



## A COMPARATIVE STUDY OF EXTENT OF NET AREA SOWN OF RAJASTHAN: 2010-11 TO 2018-19

**Dr. Shivjeet Kaur**

Assistant Professor, Punjabi University, Patiala

**Alka Rani**

Research Scholar At Punjabi University, Patiala

### ABSTRACT

Agricultural development entails fundamental adjustments to agricultural methods and practises, improvements to outputs as a result, and modifications to the socioeconomic makeup of rural communities. It involves moving the agricultural sector away from the crude, widely diverse, mostly rain-fed, subsistence-oriented family level production towards technically sophisticated, more specialised, market-oriented output, to put it succinctly. Changes in land-use patterns, such as a decline in the amount of cultivable waste land, an increase in the net area planted, and an improvement in crop intensity, indicate changes in the agricultural environment. The percentage of cultivated land that is planted at least once in a farming year is known as net area sown. It refers to the real area of land that is farmed throughout the year.

**KEYWORDS :** Agricultural Development, Agricultural Techniques, Rudimentary, Subsistence, Technically Advanced, Net Area Sown.

### INTRODUCTION:

Another aspect of agricultural growth is the shift in cropping patterns in favour of commercial crop farming. A farm's transition from widely varied, subsistence-oriented output to more specialised, market-oriented production is known as agricultural development (Kulshres and Rathore, 2015). The improvement of various agricultural inputs, such as the use of tractor-tillers in place of bullock-driven ploughs, the introduction of harvest combines in place of sickles, the use of chemical fertilisers in place of cow dung, the replacement of Persian wheels with self-propelled tube wells, developed irrigation in place of reliance on rainfall, and the substitution of native seeds with high yielding varieties of seeds, etc., are significant aspects of the development of agriculture. Increases in inputs often result in increases in outputs, which creates a new dimension of agricultural sector growth (Pellika et al., 2013). Increased crop productivity and gross output have a significant impact on crop commercialization, which in turn impacts the dietary habits of the inhabitants of the research region. The level of commercialization in agriculture is an indicator that it is moving away from simple subsistence crop production. The commercialization of agriculture is directly related to improvements in agricultural infrastructure facilities in rural regions, which aids in hastening the development process. The introduction of seed-fertilizer technology has caused significant changes in the agriculture of the studied area. Directly or indirectly, the use of this new technology began to change several facets of agriculture. Due to increased human interference in the environment with the introduction of green revolution technologies, there had been significant changes in the land use of the study region (Kumar, 2012). The green revolution's commercialization of agriculture, which encouraged farmers to maximise their use of the region's limited land resources, is reflected in a decrease in the amount of cultivable waste land and an increase in net area sown and crop intensity. The creation of irrigation infrastructure and agricultural mechanisation were two of the many variables that led to the changes in the land use pattern. The expansion of irrigation infrastructure in the study area was responsible for the shift in agriculture since it helped cultivate rain-fed regions, hence lowering cultivable waste land and increasing net area planted.

61 percent of the state's land area is considered to be arid. 10.4% of India's landmass, yet just 1% of its water resources, is covered by the state of Rajasthan. Ten agro-climate areas and 33 administrative districts make up the state. Nearly 60% of the region is in a desert climate, while more than 65% of the land is used for agriculture. Almost two thirds of the population relies on agribusiness, agro-forestry, and agriculture and animal husbandry for their living. In rainfed environments, where the

moisture regime is extremely changeable and greatly influenced by rainfall distribution, the soil's water-holding capacity, and water-release properties, weather has a bigger influence. Rajasthan is one of the water deficit states of the country. Which contributes to about 45 per cent of agricultural production is entirely from monsoon activity over the country and is best with problems of mid-season drought and associated impacts on crop productivity. Cropping intensity varies over the districts of Rajasthan. In the western Rajasthan six out of eleven districts as Barmer, Bikaner, Churu, Sri Ganaganagar, Jaisalmer and Jodhpur lie wholly in the arid zone, In the arid zone, rainfall is the most important factor limiting crop production and sustenance of life.

Numerous studies have shown that the use of tractors and irrigation as a result of mechanisation significantly increased cropping intensity. The farmers were able to increase the agricultural intensity of their farms because to the availability of mechanical power and tube well irrigation. Agricultural production and profitability increased as a result of farm mechanisation due to faster operations, greater work quality, and more effective crop input use. Another element that significantly altered the land-use pattern of the study region was the substitution of power-driven equipment for manual labour. The value of using tractors for non-repetitive tasks like levelling land for reclamation, getting rid of invasive perennial plants, and ploughing difficult terrain was undeniable. Tractors in particular were highly comfortable, satisfying, and helpful in getting more area under the plough. The straightforward idea of economies of scale urged farmers to fully utilise both the land resource and farm equipment. Therefore, any tiny plot of ground that was uncultivated but could be farmed was ploughed.

### METHODOLOGY:

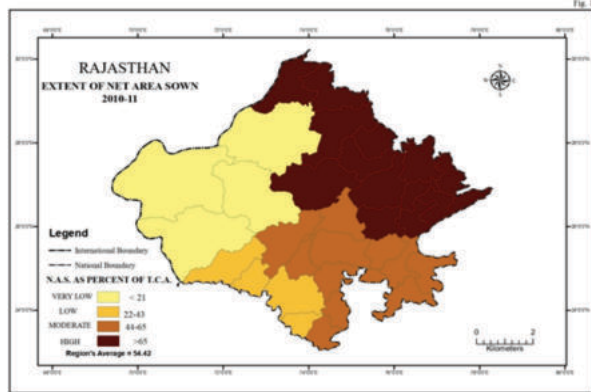
The present study shows the comparison of extent of net area sown of Rajasthan: 2010-11 to 2018-19. The present study is based on the secondary data. The data is collected from the various issues of Statistical Abstract of Rajasthan and Agricultural Statistic at a Glance. Maps are prepared for showing the comparative spatial distribution of extent of net area sown.

### DISCUSSION:

Extent Of Net Area Sown Of Rajasthan: 2010-11 TO 2018-19 (Fig. 1, & Fig. 2)

One of the states in the nation with a water shortage is Rajasthan. Which is best with difficulties of mid-season drought and associated repercussions on crop productivity and contributes to roughly 45% of agricultural production is

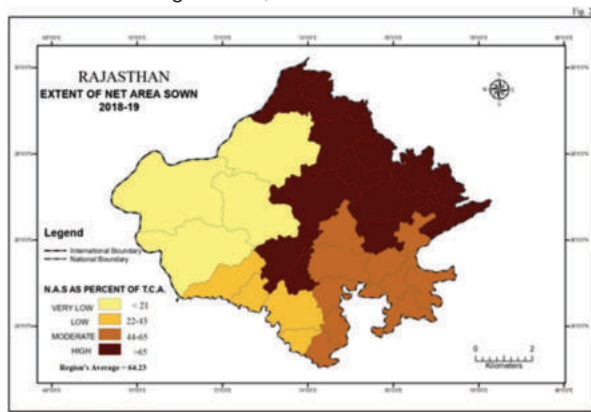
fully from monsoon activity over the country. Rajasthan's districts all see different levels of cropping. In the dry zone, rainfall is the main factor restricting crop production and life support in six out of the eleven districts of western Rajasthan, including Barmer, Bikaner, Churu, Sri Ganaganagar, Jaisalmer, and Jodhpur. Numerous studies have shown that the use of tractors and irrigation as a result of mechanisation significantly increased cropping intensity. Though the average amount of net area seeded in the research region in 2010–11 was 54.42 percent, there were notable geographical variances in the area. From 18.90% in the Jaisalmer district to 94.75% in the Banswara district, it fluctuated. The following criteria are chosen for a thorough investigation of the pattern of net area sown:



Source: Statistical Abstract of Rajasthan 2010-11

**i. Areas of High Extent of Net Area Sown (> 65 percent)**

The 14 districts with the highest amount of net area seeded in 2010–11 were Ganganagar, Hanumangarh, Churu, Ngaur, Sikar, Jhunjhunu, Alwar, Bharatpur, Jaipur, Swai Madhopur, Tonk, Dausa, and Karauli. All of these districts had level topography that was suited for farming. These were formerly settled farming regions. The major source of income in this area was agriculture, with the industrial and service sectors developing just modestly. Small mandi towns or agricultural service facilities were present in each of these regions, supporting the rural economy. Therefore, less uncultivable ground was beneath urban settlements, transportation networks, industry, etc., leaving more space open for agriculture. In 2018–19, the northern and eastern portions of the plain were home to the majority of the net area planted. The districts with the highest percentage of net area seeded included Ganganagar, Hanumangarh, Churu, Ngaur, Sikar, Jhunjhunu, Alwar, Bharatpur, Jaipur, Swai Madhopur, Tonk, Dausa, Karauli, Pali, and Rajsamand. All of these districts had level topography that was suited for farming. These were formerly settled farming regions. The major source of income in this area was agriculture, with



Source: Agricultural Statistics of Rajasthan 2019-20

the industrial and service sectors developing just modestly. Small mandi towns or agricultural service facilities were present in each of these regions, supporting the rural economy. Therefore, less uncultivable ground was beneath

urban settlements, transportation networks, industry, etc., leaving more space open for agriculture.

**ii. Areas with Moderate Extent of Net Area Sown (44-65 percent)**

The region that comes within this category had some unique features. These areas have sandier, less productive soil, poor irrigation infrastructure, and unfavourable geoclimatic conditions. Despite the absence of irrigation systems, these areas were able to have a moderate amount of net area seeded thanks to relatively high rainfall. This region has better established industrial infrastructure and rather significant urban areas. Although this land was suited for agriculture, a little amount of net area was sown as a result of economic diversification. Due to a lack of economic diversification, this area of the study region was substantially more dependent on agriculture. Therefore, this location had a reasonable amount of net area seeded despite physical limitations. The majority of the study region's net area sown in 2018–19 was of a moderate extent. The region that comes within this category had some unique features. These areas have sandier, less productive soil, poor irrigation infrastructure, and unfavourable geoclimatic conditions. Despite the absence of irrigation systems, these areas were able to have a moderate amount of net area seeded thanks to relatively high rainfall. This region has better established industrial infrastructure and rather significant urban areas. Although this land was suited for agriculture, a little amount of net area was sown as a result of economic diversification. Due to a lack of economic diversification, this area of the study region was substantially more dependent on agriculture. Therefore, this location had a reasonable amount of net area seeded despite physical limitations.

**iii. Areas with Low Extent of Net Area Sown (22-43 percent)**

The third group of low extent of net area seeded in the two research years is represented by the western region of Rajasthan. This category includes the four districts of Bikaner, Jaisalmer, Jodhpur, and Barmer. The dry environment, sandy soils, lack of irrigational facilities, ignorance, and remoteness were the causes of a continuous strip of low extent of net area planted in western sections of the study region. These variables also contributed to the low extent of net area sown in this area of the plain. There was plenty of land available for cultivation in these regions since land holdings were relatively big. Due to the low demand brought on by low population density and the abundance of agricultural land, market forces were muted and there was less competition for effective land use.

**iv. Areas with Very Low Extent of Net Area Sown (< 21 percent)**

Both in 2010–11 and in 2018–19, Jalor, Sirohi, Udaipur, and Dungarpur fall under this group. A continuous strip of very little net area seeded in this section of the study region was caused by sandy soils, a lack of irrigational infrastructure, ignorance, and remoteness. While low intensity was mostly confined to the state's dry zone or western regions, high to moderate intensity areas were primarily found in the state's more humid northern and eastern regions. This suggests that the yearly supply of water affects agricultural practises in Rajasthan significantly. Other important factors were the soil's fertility, farmers' understanding of the issue, accessibility, and mechanisation.

**CONCLUSIONS**

The majority of the districts in Rajasthan's western and central regions had low to moderate amounts of net area sown due to the presence of sand dunes, rocky terrain, merely a lack of irrigational facilities and HYV seeds, little use of agricultural equipment, and little rainfall. To increase productivity, these areas require additional planning and funding for peasant training and infrastructure. In Ganganagar, Hanumangarh,

Churu, Ngaur, Sikar, Jhunjhunu, Alwar, Bharatpur, Jaipur, Swai Madhopur, Tonk, Dausa, and Karauli, Pali, and Rajsamand, there was a significant amount of net area planted. These areas benefited from good alluvial soils, a flat, featureless landscape, and increased levels of agricultural mechanisation. The generally humid environment, modest size of properties, and knowledge of Green Revolutionary tactics were other factors in the significant amount of net area seeded. The amount of net area seeded was minimal in locations with natural constraints on the spread of agriculture, such as rough topography, unproductive soils, soil erosion, a deep water table, and the existence of water bodies. In contrast, a large proportion of net area was sown in the regions where agriculture is the primary source of income due to a lack of secondary and tertiary enterprises. Despite having outstanding agricultural prospects, locations with high levels of urbanisation or industry only had a modest amount of net area farmed due to the availability of alternative job options. A significant amount of net area was seeded in the southern areas of the research region, which were subject to natural limitations including low rainfall, frequent droughts, sandy and stony surfaces, etc. The expansion of net area seeded is a good measure of farmers' awareness and a valid confirmation of government policy. Many districts, including Jaipur, Sikar, Jhunjhunu, Alwar, Bharatpur, Ganganagar, Hanumangarh, Kota, Bundi, and Jhalawar, have made significant contributions to raising the amount of net area planted beyond the state average. The impact of reform also affected the levels of agricultural production in Rajasthan.

#### REFERENCES:

1. Kulshres and Rathore (2015). "Agricultural Trends and Development in Rajasthan", *Rajasthan Economic Journal*, Vol 38, 39 (1 and 2) January and July, 2014 and 2015. ISSN: 0975-9050.
2. Allam.et.al (2019). "Using LandSat Satellite Data for Assessing the Land Use and Land Cover Change in Kashmir Valley" *GeoJournal (Springer)*, 10.1007/S10708-019-10037-X.
3. Pellika.et.al (2013), "Agricultural Expansion and its Consequences in Taita Hills, Kenya", *Development in Earth Surface Processes*, vol.16. Pp.165-179.
4. Kumar (2012), "Cropping and Land Use Patterns in Himachal Pradesh: Case of district Solan", *ijcrr (Indian Journal of Current Research and Review)*, vol. 04, issue3, pp 19-25.
5. Agricultural Statistic At A Glance, Rajasthan: 2011-12
6. Agricultural Statistic At A Glance, Rajasthan: 2019-20