

Indian potato varieties and their salient features

Ramesh Rajbhar¹, Badri Lal Nagar², Gurumurthy N³, Rakesh Kumar⁴, Prathavi Raj Meena⁵, Pooja Meena⁶

Early varieties

- 1. Kufri Chandramukhi:** Bihar, Gujarat, Haryana, Punjab, Madhya Pradesh, Himachal Pradesh, Uttar Pradesh, Orissa, and West Bengal are the main producers. This potato crop takes 80-90 days to develop. Large, round, white, somewhat flattened eyes, and white flesh that is dull. This potato has an average yield of 25 tonnes per acre.
- 2. Kufri Jawahar:** Mainly grown in Haryana, Punjab, Gujrat, Madhya Pradesh and Karnataka. Medium in size and round-oval shape and creamy white colour with fleet eyes and pale yellow flesh. This potato crop matures in 80-90 days. And average yield is about 40 tonnes per hectare. This potato is moderately resistant to late blight disease.
- 3. Kufri Lauvkar:** Mainly grown in Maharashtra, Madhya Pradesh and Karnataka
- 4. Kufri Ashoka:** Mostly grown in Bihar, Punjab, Haryana, Uttar Pradesh and West Bengal. Large and oval-long in shape with fleet eyes and white flesh. This potato crop matures in 70-80 days and average yield is about 40 tonnes per hectare.
- 5. Kufri Khyati:** Kufri Khyati is a high yielding early maturing white tuber variety having moderate resistance to late blight and is for cultivation in plains of India. At most of the places, Kufri Khyati yielded higher than the other early maturing cultivars. An important feature of this variety is that, unlike most of the early maturing varieties, it possesses moderate resistance to late blight. This variety performs well both under very early (60 days) and early (75 days) harvests.

Ramesh Rajbhar¹, Badri Lal Nagar², Gurumurthy N³, Rakesh Kumar⁴, Prathavi Raj Meena⁵, Pooja Meena⁶

^{1,4} Ph.D. Research Scholar, Department of vegetable science, Acharya Narendra Dev University of Agriculture and Technology, Ayodhya, U.P.

² Ph.D. Research Scholar, Department of vegetable science, Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalaya Gwalior, M.P.

³ M.Sc. (Horti) Vegetable Science, University of Horticultural Sciences Bagalkot, Karnataka.

⁵ M.Sc. (Horti) Vegetable Science, Acharya Narendra Dev University of Agriculture and Technology, Ayodhya, U.P.

⁶ M.Sc. (Horti) Vegetable Science, Agriculture University Jodhpur, Rajasthan.

6. **Kufri Surya:** Kufri Surya is an early maturing, heat tolerant and hopper-burn resistant potato variety with oblong tubers, white smooth skin and pale yellow flesh. This variety is meant for early (September) planting in north-western plains and for rabi and kharif plantings in peninsular India. This variety yields excellent defect free tubers with high proportion of large (>85mm) tubers suitable for processing into high quality French fries and chips. The reducing sugar content of tubers of this variety is less than 100 mg/100 g fresh weight and the tuber dry matter content is 20-21% at harvest.

Mid varieties

1. **Kufri Sadabahar:** This type can be grown in Uttar Pradesh and has a medium maturation period (90–100 days). It can produce 35–40 tonnes of tubers per hectare and can be planted in neighbouring states as well. The white, oval-oblong tubers range in size from medium to large, and have shallow eyes and white meat. The cultivar can withstand frost and has field resistance to late blight. Large, rectangular tubers and a high dry matter content make it suitable.

2. **Kufri Anand:** This medium-maturing (90-100 days) cultivar is suitable for growing in Uttar Pradesh's plains and nearby states. It is a high-yielding variety that can

generate 35 to 40 tonnes of tubers per hectare. The meat of the huge, white, flattened, oval-oblong tubers has a fleeting appearance. The variety can be used to make French fries because it is frost-tolerant and resistant to late blight.

3. **Kufri Bahar:** This type, which takes 90 to 100 days to mature, is suitable for cultivation in some areas of Haryana, Madhya Pradesh, Jammu & Kashmir, and Uttar Pradesh. This cultivar currently dominates Uttar Pradesh, generating 30-35 tonnes of tubers per hectare. Early in the planting season, it can also be grown. The tubers have medium-deep eyes and huge, white, oval faces with white skin.

4. **Kufri Arun:** It is a medium-maturing (90-100days) variety for cultivation in North Indian plains. The variety can produce 35-40 tonnes/ha tubers, possessing about 20 per cent dry matter.

5. **Kufri Jyoti:** Bihar, Maharashtra, Gujarat, Haryana, Punjab, Uttar Pradesh, Karnataka, and West Bengal are the main producers. The eyes are small and swift, and the flesh is white. This potato has an average yield of 20 tonnes per acre. Early and late blight resistance is moderate in this potato. Most Kufri Jyoti transactions take place in the mandis of Bengal, Bihar, and Jharkhand.

6. **Kufri Badshah:** Mostly grown in Jammu Kashmir, Haryana, Punjab, Gujrat, Uttar Pradesh and Madhya Pradesh. This potato crop matures in 100-110 days. Average yield is about 50 tonnes per hectare.
7. **Kufri Bahar:** The variety 3797 is another name for it. The northern Indian plains benefit from it. In between 90 and 110 days, Kufri Bahar prepares. Large and round-oval in shape with medium deep eyes. This potato crop matures in 100-110 days. Average yield of this potato is about 45 tonnes per hectare.
8. **Kufri Ganga:** Kufri Ganga is a medium maturing, main season, high yielding table purpose potato variety suitable for cultivation in north Indian plains. It is a clonal selection from a cross between MS/82-638 as Kufri Gaurav. It has semi compact, vigorous and tall plants with field resistance to late blight. It produces attractive white-cream, ovoid tubers with shallow eyes and cream flesh. It possesses good keeping quality and moderate tuber dry matter (16-18%). It produces >90% marketable tuber yield and is capable of yielding 35-40 t/ha .
9. **Kufri Kanchan:** This cultivar is primarily sown in the hills of Sikkim and North Bengal. It yields between 250 and 300 quintals per hectare. In the mandis of Bihar and Jharkhand, the most popular types for farmers and mandi dealers are New Holland, Kufri, Kanchan, and Sindoori.
10. **Kufri Chipsona-1, 2-** Mostly grown in Bihar and Uttar Pradesh. Medium to large size and oval in shape with fleet eyes and dull white flesh. This potato crop matures in 90-110 days and average yield is about 35- 40 tonnes per hectare. This potato is resistant to late blight disease and tolerant to frost.
11. **Kufri Chipsona -3:** The ovoid-shaped tubers have medium-deep eyes and creamy flesh. In comparison to Kufri Chipsona 1 and Kufri Chipsona 2, the total and processing grade tuber yield is higher. This variety has a potential yield of 300–350 q/ha and is resistant to late blight. The cultivar reaches chemical maturity in 110 days, and when stored at 10–12 °C, tubers produce appropriate chip colour for 4-6 months. With more than 20% dry-matter content and extremely low reducing sugars (0.05%) in plains, Kufri Chipsona 3 offers good processing quality.
12. **Kufri Lalima:** This potato crop is mostly grown in Uttar Pradesh and Bihar. Large to medium in size and slightly red colour with medium deep eyes and white flesh. This potato crop matures in 100-110 days and average yield is about 40 tonnes per hectare. This potato is moderately resistant to early blight and resistant to Potato Virus

Y. This potato is not suitable for processing.

Late varieties

1. Kufri Chamatkar: Plants are medium, spreading, short stolon, compact, dark green foliage, foliage prominent, very small internodes, more stems and small leaflets. Flowers are of white colour. Tubers are round and white, eyes medium deep, flesh yellow and red sprouts. Degeneration is slow and quick tuberization. It is late maturing variety, which matures 110-120 days in plains and 150 days in hills. The yield potential of this variety is 250 q/ha in plains and 75.00 q/ha in hills. It is resistant to early blight but susceptible to viruses, late blight, brown rot, charcoal rot, wilts and common scab.

2. Kufri Dewa: Plants are very tall open, erect and very small internodes. Leaves are semi-compact, dark green and upright. Petioles are very long having 3-6 cm towards base and devoid of leaves. Tubers are erratic round with purple splashes, eye deep and pigmented and sprout light red with white flesh. Tubers develop brown spots after harvest. It is highly susceptible to late blight, possesses good resistance to frost and drought. It matures in 120 days in plains and 165 days in hills. An average yield is 250 q/ha.

3. Kufri Jeevan: It is a derivative of the cross M-109-3 x D 698 and adopted for northwest hills of Himachal Pradesh and Uttar Pradesh. Tubers are medium, white skin, oval shaped, eyes fleet, faint red picked, flesh waxy and pale yellow. It matures 150-160 days in hills and 120 days in plains. It is resistant to wart, highly resistant to late blight and in moderately resistant to early blight.

4. Kufri Naveen: It is a derivative of the cross 0-692 x, 3070d (4) and adapted to northeast hills of Assam and high altitude of Himachal Pradesh. Tubers are medium, white and oval with fleet eyes. Flesh is waxy and pale yellow. It is susceptible to early blight and to resistant to wart. It possesses high degree of field resistant/immunity to race 0, 1 and 4 of late blight.

5. Kufri Sinduri: It's a better variety of potato that can withstand even frost. In comparison to the mountainous location, the crop matures more quicker in the plain area. Maturity in 120 to 125 days. To a degree, this potato can withstand temperature and water stress. Eyes that are medium in size and deep in colour. Early blight resistance is moderate, and it can withstand the Potato Leaf Roll Virus. This potato has an average yield of 40 tonnes per acre.

- Kufri Himsona** Kufri Himsona gives high total and processing grade tuber yields and possesses field resistance to late blight. Its round-oval tubers contain high dry matter (22.4%), low reducing sugars (<100 mg/100 g fr wt) and are free from internal defects.

