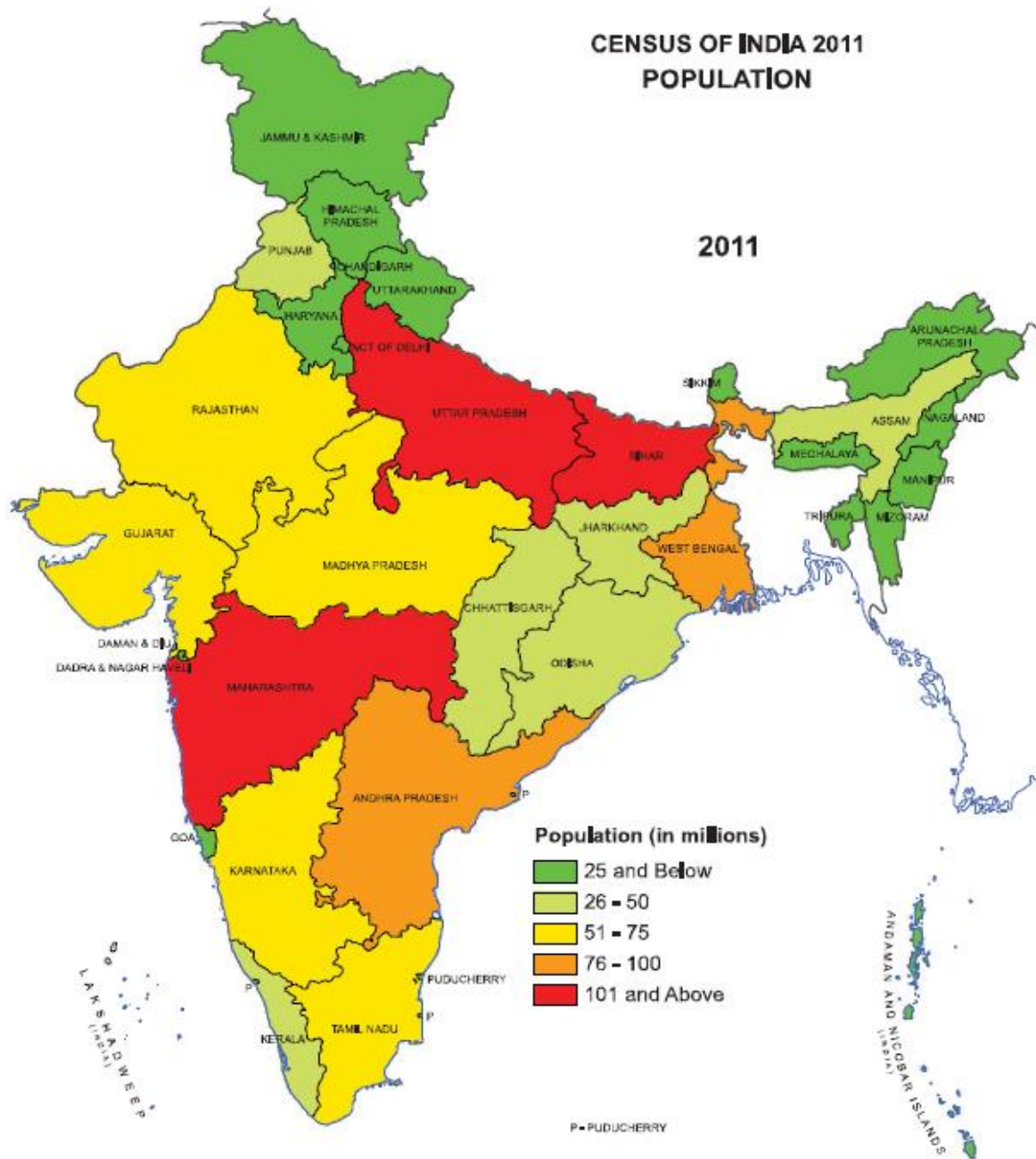


5. POPULATION STATISTICS & AGRICULTURAL STATISTICS

This section containing 13 tables. It briefly gives the data tables on population and agricultural statistics covering India's population projection for year 2020, rural population & agricultural workers, state wise agricultural work force availability, some tables on agro-climatic zones with challenges, land use classification, growth of irrigation. Area, production and yield of various crops including data on India's position in world agriculture have also been covered in this chapter.

Fig.5.1 Census of India 2011-Population



Source: http://www.censusindia.gov.in/2011census/PCA/PCA_Highlights/pca_highlights_file/India/Chapter-1.pdf.

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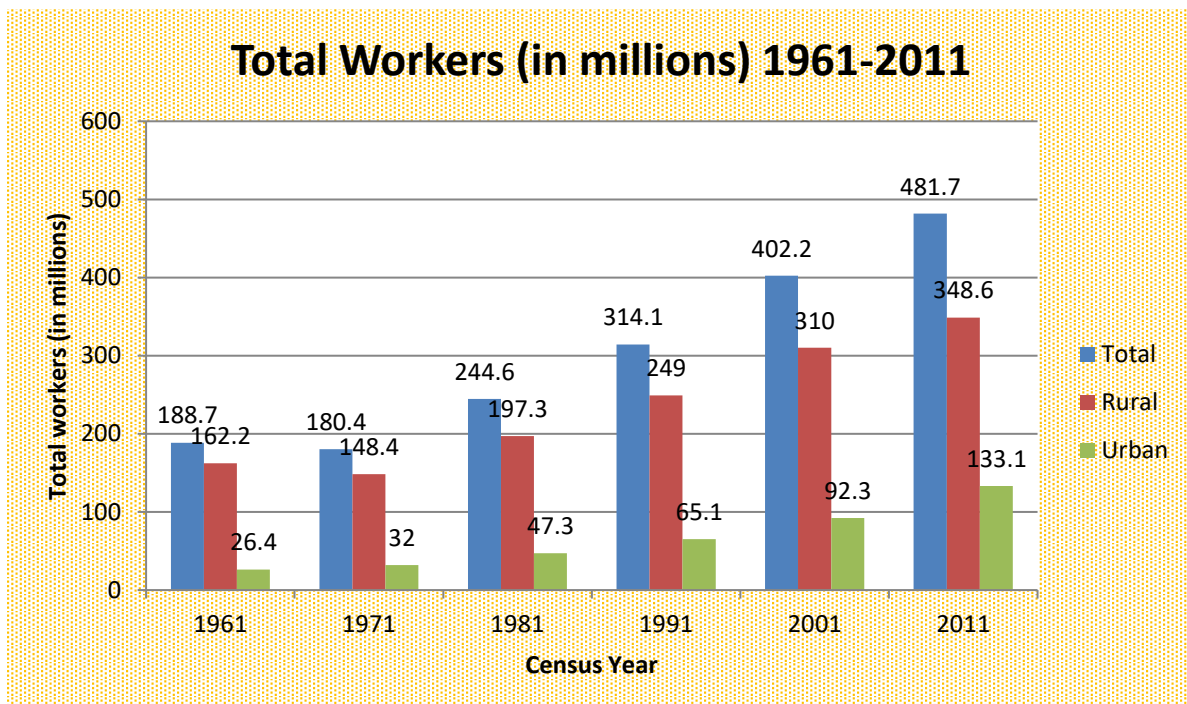
Table 5.1: State/UT wise Population of India

Sl. No.	State/UTs	(Number)	
		2011	2020*
1	Uttar Pradesh	19,98,12,341	23,78,82,725
2	Maharashtra	11,23,74,333	12,31,44,223
3	Bihar	10,40,99,452	12,47,99,926
4	West Bengal	9,12,76,115	9,96,09,303
5	Madhya Pradesh	7,26,26,809	8,53,58,965
6	Tamil Nadu	7,21,47,030	7,78,41,267
7	Rajasthan	6,85,48,437	8,10,32,689
8	Karnataka	6,10,95,297	6,75,62,686
9	Gujarat	6,04,39,692	6,38,72,399
10	Andhra Pradesh	4,95,77,103	5,39,03,393
11	Odisha	4,19,74,219	4,63,56,334
12	Telangana	3,50,03,674	3,85,10,982
13	Kerala	3,34,06,061	3,56,99,443
14	Jharkhand	3,29,88,134	3,85,93,948
15	Assam	3,12,05,576	3,56,07,039
16	Punjab	2,77,43,338	3,01,41,373
17	Chhattisgarh	2,55,45,198	2,94,36,231
18	Haryana	2,53,51,462	2,82,04,692
19	Uttarakhand	1,00,86,292	1,12,50,858
20	Himachal Pradesh	68,64,602	74,51,955
21	Tripura	36,73,917	41,69,794
22	Meghalaya	29,66,889	33,66,710
23	Manipur	25,70,390	30,91,545
24	Nagaland	19,78,502	22,49,695
25	Goa	14,58,545	15,86,250
26	Arunachal Pradesh	13,83,727	15,70,458
27	Mizoram	10,97,206	12,39,244
28	Sikkim	6,10,577	6,90,251
UT1	Delhi	1,67,87,941	1,87,10,922
UT2	Jammu and Kashmir	1,22,67,032	1,36,06,320
UT3	Puducherry	12,47,953	14,13,542
UT4	Chandigarh	10,55,450	11,58,473
UT5	Dadra and Nagar Haveli and Daman and Diu	5,85,764	6,15,724
UT6	Andaman and Nicobar Islands	3,80,581	4,17,036
UT7	Ladakh	2,74,000	2,89,023
UT8	Lakshadweep	64,473	73,183
India		1,21,05,69,573	1,37,05,08,600

Source: 1. uidai.gov.in > state-wise-aadhaar-saturation. Accessed on 07.05.2021.

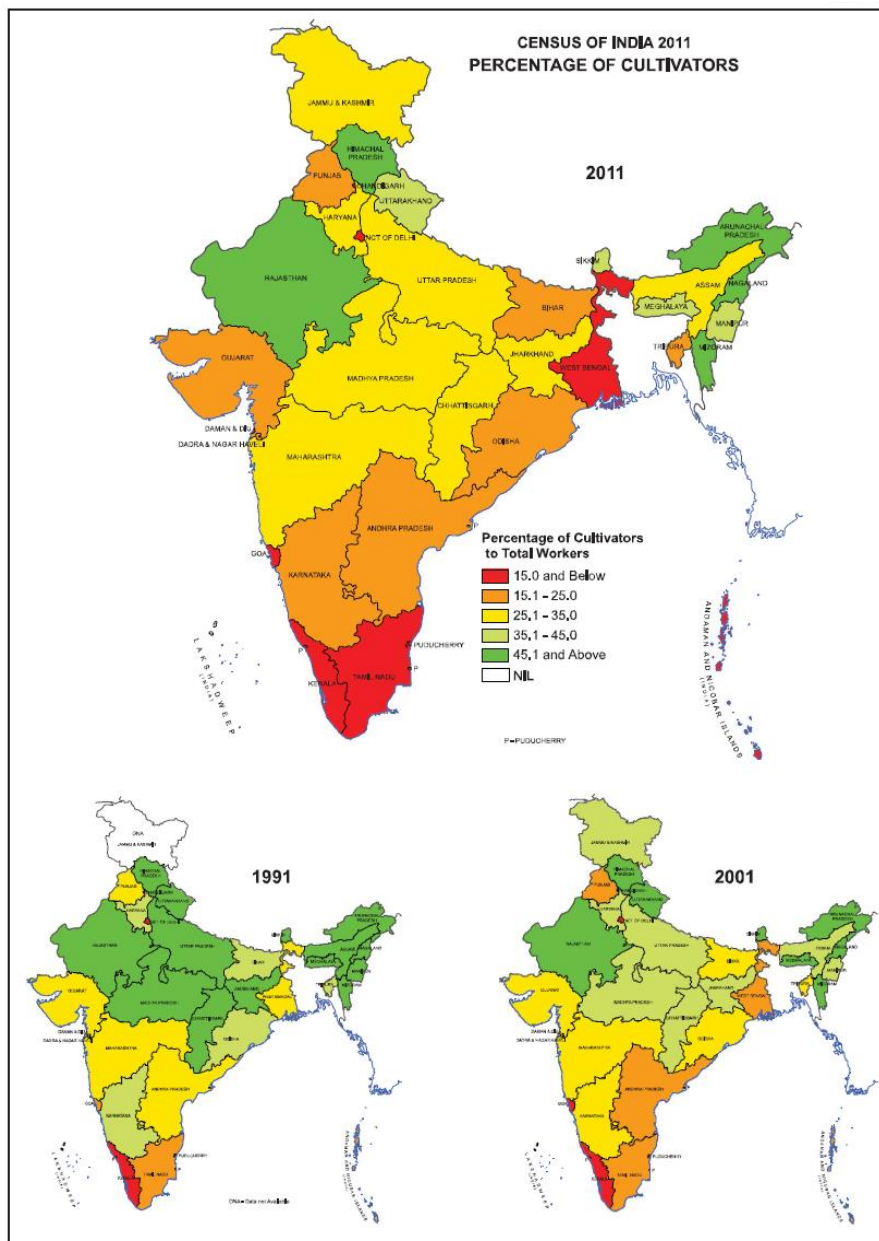
2. http://planningcommission.gov.in/data/datatable/data_2312/DatabookDec2014 307.pdf.

Fig.5.2 Total Workers and Percentage Decadal Change by Residence (Persons)



Source: http://www.censusindia.gov.in/2011census/PCA/PCA_Highlights/pca_highlights_file/India/Chapter-4.pdf.

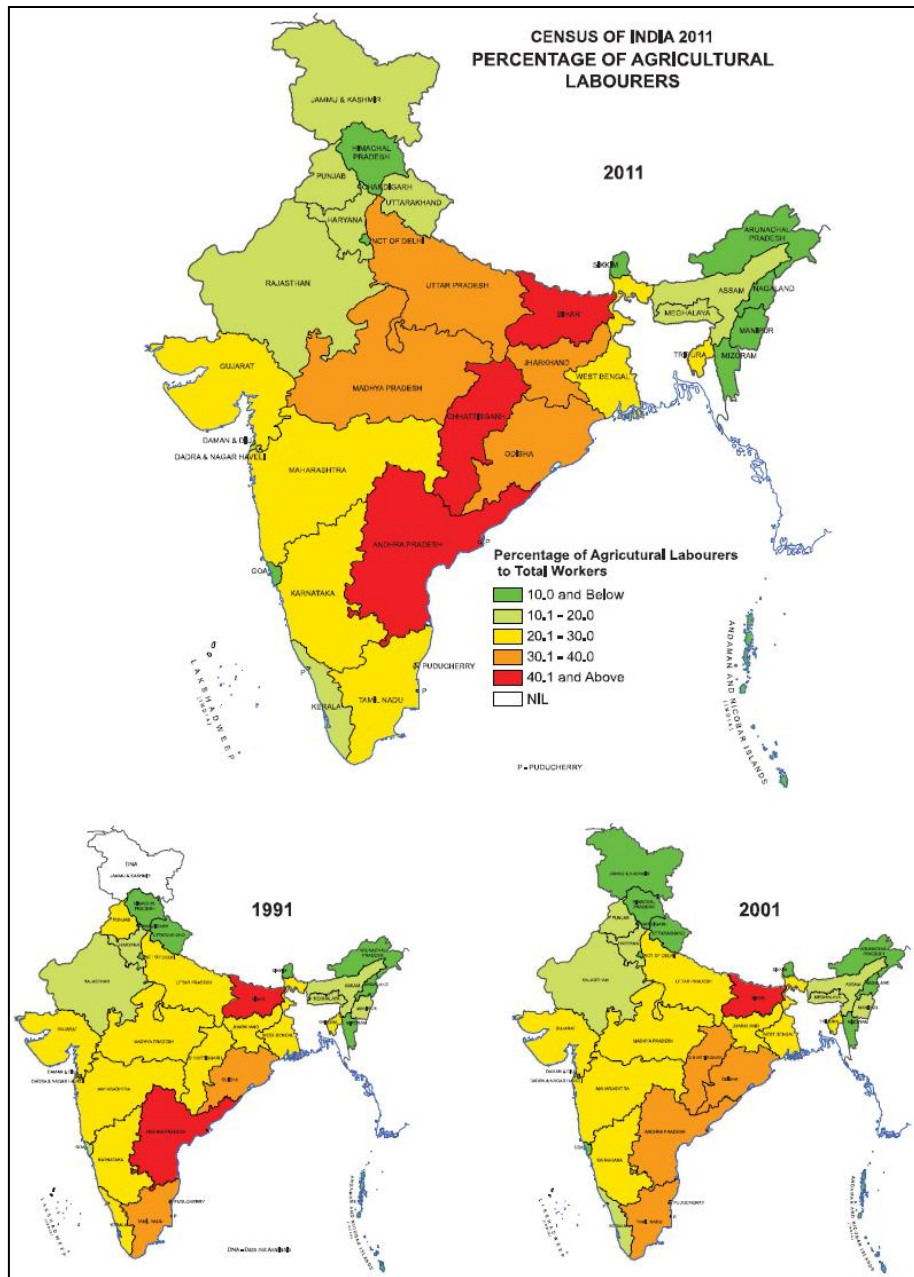
Fig.5.3 Percentage of Cultivators



Source: http://www.censusindia.gov.in/2011census/PCA/PCA_Highlights/pca_highlights_file/India/Chapter-4.pdf.

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Fig.5.4 Percentage of Agricultural Labourers



Source: http://www.censusindia.gov.in/2011census/PCA/PCA_Highlights/pca_highlights_file/India/Chapter-4.pdf.

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Table 5.2: Population Growth in India (2020)

Year	<i>Total</i>	Rural	Urban
1901	23,83,96,327	21,25,44,454	2,58,51,873
1911	25,20,93,390	22,61,51,757	2,59,41,633
1921	25,13,21,213	22,32,35,043	2,80,86,170
1931	27,89,77,238	24,55,21,249	3,34,55,989
1941	31,86,60,580	27,45,07,283	4,41,53,297
1951	36,10,88,090	29,86,44,381	6,24,43,709
1961	43,92,34,771	36,02,98,168	7,89,36,603
1971	54,81,59,652	43,90,45,675	10,91,13,977
1981	68,33,29,097	52,38,66,550	15,94,62,547
1991	84,63,02,688	62,86,91,676	21,76,11,012
2001	1,02,87,37,436	74,24,90,639	28,61,19,689
2011	1,21,05,69,573	83,34,63,448	37,71,06,125
2020	1,37,05,08,600	89,53,86,226	47,10,31,528

Source:1.http://www.censusindia.gov.in/Census_Data_2001/India_at_glance/variation.aspx.

2.<https://www.macrotrends.net/countries/IND/india/population-growth-rate>. Accessed on 05.01.2021.

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Table 5.3: Rural Population and Agricultural Workers (2020*)

(Million)

Year	Total population	Average annual exponential growth rate %	Rural population		Cultivators		Agricultural labourers		Total	
			Number	%	Number	%	Number	%	Number	%
1951	361.1	1.25	298.6	82.7	69.9	71.9	27.3	28.1	97.2	100
1961	439.2	1.96	360.3	82	99.6	76	31.5	24	131.1	100
1971	548.2	2.22	439	80.1	78.2	62.2	47.5	37.8	125.7	100
1981	683.3	2.2	523.9	76.7	92.5	62.5	55.5	37.5	148	100
1991	846.4	2.14	628.9	74.3	110.7	59.7	74.6	40.3	185.3	100
2001	1028.7	1.95	742.6	72.2	127.3	54.4	106.8	45.6	234.1	100
2011	1210.2	1.64	833.1	68.8	118.7	50.9	114.3	49.1	233	100
2020*	1370.5	2.1	902.9	67.3	132.2	47.4	126.5	52.6	258.7	100

*forecasted

- Note:** 1. India and Manipur figures are final and include estimated figures for those of the three sub- divisions viz. Mao Marm, Paomata and Pural of Senapati district of Manipur as population census 2001 in these three sub-divisions were cancelled due to technical and administrative reasons although a population census was carried out in these sub- divisions also as per schedule.
2. The 1991 Census could not be held owing to disturbed conditions prevailing in Jammu & Kashmir. Hence the population figures for 1991 of Jammu & Kashmir have been worked out by 'interpolation' on the basis of 2001 final population. The data on workers exclude J&K.
3. The 1981 census could not be held in Assam. The figures for 1981 for Assam have been worked out by 'interpolation'.

Source: <http://www.iasri.res.in/agridata/HOME.HTML>, 2. Agriculture research data book 2013, pp 39.

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Table 5.4: Classification of Workers (2011 census)

States / UTs	Total workers	Cultivators		Agricultural labourers	
		Number	%	Number	%
Andhra Pradesh (United)					
Total Population	8,45,80,777				
Persons	3,30,37,378	64,91,522	16.5	1,69,67,754	43.0
Males	2,14,60,081	43,57,304	18.0	81,30,022	33.6
Females	1,15,77,297	21,34,218	14.0	88,37,732	58.0
Arunachal Pradesh					
Total Population	13,83,727				
Persons	4,78,721	3,02,723	51.5	36,171	6.2
Males	3,01,109	1,52,863	43.6	18,377	5.2
Females	1,77,612	1,49,860	63.1	17,794	7.5
Assam					
Total Population	3,12,05,576				
Persons	86,87,123	40,61,627	33.9	1,84,5,346	15.4
Males	70,34,642	30,99,763	36.3	1,12,9210	13.2
Females	16,52,481	9,61,864	28.1	7,16,136	20.9
Bihar					
Total Population	10,40,99,452				
Persons	2,13,59,611	7,196,226	20.7	1,83,45,649	52.8
Males	1,72,70,690	5,745,420	22.8	1,25,70,717	49.8
Females	40,88,921	1,450,806	15.3	57,74,932	60.8
Chhattisgarh					
Total Population	2,55,45,198				
Persons	82,41,714	40,04,796	32.9	50,91,882	41.8
Males	55,97,454	24,24,025	34.0	23,44,549	32.9
Females	26,44,260	15,80,771	31.3	27,47,333	54.4
Goa					
Total Population	14,58,545				
Persons	4,76,053	31,354	5.4	26,760	4.6
Males	3,56,967	18,848	4.5	14,816	3.5
Females	1,19,086	12,506	7.9	11,944	7.6
Gujarat					
Total Population	6,04,39,692				
Persons	22,03,65,374	54,47,500	22.0	68,39,415	27.6
Males	1,65,67,695	42,44,449	23.6	36,49,591	20.3
Females	37,97,679	12,03,051	17.8	31,89,824	47.1
Haryana					
Total Population	2,11,45,000				
Persons	70,15,283	24,80,801	27.8	15,28,133	17.1
Males	58,60,600	17,89,122	26.3	10,41,241	15.3
Females	11,54,683	6,91,679	32.8	4,86,892	23.1
Himachal Pradesh					
Total Population	68,64,602				
Persons	20,62,501	20,62,062	57.9	1,75,038	4.9
Males	14,38,989	9,06,154	44.3	1,03,060	5.0
Females	6,23,512	11,55,908	76.2	71,978	4.7
Jammu & Kashmir					
Total Population	1,25,41,302				

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Persons	26,44,149	12,45,316	28.8	5,47,705	12.7
Males	23,05,788	7,65,527	24.0	41,4,344	13.0
Females	3,38,361	4,79,789	42.5	1,33,361	11.8
Jharkhand					
Total Population	3,29,88,134				
Persons	68,18,595	38,14,832	29.1	44,36,052	33.9
Males	52,34,442	22,91,182	27.2	23,41,700	27.8
Females	15,84,153	15,23,650	32.6	20,94,352	44.8
Karnataka					
Total Population	6,10,95,297				
Persons	2,33,97,181	65,80,649	23.6	71,55,963	25.7
Males	1,63,49,837	47,53,708	26.0	32,83,279	18.0
Females	70,47,344	18,26,941	19.0	38,72,684	40.3
Kerala					
Total Population	3,34,06,061				
Persons	93,29,747	6,70,253	5.8	13,22,850	11.4
Males	71,79,828	5,46,906	6.5	8,57,995	10.2
Females	21,49,919	1,23,347	3.9	4,64,855	14.7
Madhya Pradesh					
Total Population	7,26,26,809				
Persons	2,27,02,119	9,84,44,39	31.2	1,21,92,267	38.6
Males	1,63,62,065	65,91,064	32.7	63,10,657	31.3
Females	63,40,054	32,53,375	28.5	58,81,610	14.7
Maharashtra					
Total Population	11,23,74,333				
Persons	4,37,62,890	1,25,69,373	25.4	1,34,86,140	27.3
Males	2,99,89,314	75,92,313	23.3	67,74,538	20.8
Females	1,37,73,576	49,77,060	29.6	67,11,602	39.9
Manipur					
Total Population	25,70,390				
Persons	8,55,012	4,57,891	39.5	1,11,061	9.6
Males	5,54,518	2,70,899	40.7	44,046	6.6
Females	3,00,494	1,86,992	37.9	67,015	13.6
Meghalaya					
Total Population	29,66,889				
Persons	9,21,575	4,94,675	41.7	1,98,364	16.7
Males	5,85,520	2,77,330	39.4	1,06,342	15.1
Females	3,36,055	2,17,345	45.1	92,022	19.1
Mizoram					
Total Population	10,97,206				
Persons	4,15,030	2,29,603	47.2	41,787	8.6
Males	2,63,305	1,29,482	44.5	22,488	7.7
Females	1,51,725	1,00,121	51.1	19,299	9.8
Nagaland					
Total Population	19,78,502				
Persons	7,41,179	5,37,702	55.2	62,962	6.5
Males	4,42,204	2,59,454	47.4	31,857	5.8
Females	2,98,975	2,78,248	65.2	31,105	7.3
Odisha					
Total Population	4,19,74,218				

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Persons	1,07,07,543	41,03,989	23.4	67,39,993	38.4
Males	87,94,413	33,75,350	28.4	34,81,836	29.3
Females	19,13,130	7,28,639	12.9	32,58,157	57.8
Punjab					
Total Population	2,77,43,338				
Persons	84,50,936	19,34,511	19.5	15,88,455	16.0
Males	72,64,631	17,53,359	21.7	12,39,445	15.4
Females	11,86,305	1,81,152	9.9	3,49,010	19.1
Rajasthan					
Total Population	6,85,48,437				
Persons	2,10,57,968	1,36,18,870	45.6	49,39,664	16.5
Males	1,52,43,537	75,18,486	41.1	21,32,669	11.7
Females	58,14,431	61,00,384	52.6	28,06,995	24.2
Sikkim					
Total Population	6,10,577				
Persons	2,30,397	1,17,401	38.1	25,986	8.4
Males	1,60,513	63,327	32.6	12,883	6.6
Females	69,884	54,074	47.5	13,103	11.5
Tamil Nadu					
Total Population	7,21,47,030				
Persons	2,79,42,181	42,48,457	12.9	96,06,547	29.2
Males	1,89,61,194	27,32,479	12.7	48,42,707	22.6
Females	89,80,987	15,15,978	13.2	47,63,840	41.6
Tripura					
Total Population	36,73,917				
Persons	10,77,019	2,95,947	20.1	3,53,618	24.1
Males	8,87,881	2,28,868	21.9	2,14,106	20.5
Females	1,89,138	67,079	15.8	1,39,512	32.9
Uttar Pradesh					
Total Population	19,98,12,341				
Persons	4,46,35,492	1,90,57,888	29.0	1,99,39,223	30.3
Males	3,74,20,299	1,55,11,533	31.1	1,38,03,442	27.7
Females	72,15,193	35,46,355	22.2	61,35,781	38.4
Uttarakhand					
Total Population	1,00,86,292				
Persons	28,70,624	15,80,423	40.8	4,03,301	10.4
Males	20,70,760	7,35,412	28.8	2,86,540	11.2
Females	7,99,864	8,45,011	64.0	1,16,761	8.8
West Bengal					
Total Population	9,12,76,115				
Persons	2,56,86,630	51,16,688	14.7	1,01,88,842	29.3
Males	2,16,78,279	45,00,041	16.8	74,52,814	27.9
Females	40,08,351	6,16,647	7.7	27,36,028	34.0
Delhi					
Total Population	1,67,87,941				
Persons	53,07,329	33,398	0.6	39,475	0.7
Males	45,62,710	27,458	0.6	31,352	0.7
Females	7,44,619	5,940	0.7	8,123	1.0
A & N Islands					
Total Population	3,80,581				
Persons	1,25,910	16,567	10.9	4,781	3.1
Males	1,03,619	12,663	10.5	3,744	3.1

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Females	22,291	3,904	12.3	1,037	3.3
Chandigarh					
Total Population	10,55,450				
Persons	3,85,929	2,578	0.6	1,687	0.4
Males	3,17,190	2,114	0.6	1,375	0.4
Females	68,739	464	0.6	312	0.4
Dadra & Nagar Haveli					
Total Population	3,43,709				
Persons	1,30,299	28,164	17.9	17,799	11.3
Males	1,09,125	18,296	15.3	5,453	4.6
Females	21,174	9,868	26.1	12,346	32.6
Lakshadweep					
Total Population	64,473				
Persons	10,804	NA	0.0	NA	0.0
Males	9,137	NA	0.0	NA	0.0
Females	1,667	NA	0.0	NA	0.0
Puducherry					
Total Population	12,47,953				
Persons	3,99,689	12,099	2.7	68,391	15.4
Males	3,06,409	10,033	3.0	42,794	12.9
Females	93,280	2,066	1.8	25,597	22.8
Daman & Diu					
Total Population	2,43,247				
Persons	1,16,435	2,316	1.9	772	0.6
Males	1,04,614	1,492	1.4	632	0.3
Females	11,821	824	6.0	410	3.0
All – India					
Total Population	1,21,05,69,573				
Persons	36,24,46,420	11,86,92,640	24.6	14,43,29,833	30.0
Males	27,31,49,359	8,27,06,724	24.9	8,27,40,351	24.9
Females	8,92,97,061	3,59,85,916	24.0	6,15,89,482	41.1

Source: http://www.censusindia.gov.in/2011census/PCA/PCA_Highlights/pca_highlights_file/India/Chapter-4.pdf.s.

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Table 5.5: Agro-climatic Regions / Zones in India (2020)

Zone	Agro-climatic regions/zones	States represented	Conditions and Scope
I	Western Himalayan region	Himachal Pradesh, Jammu & Kashmir, Uttarakhand	Temperature : July 5°C - 30 °C, January 5 °C and -5 °C. Rainfall : 75 cm to 150 cm. Soil : alluvial and brown soil. Crops : rice, maize barley, oats, wheat. Horticulture: apple, peaches, apricot, pears, cherry, almond, litchis, walnut, Saffron etc. Challenges : poor accessibility, soil erosion, landslides, inclement weather, marketing and storage facilities.
II	Eastern Himalayan region	Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura, West Bengal	Temperature : July 25 °C and 30 °C, January 10 °C and 20 °C. Rainfall : 200-400 cm. Soil : red-brown soil. Crops : rice, maize, potato, tea. pineapple, litchi, oranges and lime. Challenges : Infrastructural facilities, and terrace farming.
III	Lower Gangetic plain region	West Bengal, Eastern Bihar and the Brahmaputra valley.	Temperature : July 26 °C to 41 °C, January 9 °C to 24°C. Rainfall : 100 cm-200 cm. The region has high water table Crops : Rice Jute, maize, potato, and pulses. Challenges : pisciculture, poultry, livestock, forage production and seed supply.
IV	Middle Gangetic plain region	Parts of Uttar Pradesh, Bihar	Temperature : July 26 °C to 41 °C, January 9 °C to 24 °C. Rainfall : 100 cm and 200 cm. Soil : alluvial soil. Crops : Rice, maize, millets, wheat, gram, barley, peas, mustard and potato. Challenges : Alternative farming systems, and utilising chaur lands.
V	Upper Gangetic plain region	Uttar Pradesh	Temperature : July 26 °C to 41 °C, January 7 °C to 23 °C. Rainfall : 75 cm-150 cm. Soil : sandy loam. Crops : wheat, rice, sugarcane, millets, maize, gram, barley, oilseeds, pulses and cotton are the main crops. Challenges : Dairy development, horticulture and multiple mixed cropping patterns.
VI	Trans Gangetic plain region	Chandigarh, Delhi, Haryana, Punjab, Rajasthan	Temperature : July 25 °C and 40 °C, January 10 °C and 20 °C. Rainfall : 65 cm and 125 cm. Soil: sandy loam. Crops : wheat, sugarcane, cotton, rice, gram, maize, millets, pulses and oilseeds etc. Challenges : waterlogging, salinity, alkalinity, soil erosion and falling water table.
VII	Eastern plateau and hills region	Chhattisgarh, Jharkhand, Madhya Pradesh, Maharashtra, Odisha, West Bengal	Temperature : July 26 °C to 34 °C, January 10 °C to 27 °C. Rainfall : 80 cm-150 cm. Soil : red and yellow. Crops: rice, millets, maize, oilseeds, ragi, gram and potato. Challenges : acidic lands, integrated watershed development soil conservation and rain water.
VIII	Central plateau and hills region	Madhya Pradesh, Rajasthan, Uttar Pradesh	Temperature : July 26 °C to 40 °C, January 7 °C to 24 °C. Rainfall : 50 cm-100 cm. Soil : red, yellow and black soils. Crops : millets, wheat, gram, oilseeds, cotton and sunflower. Challenges : scarcity of water, dairy development, reclamation of ravine lands.
IX	Western plateau and hills region	Madhya Pradesh, Maharashtra	Temperature : 24 °C and 41 °C, January 6 °C and 23 °C. Rainfall : 25 cm-75 cm. Soil : black. Crops : Wheat, gram, millets, cotton, pulses, groundnut, and oilseeds . Challenges : water use efficiency, Improvement of milk

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			production and poultry.
X	Southern plateau and hills region	Andhra Pradesh, Karnataka, Tamil Nadu	Temperature : July 25 °C and 40 °C and 10 °C and 20 °C Rainfall : 50 cm and 100 cm. Crops : millets, oilseeds, pulses, Coffee, tea, cardamom and spices Challenges : Horticulture, dairy development and poultry farming.
XI	East coast plains and hills region	Andhra Pradesh, Odisha, Puducherry, Tamil Nadu	Temperature : July 25 °C and 35 °C, January 20 °C and 30 °C Rainfall : 75 cm and 150 cm. Soil : alluvial, loam and clay Crops : rice, jute, tobacco, sugarcane, maize, millets, groundnut, oilseeds, pepper and cardamom. Challenges : diversifying cropping, horticulture, social forestry and dairy-farming.
XII	West coast plains and ghat region	Goa, Karnataka, Kerala, Maharashtra, Tamil Nadu	Temperature : July 25 °C and 30 °C, January 18 °C and 30 °C Rainfall : more than 200 cm. Soil : laterite and coastal alluvial. Crops : Rice, coconut, oilseeds, sugarcane, millets, pulses and cotton Challenges : Infrastructural facilities, and prawn culture in brackish water.
XIII	Gujarat plains and hills region	Gujarat, Dadra & Nagar Haveli, Daman & Diu	Temperature : July 30 °C, January 25°C. Rainfall : 50 cm and 100 cm Soil : regur, alluvium, red and yellow Crops : Groundnut, cotton, rice, millets, oilseeds, wheat and tobacco. Challenges : canal and groundwater management, rain water harvesting and management, dry land farming, agro-forestry development, wasteland development
XIV	Western dry region	Rajasthan	Temperature : June 28 °C to 45 °C, January 5 °C and 22 °C. Rainfall : less than 25 cm. Crops : Bajra, jowar, moth, wheat and gram. Challenges : rainwater harvesting.
XV	Island region	Andaman & Nicobar Islands, Lakshadweep	Temperature : July and January 30 °C and 25 °C. Rainfall : less than 300 cm. Soil : Sandy to clayey loam Crops : Coconut Rice, maize, millets, pulses, arecanut, turmeric and cassava. Challenges : Infrastructural facilities, water management and fisheries. storage and processing of fish.

Note: Planning Commission (Khanna, 1989) has identified 15 resource development regions in the country, 14 in the main land and remaining one in the islands of Bay of Bengal and Arabian Sea.

Source: 1. http://epgp.inflibnet.ac.in/epgpdata/uploads/epgp_content/S000017GE/P001789/M025466/ET/1512709815Agro-climaticzones_e-text.pdf. Accessed on 01.01.2021.

2. <https://www.yourarticlelibrary.com/india-2/15-agro-climatic-regions-of-india/44424>. Accessed on 01.01.2021.

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Table 5.6: Year-wise Distribution of Agricultural Land in India

Land Use Classification	(Million Hectare)										
	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
I. Geographical Area	328.73	328.73	328.73	328.73	328.73	328.73	328.73	328.73	328.73	328.73	328.73
II. Reporting Area for Land Utilisation Statistics	307.09	307.23	307.41	307.41	307.48	307.39	307.49	307.8	307.78	307.75	308.73
1. Forest area, %	71.43	71.46	71.53	71.56	71.59	71.60	71.57	71.83	71.76	71.87	72.02
	23.27	23.28	23.27	23.28	23.28	23.29	23.28	23.34	23.31	23.35	23.36
2. Not Available for Cultivation (A+B)	42.73	42.9	43.06	43.33	43.58	43.53	43.57	43.85	43.93	44.02	44.82
(A) Area Under Non-Agril. Uses, %	25.45	25.88	26.21	26.16	26.40	26.31	26.50	26.91	26.94	27.08	27.84
	7.74	7.87	7.97	7.96	8.03	8.00	8.06	8.19	8.20	8.24	9.03
(B) Barren & Unculturable Land, %	17.29	17.02	16.85	17.18	17.18	17.22	17.07	16.94	16.99	16.94	16.99
	5.26	5.18	5.13	5.23	5.23	5.24	5.19	5.15	5.17	5.15	5.51
3. Other Uncultivated Land Excluding Fallow Land (A+B+C)	27.04	26.81	26.42	26.50	26.15	26.11	26.08	26.00	25.78	25.64	25.70
(A) Permanent Pastures & Other Grazing Lands, %	10.44	10.42	10.36	10.34	10.34	10.30	10.31	10.26	10.26	10.26	10.34
	3.18	3.17	3.15	3.15	3.15	3.13	3.14	3.12	3.12	3.12	3.35
(B) Misc. Tree Crops & Groves, %	3.35	3.40	3.34	3.21	3.20	3.16	3.18	3.19	3.10	3.09	3.12
	1.02	1.03	1.02	0.98	0.97	0.96	0.97	0.97	0.94	0.94	1.01
(C) Culturable Waste Land, %	13.27	13.04	12.73	12.95	12.65	12.64	12.64	12.39	12.42	12.29	12.24
	4.04	3.97	3.87	3.94	3.85	3.85	3.85	3.77	3.78	3.74	3.97
4. Fallow Lands (A+B)	26.03	24.98	24.48	26.85	24.59	25.18	26.33	24.85	26.18	26.72	26.36
A. Fallow Lands Other Than Current Fallows, %	10.52	10.33	10.29	10.84	10.32	10.67	11.04	10.69	11.09	11.31	11.27
	3.20	3.14	3.13	3.30	3.14	3.25	3.36	3.25	3.37	3.44	3.66
B. Current Fallows, %	14.21	14.51	14.19	16.01	14.28	14.51	15.29	14.16	15.09	15.41	15.09
	4.32	4.41	4.32	4.87	4.34	4.41	4.65	4.31	4.59	4.69	4.89
Net Area Sown, %	139.82	141.02	141.9	139.17	141.56	140.98	139.93	141.43	140.13	139.51	139.42
	42.53	42.90	43.17	42.34	43.06	42.89	42.57	43.02	42.63	42.44	45.22
Gross Cropped Area	192.38	195.22	195.33	189.19	197.68	195.8	194.22	200.95	198.38	197.05	200.20
Area Sown More than Once	52.56	53.76	53.43	52.18	57.39	54.66	54.29	59.53	58.25	57.55	60.79
Cropping Intensity	137.59	138.44	137.65	135.94	139.64	138.88	138.79	142.09	141.57	141.25	143.60
Net Irrigated Area	62.74	63.19	63.64	61.94	63.67	65.71	66.29	68.12	68.38	67.30	68.65
Gross Irrigated Area	86.75	88.06	88.90	85.09	88.94	91.79	92.24	95.76	96.75	96.62	98.15

Source: Agricultural Statistics at a Glance 2020, Directorate of Economics & Statistics, Government of India, Page 195.

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Table 5.7: Agricultural Land use (Crop-wise) in India

Crop	Percentage Share of Area to Gross Cropped Area			
	2013-14*	2014-15*	2015-16*	2016-17*
Rice	22.13	22.30	22.01	22.25
Jowar	2.86	3.15	3.09	2.78
Bajra	4.03	3.96	3.61	3.77
Maize	4.49	4.43	4.30	4.58
Ragi	0.60	0.60	0.58	0.51
Wheat	15.61	16.18	15.72	16.04
Barley	0.34	0.37	0.28	0.28
Other Cereals & Millets	0.36	0.35	0.37	0.34
Coarse Cereals	12.69	12.85	12.24	12.26
Total Cereals	50.43	51.33	49.97	50.55
Gram	4.68	3.86	3.78	4.04
Tur	1.76	1.71	1.77	2.36
Other Pulses	5.40	5.37	6.04	6.83
Total Pulses	11.83	10.94	11.59	13.22
Total Food-grains	62.26	62.26	61.56	63.77
Sugarcane	2.75	2.81	2.66	2.35
Condiments & Spices	1.64	1.74	1.96	1.94
Total Fruits	2.07	2.12	2.36	2.35
Potatoes	0.84	0.89	0.98	0.93
Onions	0.30	0.33	0.57	0.55
Total Vegetables	2.80	2.91	3.46	3.35
Groundnut	2.70	2.57	2.27	2.64
Sesamum	0.84	0.93	1.01	0.92
Rapeseed & Mustard	3.01	2.72	2.84	2.82
Linseed	0.11	0.11	0.09	0.11
Other Oil Seeds	8.31	7.99	8.15	7.79
Total Oil Seeds	14.98	14.33	14.36	14.28
Cotton	5.93	6.38	6.14	5.29
Jute	0.38	0.38	0.37	0.35
Mesta	0.03	0.04	0.04	0.04
Total Fibers	6.37	6.82	6.56	5.70
Tobacco	0.23	0.24	0.22	0.20
Other Crops	6.89	6.76	6.85	6.07
Gross Cropped Area	100.00	100.00	100.00	100.00

*Provisional

Source: Agricultural Statistics at a Glance 2020, Directorate of Economics & Statistics, Government of India. Page 197.

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Table 5.8: Growth of Irrigated Area (2019)

(Million hectare)

Year	Net sown area	Total cropped area	Area sown area, more than once (3-2)	Net Irrigated Area	Gross Irrigated Area	Area Irrigated more than Once (6-5)
1	2	3	4	5	6	7
1951-52	119.40	133.23	13.83	21.05	23.18	2.13
1955-56	129.16	147.31	18.16	22.76	25.64	2.88
1960-61	133.20	152.77	19.57	24.66	27.98	3.32
1965-66	136.20	155.28	19.08	26.34	30.90	4.56
1970-71	140.86	165.79	24.93	31.10	38.20	7.09
1975-76	141.65	171.30	29.64	34.59	43.36	8.77
1980-81	140.29	172.63	32.34	38.72	49.78	11.06
1985-86	140.90	178.46	37.56	41.87	54.28	12.42
1990-91	143.00	185.74	42.74	48.02	63.2	15.18
1995-96	142.20	187.47	45.27	53.40	71.35	17.95
2000-01	141.34	185.34	44.00	55.20	76.19	20.98
2005-06	141.16	192.74	51.57	60.84	84.28	23.44
2006-07	139.82	192.38	52.56	62.74	86.75	24.01
2007-08	141.02	195.22	54.21	63.19	88.06	24.87
2008-09	141.90	195.33	53.43	63.64	88.90	25.26
2009-10	139.17	189.19	50.02	61.94	85.09	23.14
2010-11	141.56	197.68	56.12	63.67	88.94	25.27
2011-12	140.98	195.80	54.82	65.71	91.79	26.08
2012-13	139.93	194.22	54.29	66.29	92.24	25.96
2013-14	141.43	200.95	59.53	68.12	95.76	27.64
2014-15	140.13	198.38	58.25	68.38	96.75	28.37
2015-16	139.51	197.05	57.55	67.30	96.62	29.32

Source: Agricultural Statistics at a Glance 2019, Directorate of Economics & Statistics, Government of India. Page 194.

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Table 5.9: Distribution of Number of Holdings and Area Operated in India as per type of holding

Size Group	Number (000 ⁰)							Area (000 ha)						
	1970-71	1980-81	1990-91	1995-96	2000-01	2005-06	2010-11	1970-71	1980-81	1990-91	1995-96	2000-01	2005-06	2010-11
Marginal (Below 1.00ha)	36,200	50,122	63,389	71,179	75,408	83,694	92,826	14,599	19,735	24,894	28,121	29,814	32,026	35,908
Small (1.00-2.00 ha)	13,432	16,072	20,092	21,643	22,695	23,930	24,779	19,282	23,169	28,827	30,722	32,139	33,101	35,244
Semi-Medium (2.00 - 4.00ha)	10,681	12,455	13,923	14,261	14,021	14,127	13,896	29,999	34,645	38,375	38,963	38,193	37,898	37,705
Medium (4.00-10.00ha)	7,932	8,068	7,580	7,092	6,577	6,375	5,877	48,234	48,543	44,752	41,398	38,217	36,583	33,828
Large (Above 10.00ha)	2,766	2,166	16,54	1,404	1,230	1,096	973	50,064	37,705	28,659	24,160	21,072	18,715	16,907
All holdings	71,011	88,883	1,06,638	1,15,579	1,19,931	1,29,222	1,38,351	1,62,178	1,63,797	1,65,507	1,63,364	1,59,435	1,58,323	1,59,592

Source: Agriculture research data book 2019, pp 8.

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Table 5.10: Production and Productivity in Agriculture (2020)

(Area: million ha, Production & Consumption: million tonne, Yield: kg/ha)

Crops		1950-51	1960-61	1970-71	1980-81	1990-91	2000-01	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
All Food grains	Area	97.32	115.58	124.32	126.67	127.84	121.05	126.67	124.75	120.78	125.04	124.3	123.22	129.23	127.56	124.83	127.59
	Production	50.82	82.02	108.42	129.59	176.39	196.81	244.49	259.29	257.13	265.05	252.03	251.54	275.11	284.83	285.28	296.65
	Yield	522	710	872	1,023	1,380	1,626	1,930	2,078	2,129	2,120	2,028	2,041	2,129	2,233	2285	2325
Rice	Production	20.58	34.58	42.22	53.63	74.29	84.98	95.98	105.3	105.23	106.65	105.48	104.41	109.7	112.91	116.48	118.43
	Yield	668	1,013	1,123	1,336	1,740	1,901	2,239	2,393	2,461	2,416	2,391	2,400	2,494	2,578	2638	2705
Wheat	Production	6.46	11	23.83	36.31	55.14	69.68	86.87	94.88	93.51	95.85	86.53	92.29	98.51	99.7	103.60	107.59
	Yield	663	851	1,307	1,630	2,281	2,708	2,988	3,177	3,117	3,145	2,750	3,034	3,200	3,371	3533	3421
Coarse Cereals	Production	15.38	23.74	30.55	29.02	32.7	31.08	43.4	42.01	40.04	43.29	42.86	38.52	43.77	46.99	43.06	47.48
	Yield	408	528	665	695	900	1,027	1,531	1,590	1,617	1,717	1,703	1,579	1,750	1,941	1944	1976
Sugar cane	Production	57.05	110	126.37	154.25	241.05	295.96	342.38	361.04	341.2	352.14	362.33	348.45	306.07	376.9	405.42	355.70
	Yield	33,422	45,549	48,322	57,844	65,395	68,577	70,091	71,668	68,254	70,522	71,512	70,720	69,001	79,650	80,105	77,893
Pulses	Production	8.41	12.7	11.82	10.63	14.26	11.08	18.24	17.09	18.34	19.25	17.15	16.32	23.13	25.23	22.08	23.15
	Yield	441	539	524	473	578	544	691	699	789	764	728	655	786	841	757	817
Oilseeds	Production	5.16	6.98	9.63	9.37	18.61	18.44	32.48	29.8	30.94	32.75	27.51	25.25	31.28	31.31	31.52	33.42
	Yield	481	507	579	532	771	810	1,193	1,133	1,168	1,168	1,075	968	1,195	1,270	1271	1236
Milk	Production	17	20	22	31.6	53.9	80.6	121.8	127.9	132.4	137.7	146.3	155.5	163.7	176.3	187.7	198.40
Fish	Production	0.75	1.16	1.76	2.44	3.84	5.66	8.42	8.67	9.04	9.58	10.26	10.76	11.42	12.61	13.6	14.16
Gross cropped area		131.89	152.77	165.79	172.63	185.74	185.34	197.68	195.80	194.25	200.95	198.36	N.A.	N.A.	N.A.	N.A.	N.A.
Gross irrigated area		22.56	27.98	38.2	49.78	63.2	76.19	88.94	91.79	92.25	95.77	94.46	N.A.	N.A.	N.A.	N.A.	N.A.
Fertilizer Consumption		0.07	0.29	2.18	5.52	12.55	16.7	28.12	27.79	25.54	24.48	25.58	26.75	25.95	26.59	27.37	29.36

Source: Agricultural Statistics at a Glance 2020, Directorate of Economics & Statistics, Government of India. Page: various pages.

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Table 5.11: All India Crop-wise Yield

Crop	(tonne/ ha)										
	1950-51	1990-91	2000-01	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18*
Rice	0.67	1.74	1.90	2.24	2.39	2.46	2.42	2.39	2.40	2.49	2.58
Wheat	0.66	2.28	2.71	2.99	3.18	3.12	3.15	2.75	3.03	3.20	3.37
Jowar	0.35	0.81	0.76	0.95	0.96	0.85	0.96	0.88	0.70	0.81	1.00
Bajra	0.29	0.66	0.69	1.08	1.17	1.20	1.18	1.26	1.13	1.31	1.24
Maize	0.55	1.52	1.82	2.54	2.48	2.57	2.68	2.63	2.56	2.69	3.03
Coarse Cereals	0.41	0.90	1.03	1.53	1.59	1.62	1.72	1.70	1.58	1.75	1.94
Gram	0.48	0.71	0.74	0.90	0.93	1.04	0.96	0.89	0.84	0.97	1.06
Tur or Arhar	0.79	0.67	0.62	0.66	0.66	0.78	0.81	0.73	0.65	0.91	0.96
Total Pulses	0.44	0.58	0.54	0.69	0.70	0.79	0.76	0.73	0.66	0.79	0.84
Total Foodgrains	0.52	1.38	1.63	1.93	2.08	2.13	2.12	2.03	2.04	2.13	2.23
Sugarcane	33.42	65.40	68.58	70.09	70.32	68.25	70.52	71.51	70.80	69.00	79.65
Groundnut	0.78	0.90	0.98	1.41	1.31	1.00	1.76	1.55	1.47	1.40	1.87
Rapeseed & Mustard	0.37	0.90	0.94	1.19	1.15	1.26	1.19	1.08	1.18	1.30	1.40
Soyabean	0.43	1.02	0.82	1.33	1.21	1.35	1.01	0.95	0.74	1.18	1.05
Sunflower	0.65	0.54	0.61	0.70	0.69	0.66	0.75	0.74	0.61	0.66	0.74
Total Oilseeds	0.48	0.77	0.81	1.19	1.14	1.17	1.17	1.08	0.97	1.20	1.27
Cotton	0.09	0.23	0.19	0.50	0.49	0.49	0.51	0.46	0.42	0.51	0.48
Tobacco	0.73	1.35	1.32	1.69	1.61	1.54	1.61	1.84	1.78	2.02	NA

N.A:Not available, * 4th Estimate.

Source:Agricultural Research Data Book 2019 pp 198.

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Table 5.12: India's Position in World Agriculture in 2019

Item	India	World	% Share	India's Rank	Next to
1. Total Area (Million Hectares)	329	13,461	2.4	Seventh	Russian Federation, Canada, U.S.A., China, Brazil, Australia
Land Area	297	13,003	2.3	Seventh	Russian Federation, Canada, U.S.A., China, Brazil, Australia
Arable Land	157	1,396	11.3	Second	U.S.A.
2. Total Population*(Million)	1,384	7,795	17.8	Second	China
Agriculture	595	2,620	28.6	Second	China
3. Economically Active Population* (Million)					
Total	505	3,324	15.2	Second	China
Agriculture	273	1,312	20.8	Second	China
4. Crop Production (Million Tonne)					
(A): Total Cereals	288	2,589	11.1	Third	China, U.S.A.
Wheat	86	701	12.3	Second	China
Rice (Paddy)	157	722	21.7	Second	China
Total Pulses	17.6	68	25.9	First	
(B): Oilseeds					
Groundnut (In shell)	7	38	18.2	Second	China
Rapeseeds	8.1	59.0	13.7	Third	Canada, China
5. Fruits & Vegetables (Million Tonne)					
(A): Vegetables & Melons	105	1,090	9.6	Second	China
(B): Fruits excluding Melon	74	637	11.6	Second	China
(C): Potatoes	42	373	11.3	Second	China
(D): Onion (Dry)	15	86	17.4	Second	China
6. Commercial					
(A): Sugarcane	342	1,800	19.0	Second	Brazil
(B): Tea	0.96	4.7	20.6	Second	China
(C): Coffee (green)	0.30	8.45	3.6	Seventh	Brazil, Vietnam, Indonesia, Colombia, Ethiopia, Peru
(D): Jute & Jute like Fibres	1.96	3.58	54.7	First	
(E): Cotton (link)	8.50	26.14	32.5	Second	China
(F): Tobacco Leaves	0.83	7.37	11.3	Third	China, Brazil
7. Livestock (Million Heads)					
(A): Cattle	211	1,430	14.7	Third	Brazil, China
(B): Buffaloes	113	195	57.8	First	
(C): Camels	0.45	26.6	1.7	Tenth	Somalia, Sudan, Kenya, Niger, Chad., Mauritania, Ethiopia, Pakistan, Mali
(D): Sheep	75	1,094	6.8	Second	China
(E): Goats	157	924	17.0	First	
(F): Chicken	942	20,708	4.5	Fifth	China, U.S.A., Indonesia, Brazil
8. Animal Products					
(A): Total Milk (000MT)	127	739.36	17.2	First	
(B): Eggs Total (000MT)	3,490	70,615.63	4.9	Third	China, U.S.A.
(C): Total Meat (000MT)	6,228	2,98,871	2.1	Sixth	China, U.S.A., Brazil, Germany, Russia

Source: 1. <https://www.worldometers.info/world-population/india-population/#:~:text=The%20current%20population%20of%20India,of%20the%20total%20world%20population.>

2. http://www.fao.org/faostat/en/#rankings/countries_by_commodity. Accessed on 07.05.2021.

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Table 5.13: Global Comparison of Area, Production and Yield of Principal Crops

Area (M. Hectare), Production (M. Tonne), Yield (Tonne/hectare)				
Country	Area	Production	Yield	Production (%)
1. Paddy				
World	163.46	718.35	4.39	100.00
China	30.56	206.09	6.74	28.69
India	42.50	152.60	3.59	21.24
Indonesia	13.44	69.05	5.14	9.61
Bangladesh	11.70	34.20	2.92	4.76
Vietnam	7.75	43.66	5.63	6.08
2. Wheat				
World	216.64	674.88	3.12	100.00
China	24.14	120.58	5.00	17.87
India	29.90	94.88	3.17	14.06
Russian Federation	21.28	37.72	1.77	5.59
USA	19.83	61.76	3.11	9.15
3. Maize				
World	176.99	875.10	4.94	100.00
USA	35.36	273.83	7.74	31.29
China	34.97	208.26	5.96	23.80
Brazil	14.23	71.30	5.01	8.15
Mexico	6.92	22.07	3.19	2.52
Indonesia	3.96	19.38	4.89	2.21
India	8.40	21.06	2.51	2.41
4. Sugarcane				
World	25.76	1,773.81	68.85	100.00
Brazil	9.41	670.76	71.30	37.81
India	5.09	347.87	68.34	19.61
China	1.80	124.17	68.81	7.00
Thailand	1.30	96.50	74.23	5.44
Pakistan	1.05	58.04	55.49	3.27
5. Groundnut				
World	24.63	41.27	1.68	100.00
China	4.73	16.88	3.57	40.71
India	4.90	5.78	1.18	14.00
Nigeria	2.42	3.07	1.27	7.44
USA	0.65	3.06	4.70	7.41
Myanmar	0.88	1.37	1.56	3.32

Source:FAO, regional office for Asia and the pacific, Bangkok.