

A COMPARATIVE GEOGRAPHICAL ANALYSIS OF COW RESOURCES GROWTH AND DENSITY OF BHILWARA DISTRICT

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Abstract: *Bhilwara district is an alluvial plain of middle Banas region. It has Gheer, Malvi and Rathi breed of cows. The density of cows in 2003 was 58 and 68 was in 2007 in this region. The relation between cows and on 100 people was 33 in 2003 and 33.25 in 2007. South-East Bhilwara tehsil Mandalgarh was richest area of cattle population. The ratio of cattle population in total animal was 28.41 in 2003 and 28.36 in 2007. The density of cattle distribution was similar to rainfall distribution in Bhilwara district, so natural Phenomena and cattle population distribution is highly co-related in Bhilwara district.*

Key words: Cow Resources, Growth and Density, Cattle Population Distribution

Introduction

The research area of Bhilwara district is situated in middle South Rajasthan. Bhilwara district has 16 tehsil; 384 Gram Panchayat and 1867 villages. Bhilwara city is biggest population city and largest producer of textile cloth in Rajasthan. It has 4,40,000 litre milk capacity plant of Saras dairy. The research area's Cattle population was 602818 in 2003 and 719472 in 2007. Last 5 years cattle growth percentage was 19.35.

Importance of Research

"Gaavo Vishvasy Maatra" is important "Sukta" of Regveda's all the ancient Indian literature is full of cow contribution of society. Today agriculture and village development backbone is cow. The ancient Indian family concept of cow was "Kamdhenu" so cow's role was very important in ancient and present society development. This research is the related of cows growth, distribution and density of Bhilwara district. So the contribution of cow's value and important role find out in research paper.

Objectives

The main objective is to identify the density of cow and represent in Map according to tehsil wise in the Bhilwara district. To identify the population density and cow's density of the Bhilwara district.

Tehsil wise comparison of the cow resources between 2003 – 2007

More than twenty six percent: The maximum cow was increase in Mandal block in the Middle West. It was 38.44 percent. 29.54 percent increase was in the north-west tehsil Asind.

Eighteen to twenty six percent increase: Tehsil Banera, it is the only where the increase was 24.66 percent; it is situated in the middle of the district, the cow species were 32468 in 2003 and it increased up to 40475 in 2007.

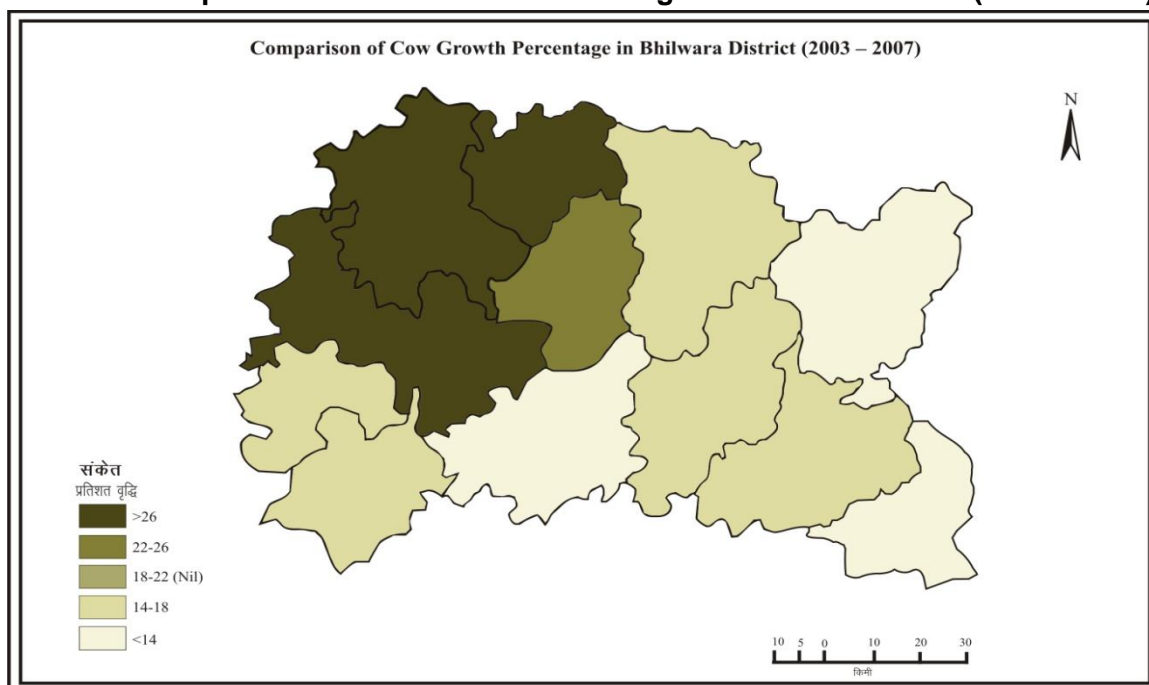
Less than 18 percent increase: In the south west part of the district – Sahada and Raipur as well as the northern Shahpura central Kotri and south-east Mandalgarh tehsils where 14 to 18

percent increase in cow species was noted. Less than 14 percent increase was noted in the central south Bhilwara and north east part of Jahajpur tehsil. In Biroliya tehsil of Bhilwara district where cow breeds decreased. It was 700 cows less in comparison with 2003 and it was two percent decreased.

Table 1: Tehsil wise comparison of the cow Resources between 2003–2007 of Bhilwara District

S.No.	Tehsil	Total No. of cow in 2003	Total No. of cow in 2007	Difference	Increase & decrease percentage
1.	Bhilwara	66541	75335	8794	13.2
2.	Sahada	38434	44798	6364	16.55
3.	Rajpur	25673	30150	4477	17.43
4.	Mandal	56778	78604	21826	38.44
5.	Asind	52146	67551	15405	29.54
6.	Banera	32468	40475	8007	24.66
7.	Shahpura	58868	68807	9939	16.88
8.	Kotri	65045	76453	11408	17.53
9.	Jahajpur	71404	79983	8579	12.01
10.	Mandalgarh	69695	82077	12382	17.76
11.	Bijoliya	37204	36509	-695	-1.86
12.	Hurda	28562	38730	10168	35.59
Total		602818	719472	116654	19.35

Table 1: Comparison of Cow Growth Percentage in Bhilwara District (2003 – 2007)



Comparison of Cow Growth Percentage in Bhilwara District (2003 – 2007)

Percentage	Tehsil
<14	Bhilwara, Jahajpur, Bijoliya
14 – 18	Shahpura, Kotri, Mandalgarh, Sahada, Rajpur
18 – 22	–
22 – 26	Banera
>26	Mandal, Asind, Hurda

Comparison of Cow species per 100 persons in Bhilwara District (2003– 2007)

There were 33 cow breeds behind 100 people in 2003 and in it were 33.25 in 2007. The highest increase during the period 2003 – 2007 Hurda and Mandal were these tehsil where it happened.

The cow breeds came down per 100 persons in Bhilwara, Sahada, Jahazpur and Bijoliyan during the period 2003 – 2007. The cow breeds decreased in south tehsil – Bhilwara, south-west Sahada tehsil, north-east Jahazpur, Shahpura and Bijoliyan in 2007 in comparison of 2003 and per hundred persons. The cow breeds increased in 2007 in Raipur, Mandal and Asind blocks, comparatively. The density of cow breeds increased per hundred persons in the mid situated tehsil – Kotri and Banera. The cow breeds increased by 0.05 per hundred in south-east tehsil Mandalgarh. The must decreased density of cow breeds – it was 5.5 per hundred persons. It is important that overall increase in cow breeds in comparison of 2003 to 2007; 4 cow breeds increased per hundred persons.

Table 2: Comparison of cow breeds behind per 100 persons 2003 to 2007

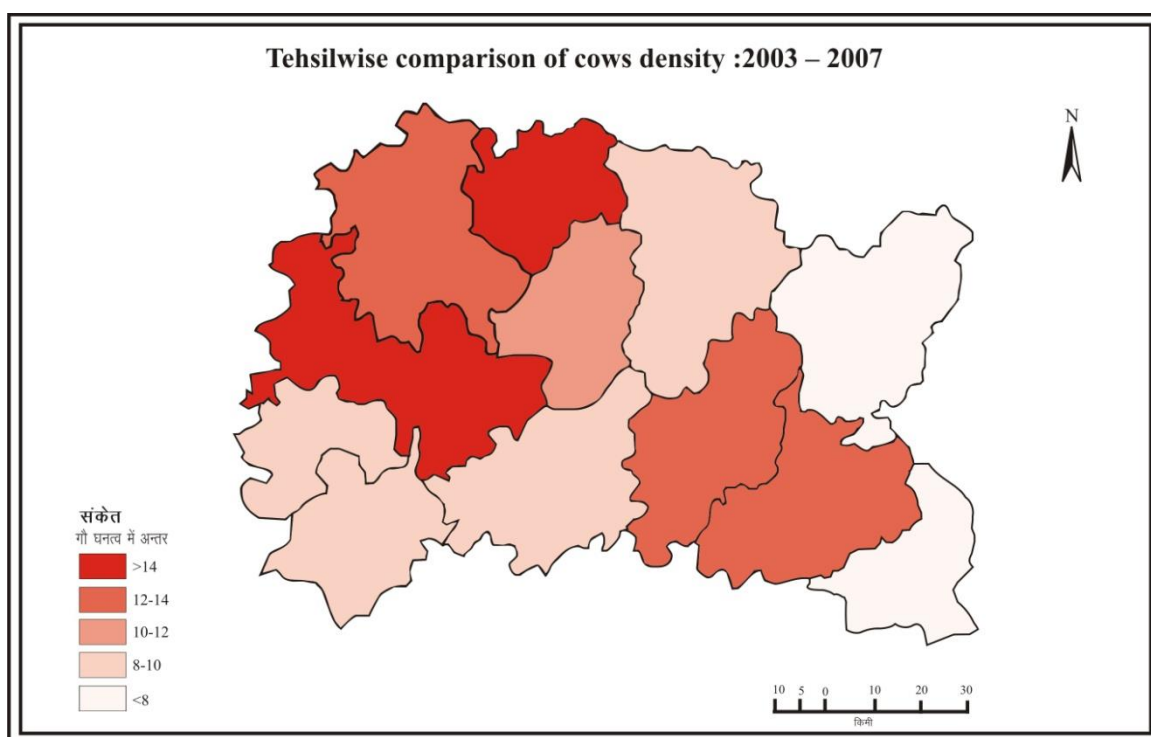
S.No.	Tehsil	Cow breeds per 100 persons in 2003	cow breeds per 100 persons in 2007	Difference
1.	Bhilwara	14.98	13.50	-1.48
2.	Sahada	33.38	33.16	0.22
3.	Raipur	30.43	30.80	0.37
4.	Mandal	28.74	33.35	4.61
5.	Asind	25.25	26.58	1.33
6.	Banera	30.56	32.71	2.15
7.	Shahpura	33.30	33.23	-0.07
8.	Kotri	43.74	43.76	0.02
9.	Jahajpur	38.26	36.72	-1.54
10.	Mandalgarh	45.89	46.44	0.55
11.	Bijoliya	46.13	40.79	-5.34
12.	Hurda	24.73	27.93	3.2
Total		32.95	33.25	+12-23 -8.65

Tehsil wise comparison of Cows density between 2003 and 2007

The density of cow breeds increased about 10.73 between 2003 & 2007. In the year 2003 the cow breeds which was 57 per km. square, it increased up to 68 in the year 2007. The maximum density of cow breeds in 2003 and 2007 in Mandalgarh tehsil. The cow species which was 47 per square km in 2003 it increased up to 68 per square km. It was maximum in the district. Thus 18 cows increased per km square in this tehsil.

Table 3: Tehsil wise comparison of cows Density (2003 – 2007)

S.No.	Tehsil	cow density per km square in 2003	Cow density per km square in 2007	Difference
1.	Bhilwara	68.95	78.07	9.12
2.	Sahada	59.08	68.86	9.78
3.	Raipur	49.43	58.05	8.62
4.	Mandal	47.07	65.16	18.09
5.	Asind	46.10	59.72	13.62
6.	Banera	47.71	59.48	11.77
7.	Shahpura	52.14	60.94	8.8
8.	Kotri	70.09	82.39	12.3
9.	Jahajpur	65.89	73.81	7.92
10.	Mandalgarh	75.39	88.79	13.4
11.	Bijoliya	59.13	58.02	-1.11
12.	Hurda	46.29	62.77	16.48
Total		57.27	68.00	128.79



Tehsil wise Comparison of Cows density Difference

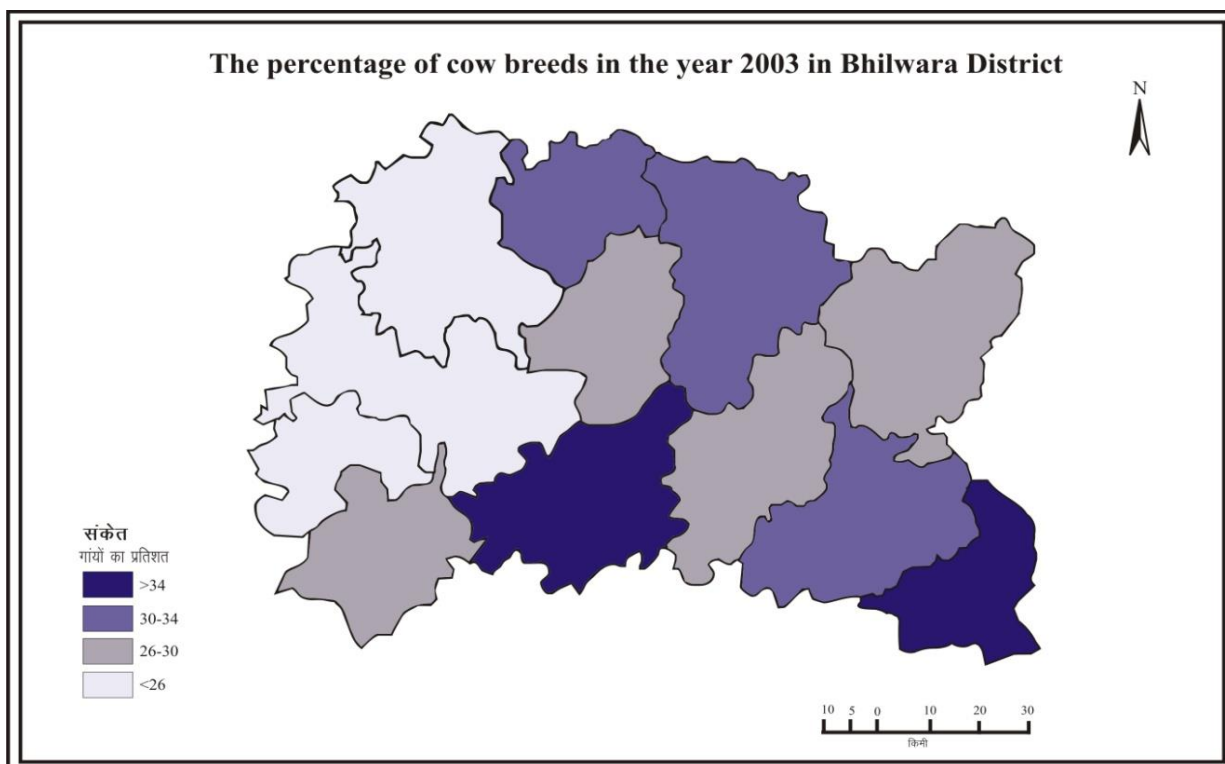
Percentage	Tehsil
< 8	Jahajpur, Bijoliya
8 - 10	Bhilwara, Sahada, Raipur, Shahpura
10 - 12	Banera
12 - 14	Asind, Kotri, Mandalgarh
> 14	Mandal, Hurda

More than 14 percent increase; in Mandal 18 and Hurda 16, 12 to 14 percent increase took place in the west tehsil of the district Asind, mid Kotri and south-east Mandalgarh, 10 to 12 percent increase of cow density was happened in Banera, 8 to 10 percent increase of cow density of the south-west tehsil of the district Raipur and Sahada and north Sahapura and south Bhilwara. It was north-east tehsil of the district Jahazpura where only cows increased.

Tehsil wise percentage of Cows breeds in total animal

Table 4: Tehsil wise percentage of Cows breeds in total Animal of 2003

S. No.	Tehsil	Total Animal wealth	No. of cows	Percentage of cows
1.	Bhilwara	195652	66541	34.01
2.	Sahada	136249	38434	28.20
3.	Raipur	119000	25673	21.57
4.	Mandal	263878	56778	21.51
5.	Asind	251054	52146	20.77
6.	Banera	112278	32468	28.91
7.	Shahpura	180150	58868	32.67
8.	Kotri	218476	65045	29.77
9.	Jahajpur	250657	71404	28.48
10.	Mandalgarh	220858	69695	31.55
11.	Bijoliya	78374	37204	47.46
12.	Hurda	95006	28562	30.06
Total		2121630	602818	28.41



Percentage of cow species in 2003 in total animal wealth

The total animal wealth in Bhilwara district in 2003 was 2121630 and 602818 number of cow was there were 28.41 percent cows in 2003. In overall animal wealth that is found in Bhilwara district, then maximum number of cow species are found in south-east Bijoliya and mid Bhilwara tehsil. There were 37204 cow species in Bijoliya out of 78374 total animal wealth that WAS 47.46 percent. Cow species was 30–40 percent in north tehsil Shahpura and Hurda and in the south-east Mandalgarh tehsil. It is greater than average percentage or the district. The cow's species was 26–30 percent in the north-east Jahazpura tehsil and mid Banera and Kotri and the south-west Sahada tehsil. In Raipur, Mandal and Asind the percentage of the cow species was 26 percent these tehsil are Situated in the west and north-west of the district. The minimum cow breeds are found in Asind tehsil which was 20.77 percent. Asind, Mandal and Raipur tehsil are in the western part of the district where we found less cow species.

Table 05: Co-relation matrix

S.No.	Tehsil	Density of population		No. of villages		Density of cows		No. of cows		
		2001	2011	2001	2011	2003	2007	2003	2007	vUrj
		V1	V2	V3	V4	V5	V6	V7	V8	V9
1.	Bhilwara	460.26	578	136	145	69.0	78.1	66541	75335	8794
2.	Sahada	176.97	208	99	115	59.1	68.86	38434	44798	6364
3.	Raipur	162.42	188	89	101	49.4	58.05	25673	30150	4477
4.	Mandal	163.74	195	188	221	47.1	65.16	56778	78604	21826
5.	Asind	182.56	225	204	219	46.1	59.72	52146	67551	15405
6.	Banera	156.09	182	83	93	47.7	59.48	32468	40475	8007
7.	Shahpura	156.56	183	151	162	52.1	60.94	58868	68807	9939
8.	Kotri	160.25	188	175	181	70.1	82.39	65045	76453	11408
9.	Jahajpur	172.2	201	217	237	65.9	73.81	71404	79983	8579
10.	Mandalgarh	164.27	191	172	199	75.4	88.79	69695	82077	12382
11.	Bijoliya	128.16	142	109	112	59.1	58.02	37204	36509	-695
12.	Hurda	187.12	225	70	82	46.3	62.77	28562	38730	10168

Table 06: Co-relation

	v1	v2	v3	v4	v5	v6	v7	v8	v9
v1	1.00	1.00	-0.01	-0.03	0.31	0.32	0.31	0.27	0.03
v2	1.00	1.00	0.00	-0.02	0.29	0.32	0.31	0.27	0.05
v3	-0.01	0.00	1.00	0.99	0.33	0.42	0.84	0.88	0.58
v4	-0.03	-0.02	0.99	1.00	0.30	0.43	0.83	0.88	0.64
v5	0.31	0.29	0.33	0.30	1.00	0.89	0.68	0.53	-0.17
v6	0.32	0.32	0.42	0.43	0.89	1.00	0.74	0.69	0.23
v7	0.31	0.31	0.84	0.83	0.68	0.74	1.00	0.97	0.44
v8	0.27	0.27	0.88	0.88	0.53	0.69	0.97	1.00	0.65
v9	0.03	0.05	0.58	0.64	-0.17	0.23	0.44	0.65	1.00

A comparison has been made with total population in 2001 to 2011 and 2003 to 2007. Density of cows is compared tehsil wise. Villages from 2001 to 2011 compared. Density and growth of cow's resources correlation co-efficient calculated.

Co-relation table description

The comparative analysis of tehsil wise total population density of population and total number of villages compare with total number of cow and density of cow by coefficient co-relation. Positive correlation found 0.31 between density of cattle population of 2003 and population density of 2001. The coefficient correlation was 0.3 of 2011 density of population and density of cattle population of 2007. It is impressive 0.1 correlations. The coefficient correlation between 2001 and 2011 total population and 2003 – 2007 total cattle population was found 0.31. Positive correlation found 0.33 and 0.43 between total number of village of 2001 and 2011 density of cows of 2003 and 2007. It shows that village development is basis on cattle higher density distribution.

Conclusion

Research paper was emphasis the village development basis of cow resources. In this research area higher density of cow resources found in south-east Mandalgarh, Jahazpur, Mandal of Bhilwara District. The research paper oriented to find the relation between rainfall distribution and cow resources distribution of density. The objective of research properly complete the hypothesis was highly significant that villages development is depend on resources. The coefficient of density of cattle of population of 2007 and total number of villages of 2011 found 0.43, so hypothesis is significant today research will make new subject scope in resources development Geography.

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