25° 11' N, & Longitude at 81° 07' E  
 Datiya District is located at latitude 25° 39' N, & Longitude at 78° 27' E  
 Tikamgarh District is located at latitude 24° 45' N, & Longitude at 78° 53' E  
 Panna District is located at latitude 24° 48' N, & Longitude at 80° 18' E  
 Sagar District is located at latitude 23° 50' N, & Longitude at 78° 50' E  
 Damoh District is located at latitude 23° 50' N, & Longitude at 79° 29' E

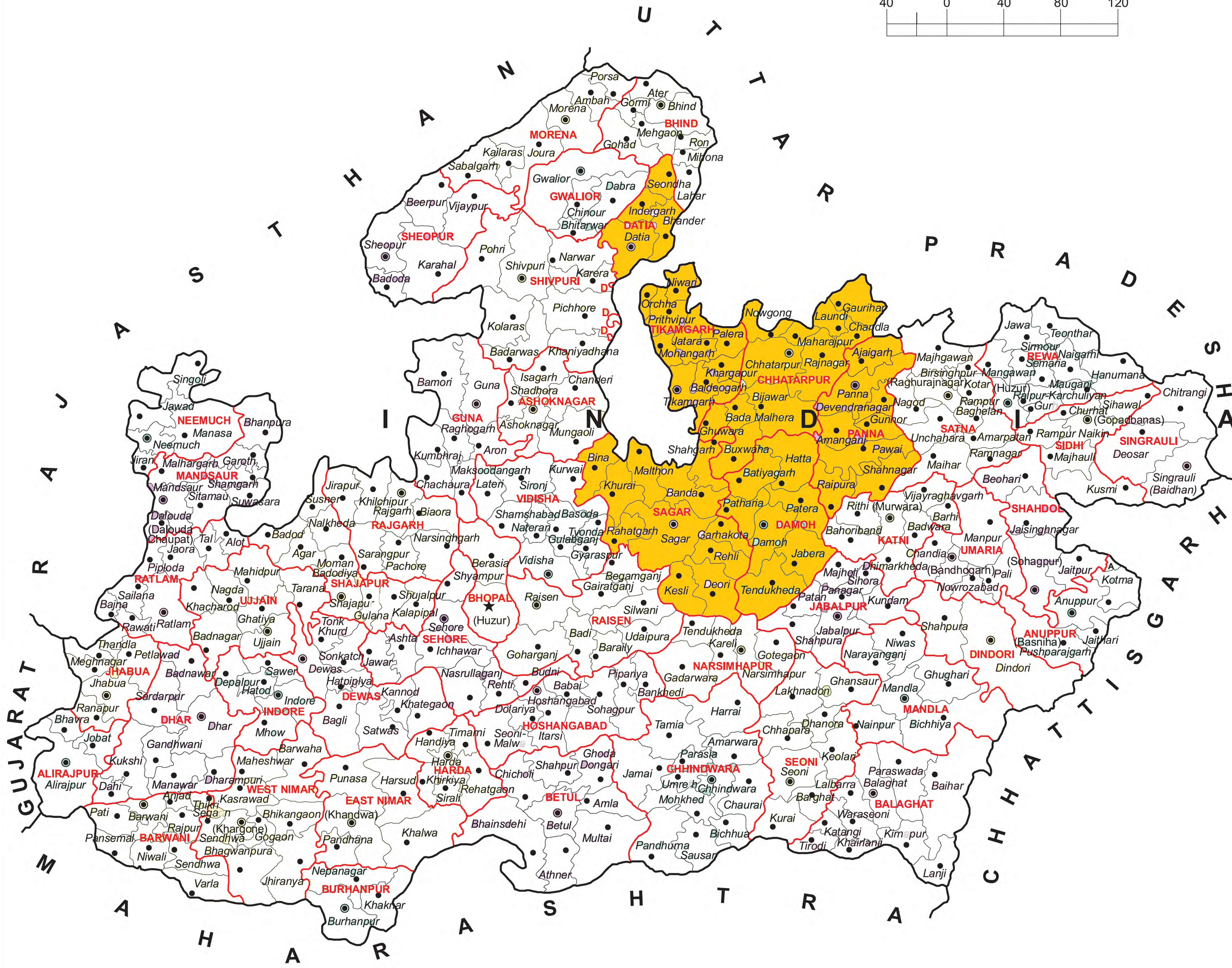
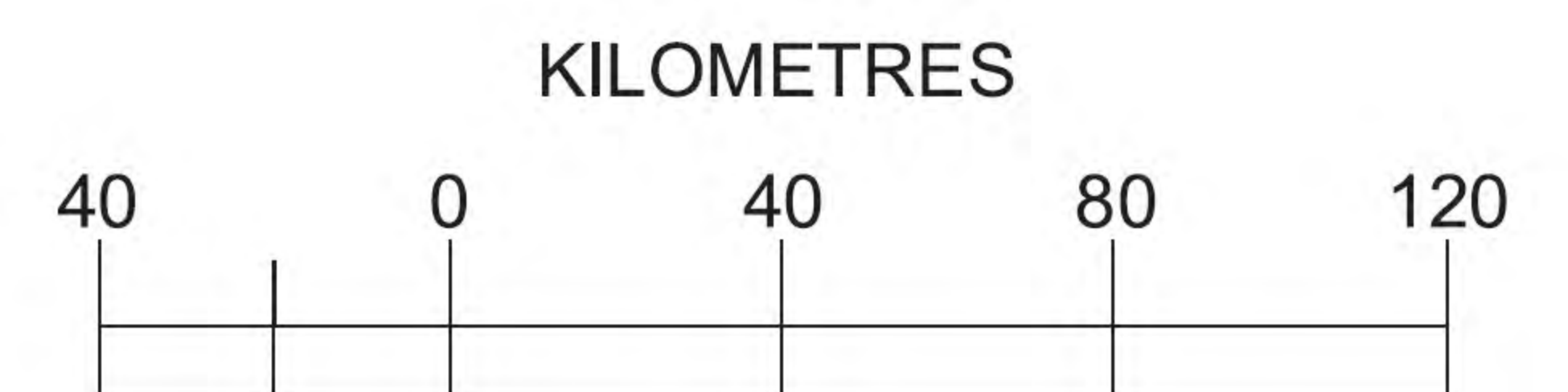
- |                     |                         |
|---------------------|-------------------------|
| 1 - Chandausi       | 12 - Chauri Chaura      |
| 2 - Garhmukteshwar  | 13 - Tamkuhi Raj        |
| 3 - Sikandra Rao    | 14 - Bhatpar Rani       |
| 4 - Bakshi Ka Talab | 15 - Nizamabad          |
| 5 - Chakamagar      | 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.



# GEOGRAPHICAL AREA OF PRODUCTION OF BUNDELKHAND KATHIYA GEHU

## MADHYA PRADESH ADMINISTRATIVE DIVISIONS 2011



- Jhansi District is located at latitude 25° 54' N, & Longitude at 79° 11' E
- Jalaun District is located at latitude 26° 13' N, & Longitude at 79° 47' E
- Lalitpur District is located at latitude 24° 65' N, & Longitude at 78° 47' E
- Hamirpur District is located at latitude 25° 58' N, & Longitude at 80° 12' E
- Mahoba District is located at latitude 25° 40' N, & Longitude at 79° 83' E
- Banda District is located at latitude 25° 45' N, & Longitude at 80° 54' E
- Chitrakoot District is located at latitude 25° 11' N, & Longitude at 81° 07' E
- Datiya District is located at latitude 25° 39' N, & Longitude at 78° 27' E
- Tikamgarh District is located at latitude 24° 45' N, & Longitude at 78° 53' E
- Chhatarpur District is located at latitude 24° 72' N, & Longitude at 79° 56' E
- Panna District is located at latitude 24° 48' N, & Longitude at 80° 18' E
- Sagar District is located at latitude 23° 50' N, & Longitude at 78° 50' E
- Damoh District is located at latitude 23° 50' N, & Longitude at 79° 29' E

D - Area belongs to Datia Tahsil of Datia district.  
A - Area belongs to Anuppur tahsil of Anuppur district.

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

### BOUNDARIES:

- STATE.....
- DISTRICT.....
- TAHSIL.....

### HEADQUARTERS:

- STATE..... ★
- DISTRICT..... ●
- TAHSIL..... •