

DISTRIBUTION AND PRODUCTION OF RICE IN INDIA

Rice is the most important food crop of India covering about one-fourth of the total cropped area and providing food to about half of the Indian population. This is the staple food of the people living in the eastern and the southern parts of the country, particularly in the areas having over 150 cm annual rainfall.

Conditions of Growth of Rice

Rice is grown almost throughout the year in hot and humid regions of eastern and southern parts of India where two to three crops are grown in a year. But in the northern and hilly parts of the country, the winters are too cold for rice cultivation and only one crop is grown in those areas.

- Rice is grown under varying conditions in India from 8°N to 30°N latitude and from sea level to about 2,500 metre altitude.
- It is a tropical plant and requires high heat and high humidity for its successful growth.
- The temperature should be fairly high at mean monthly of 24°C. It should be 20°-22°C at the time of sowing, 23-25°C during growth and 25°-30°C at the harvesting time.
- The average annual rainfall required for rice is 150 cm. It is the dominant crop in areas of over 200 cm annual rainfall and is still an important crop in areas of 100-200 cm rainfall. The 100 cm isohyet forms the limit of rice in rainfed areas. In areas receiving less than 100 cm annual rainfall, rice can be grown with the help of irrigation. About 40 percent of rice crop in India is raised under irrigation. Lesser amount of rainfall is required as the harvesting time approaches. The fields must be flooded under 10-12 cm deep water at the time of sowing and during early stages of growth.
- Therefore, the fields must be level and have low mud walls to retain water. This peculiar requirement of rice makes it primarily a crop of plain areas. Rice grown in well watered lowland plain areas is called wet or lowland rice.
- In hilly areas, the hill slopes are cut into terraces for the cultivation of rice. Such a cultivation in which the hill slopes are cut into terraces is called terraced cultivation. The supply of water to the hill terraces is not as much as in the plain areas and the rice grown in hilly areas is called dry or upland rice.
- Rice can be grown on a variety of soils including silts, loams and gravels and can tolerate acidic as well as alkaline soils. Black lava soil is also useful for rice cultivation.
- Rice crop is not much suited to mechanization and therefore requires large supply of cheap labour for its successful cultivation.
- According to G.B. Cressey rice needs plenty of heat, plenty of rain, plenty of alluvium and plenty of labour to provide plenty of food for plenty of people. There is no other food crop which is so plentiful as rice in India.

Production of Rice

- India is the second largest producer and consumer of rice in the world after China and accounts for 17.95 percent of the world's total rice production. There has been considerable increase in production, area and yield of rice in India.
- There was a record production of 106.3 million tonnes in 2013-14. Yield also reached at a high level of 2,419 kg/hectare but still much lower as compared to China, USA and Japan. This means that there is still vast scope for increasing production. This will have to be done by increasing yields because scope for increasing area under no crop is negligibly small.

TABLE 22.2. Area Production and Yield of Rice in India

Year	1950 -51	1960 -61	1970 -71	1980 -81	1990 -91	2000 -01	2007 -08	2008- 09	2009 -10	2010 -11	2011 -12	2012- 13	2013 -14
Area (Million hectares)	30.81	34.13	37.59	40.15	42.69	44.71	43.91	45.54	41.92	42.86	44.01	42.41	43.9
Production (Million tonnes)	20.58	34.58	42.22	53.63	74.29	84.98	96.69	99.18	89.09	95.98	105.4	104.40	106.3
Yield (kg/hectare)	668	1013	1123	1336	1740	1901	2102	2178	2125	2239	2393	2462	2419

Source : (i) Agricultural Statistics at a glance, 2013, pp. 66-67.

(ii) Economic Survey 2013-14, Statistical Appendix, pp. 17, 18, 19

Distribution of Rice

- Rice is grown in varying degrees in almost all parts of the country except higher parts of the Himalayan ranges exceeding 2,500 metres in altitude, Marusthali part of Rajasthan, Kachchh-Saurashtra, Malwa and Marathwada regions due to various geographical constraints.
- Rice producing areas mainly include the lower and the middle Ganga Plains, the east and the west Coastal Plains, the Brahmaputra valley and parts of the Peninsular plateau.
- Punjab, Haryana and Uttar Pradesh have assumed considerable importance after the introduction of the Green Revolution. Table 22.3 gives vital data about the state-wise distribution of rice among the major producers.
- It is clear that about half of rice production in India is contributed by four states namely West Bengal, Uttar Pradesh, Punjab and Andhra Pradesh. The other major producers are Odisha, Bihar, Chhattisgarh, Assam, Tamil Nadu, Haryana, Karnataka, Jharkhand, Madhya Pradesh, Maharashtra, Gujarat and Kerala in order of importance.

1. West Bengal:

- West Bengal is the largest producer of rice in India contributing about 14.33 percent of the total rice production from 12.8 percent of the rice producing area of the country.
- Rice occupies three-fourths of the total cropped area in the lower Ganga Plains. Suitable climatic conditions and large scale alluvial deposits have helped in the cultivation of rice on such a scale. Over two-thirds of the production comes from Medinipur, Bardhaman, North and South Twenty Four Parganas, Bankura, Birbhum and West Dinajpur districts. The other producing districts are Haora, Hugli, Jalpaiguri, Coochbehar and Malda.

2. Uttar Pradesh and Uttarakhand:

- Uttar Pradesh is the second largest producer of rice in India. Uttar Pradesh comprises 13.82 percent of the country's rice producing area and accounted for 13.80 percent of the total rice production of the country.
- About one-fourth of the total cultivated area of the state is devoted to rice cultivation. The unusual interest shown by the farmers in the rice culture; supported by the easy availability of HYV seeds, fertilizers and uninterrupted supply of irrigation are the chief factors responsible for this progress.
- As many as 50 districts of the state are producing rice out of which 7 are major producers. The main producing districts are Dehra Dun, Gorakhpur, Bareilly, Muzaffarnagar, Kheri, Faizabad, Barabanki, Banda, Varanasi, Nainital, Pilibhit, etc.

TABLE 22.3. State-wise Area, Production and Yield of Rice in India (2012-13)

Sl. No.	State	Area		Production		Yield (kg/ hectare)
		Million hectares	%age of all India	Million tonnes	%age of all India	
1.	West Bengal	5.43	12.80	14.96	14.33	2,755
2.	Uttar Pradesh	5.86	13.82	14.41	13.80	2,459
3.	Punjab	2.85	6.72	11.37	10.89	3,989
4.	Andhra Pradesh including Telangana	3.49	8.23	10.91	10.45	3,126
5.	Odisha	4.03	9.50	7.64	7.32	1,896
6.	Bihar	3.25	7.66	7.34	7.03	2,258
7.	Chhattisgarh	3.78	8.91	6.61	6.33	1,749
8.	Assam	2.24	5.28	4.56	4.37	2,036
9.	Tamil Nadu	1.58	3.73	4.40	4.21	2,785
10.	Haryana	1.22	2.88	3.98	3.81	3,262
11.	Karnataka	1.27	2.99	3.28	3.14	2,583
12.	Maharashtra	1.55	3.65	3.04	2.91	1,961
13.	Jharkhand	1.35	3.18	3.03	2.90	2,244
14.	Madhya Pradesh	1.88	4.43	2.78	2.66	1,479
15.	Gujarat	0.70	1.65	1.50	1.44	2,143
16.	Kerala	0.20	0.47	0.53	0.51	2,650
	Others	1.73	4.08	4.06	3.89	@
	All India	42.41	100.00	104.40	100.00	2,462

@—Since area/production is low in individual states, yield rate is not worked out.

Source : Agricultural Statistics at a glance, 2013, p. 68.

3. Punjab:

- Punjab is traditionally a wheat producing state but the enterprising farmers of Punjab have made full use of package technology including perennial irrigation water by canals and tube wells, HYV seeds and fertilizers. This has resulted in widespread change in the cropping pattern of Punjab and the state has become the third important producer of rice in spite of its small size.

- Punjab now gives over 3,989 kg/hectare which is the highest yield for any state of India. It is far above the other traditional rice producing states and more than one and a half times the average yield of the country.
- As many as 12 districts of Punjab are producing rice but major part of production comes from Patiala, Ferozepur, Ludhiana, Sangrur, Amritsar, Faridkot and Jalandhar.

4. Andhra Pradesh and Telangana:

- With over 10 percent of the rice production and about 8.23 percent of the rice area of the country, Andhra Pradesh is the fourth largest producer of rice in India.
- About one-fourth of the total cropped area of the state is under rice cultivation. The Godavari-Krishna Delta and the adjoining coastal plains form one of the most outstanding rice producing tracts of the country.
- About 20 districts of Andhra Pradesh and Telangana are producing rice out of which West Guntur, Godavari, East Godavari, Krishna, Srikakulam, Nellore, Prakasam, Anantapur, Warangal and Chittoor are the major producers. Important rice producing districts are West Godavari, East Godavari and Krishna.
- In the neighbouring state of Telangana, Karimnagar, Nizamabad, Mehbubnagar, Nalgonda and Medak are important rice producing districts.

5. Odisha:

- Odisha produces over 7 percent rice of India. Although about two-thirds of the total cropped area of Odisha is devoted to rice, the total production is low due to low yield of only 1,896 kg/hectare.
- Over 90 percent of the state's rice comes from Sambalpur, Koraput, Ganjam, Cuttack, Puri, Bolangir and Mayurbhanja.

6. Bihar:

- Although Bihar has 7.66 percent of the rice area of the country and about two-thirds of the cultivated area of the state is under rice cultivation, the state produces only 7.03 percent of the total rice of India.
- This is due to low average yield as compared to other parts of the the country as a whole.
- About 25 districts of Bihar are producing rice but the main producing districts are Rohtas, Bhojpur, Purnea, Paschim Champaran, Purab Champaran, Aurangabad, Gaya, Bhagalpur, Patna and Gopalganj.

7. Chhattisgarh:

- Chhattisgarh basin drained by the Mahanadi and its tributaries is the main rice producing region in this state. Although Chhattisgarh accounts for about 9 percent of the rice area of the country, this state produces only 6.3 percent of the country's total rice.
- Kamrup, Sibsagar, Goalpara, Darrang Nowgong and Cachar are the main producing districts.

9. Tamil Nadu:

- Although Tamil Nadu produces only 4 percent rice of India, the state has the distinction of giving high yield of 2,785 kg/hectare. About 37 percent of the cropped area of this state is under rice cultivation.
- Thanjavur in the Cauvery delta is the second largest rice producing district of the country which produces about 2.8 percent rice of India and accounts for about 25 percent rice produced by the state.
- South Arcot Vallalar, North Arcot (Tirunelveli), Tiruchirapalli, Perumpidugu, Muthuraiyar, Coimbatore, Ramnathpuram and Salem are the other important rice producers. Ambedkar, Nellai Kattabomman

10. Haryana:

- Like Punjab, Haryana is traditionally a wheat producing state. But the cropping pattern has undergone an unprecedented change due to large scale extension of irrigation and provision of HYV seeds and chemical fertilizers, coupled with the progressive outlook of the Haryana farmers.
- Haryana has a high yield of 3262 kg per hectare which is the second highest after that of Punjab.
- Kurukshetra, Karnal, Ambala, Kaithal, Panipat and Yamunanagar are the important rice producing districts.

11. Karnataka:

- Karnataka has made rapid progress in rice cultivation during the last few years. In Karnataka, rice is mainly grown in the valleys of the Wainganga, the Tungabhadra and the Cauvery and in the northern red soil areas. Tumkur, Dakshina Kannada, Shimoga, Mandya, Uttar Kannada, Mysore, Raichur and Kodagu are the main producers.

12. Maharashtra:

- Rice is grown in the Konkan coastal area, on the Ghats and in some eastern parts. Chandrapur, Raigad, Thane, Bhandara, Kolhapur, etc. are important rice producing districts.

13. Jharkhand:

- This state produces about three percent rice of India. Ranchi, Paschim Singhbhum, Purb Singhbhum, Lohardaga and Gumla are the chief rice producing districts.

14. Other States:

The other producers include Madhya Pradesh, Gujarat, Kerala, North Eastern hill states (Tripura, Manipur, Arunachal Pradesh, Mizoram, Sikkim), Himachal Pradesh, Jammu & Kashmir and Goa.

Trade

- Large producers of rice are its large consumers also and there is little surplus for trade. However some interstate trade is carried on and about ten percent of the total production enters trade. Punjab Haryana. Tamil Nadu, Andhra Pradesh and Uttar Pradesh are surplus states and supply rice to deficit states like West Bengal, Maharashtra, Gujarat, Kerala and Delhi.

- Even in the face of huge home consumption of rice, it is amusing to note that rice exports from India have grown steadily during the last decade. India now occupies second position in rice exports, next only to Thailand, among the rice trading countries of the world. However, the surplus production scenario has no room for the complacency.

