

SPATIAL DISTRIBUTION AND DETERMINANTS OF BRICK KILN: AN ANALYTICAL STUDY OF PALUS TEHSIL

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Article Info	ABSTRACT
Article History: Received: 15th Dec 2025 Accepted: 19th Dec 2025 Published: 20th Dec 2025	Brick kiln industry is known as an unorganized and labor-intensive industry. Brick kilns are established in places where raw materials are easily available. The paper is about the distribution of brick kilns in Palus tehsil and the factors affecting it. There are a total of 11 brick kilns in Palus tehsil. There are two major centers where these brick kilns are located. One is Andhali-Palus Road and the other is Sandgewadi-Morale Road. The average height of these brick kilns above sea level is more than 600 meters. Bricks are produced in the brick kilns here in the traditional way, only in RRS brick kiln are produced with the help of machines. The raw materials are brought to the banks of the Krishna River in Amanapur. The quality of the bricks produced in the Palus tehsil. Many geographical, social, and economical factors affect the production of brick kilns, such as soil, labor, water, coal-bagasse, gender, education, the influence of the local community, standard of living & working conditions, wages, technology, transportation, and land prices. In Palus tehsil, except for two villages, Andhali and Sandgewadi, there are no brick kilns in the other villages. Therefore, the distribution of brick kilns in Palus tehsil is uneven and of a centralized type.
Keywords: Labour-intensive industry, Spatial distribution, Alluvial soil, Altitude	
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INTRODUCTION:

Brick kilns are an unorganized and labour-intensive industry. Modern urbanization and demand for bricks for houses, has become a great employment generating industry for skilled and unskilled workers. A region of Western Maharashtra with advanced agriculture. The region has a thriving economy and has long dominated economic activity. India western industrial belt is witnessing massive growth in the construction sector, which has boosted the brick industry as a complementary industry to agriculture. Farmers in this region have recently shifted their investment to brick production. Hence, the sector plays an important role for job opportunities. People are engaged in this industry throughout the year in a variety of tasks from tillage to distribution. The brick kiln industry has played an important role in the economic development of the region for the people who are basically less literate.

The brick industry in the study area is operated in a traditional manner without the use of technology. As a result, here large number of people were able to find work in this industry. But these sectors face the problem of inadequate skilled professionals, market advisors, material experts and trained workers.

LOCATION OF STUDY AREA:

Palus is a tehsil in Sangli district of Maharashtra state. It is known as a transport hub and also an important center for the total brick production of the Sangli district. Palus is one of the industrially developed tehsils of Sangli district. Its industrial zone comprises industries functioning in steel, foundry, workshops, food processing, printing, and flexi including agro based products.

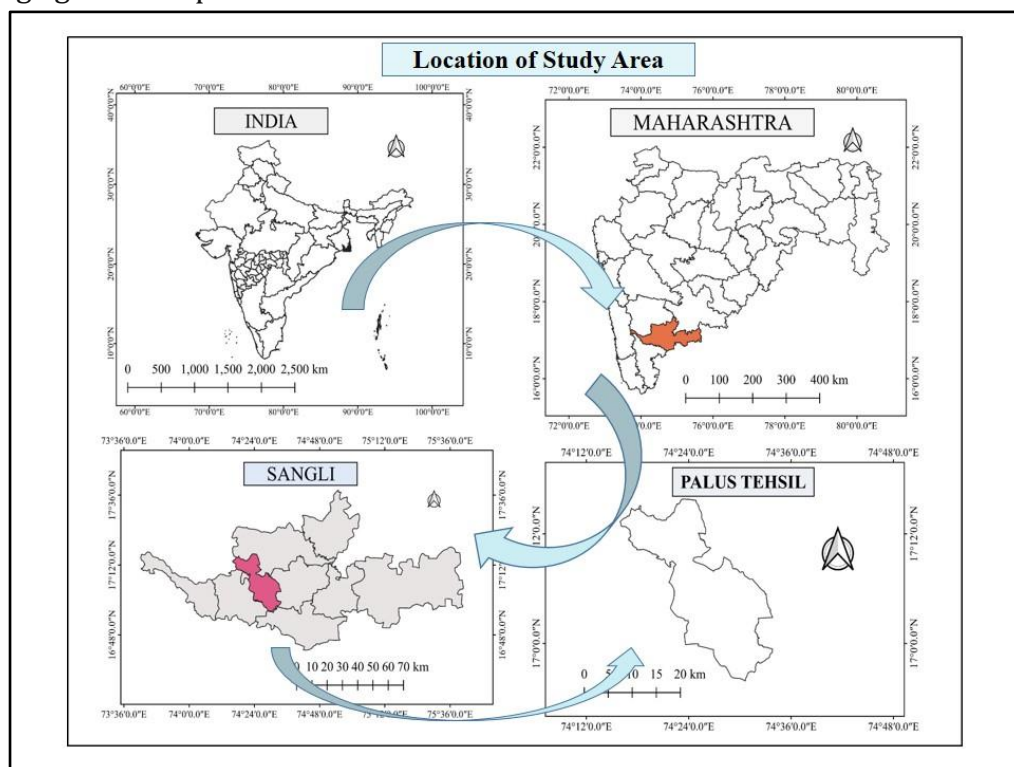


Fig. No. 1 Location of Study Area

Palus tehsil is situated between 17°05'17" North Latitude and 74°27'25" East Longitude. The average elevation of the study area is 592 meters above sea level Total

area of Palus tehsil is 297 sq. km and its population is 164909 as per census 2011. In the study area, there are three different types of soil that are mostly alluvial, black and laterite which are suitable material for making bricks. The Palus region experiences monsoon weather with moderate rainfall. In winter and summer that is from November to May are primarily the best times for brick manufacturing. There are 11 brick kilns are found in Palus tehsil and 175 workers are working in this industry. The brick industry developed in the region not only due to the market demand but also due to the economically cheaper raw materials like soil, bagasse, coal and water.

OBJECTIVES OF THE STUDY:

1. To understand the spatial distribution of brick kilns in Palus tehsil.
2. To Study the factors affecting on the brick kiln location.

DATA COLLECTION AND RESEARCH METHODOLOGY:

A. Sample Selection:

- 1) Universe: 11 Brick kilns in Palus tehsil

B. Data Collection: The primary and secondary both data has used for this present research study. The data has been collected from numerous bases and sources, like

- 1) Primary Source: By field survey Brick kiln in Palus tehsil December 2023 over questionnaire schedule, the primary data has been collected.
- 2) Secondary Source: Mainly from Sangli district gazette, books, journals and newspaper, website, secondary data has been collected.

The collected information is organized, classified and tabulated and used for the analysis. On the basis of analysis, cartographic techniques and statistical methods are used for drawing the graphs, diagrams and maps.

TABLE-I: SPATIAL DISTRIBUTION OF BRICK KILN IN PALUS TEHSIL

Sr. No	Brick Kiln Name	Latitude	Longitude	Altitude
1.	Trimurti Brick Supplier Andhali	17°07'13"N	74°28'08"E	636
2.	Trimurti Brick Supplier Andhali	17°07'01"N	74°28'13"E	633
3.	Om Brick Supplier Andhali	17°07'08"N	74°28'18"E	640
4.	Krushanamai Brick Supplier Palus	17°06'53"N	74°28'01"E	627
5.	RRS Brick Supplier Palus	17°06'49"N	74°27'54"E	624
6.	Mane-Patil Brick Supplier Palus	17°06'52"N	74°27'51"E	628
7.	Sakshi Brick Supplier Sandagewadi	17°06'15"N	74°28'43"E	625
8.	Sunil Patil Brick Supplier Sandagewadi	17°06'13"N	74°28'43"E	625
9.	Dattkruppa Brick Supplier Sandagewadi	17°06'17"N	74°28'39"E	628
10	Balumama Brick Supplier Sandagewadi	17°06'15"N	74°28'39"E	645
11	Sairam Brick Supplier Andhali	17°07'00"N	74°28'31"E	639

Source: Field Survey, Google earth app and Calculated by Author

There is a total of 11 brick kilns in Palus tehsil. These brick kilns are located at an altitude of 600 meters above sea level. Out of these, 6 brick kilns are located at an altitude of less than 630 meters and 5 brick kilns are located at an altitude of more than 630 meters. These brick kilns are located in the villages of Palus, Andhali and Sandgewadi.

Table II DISTRIBUTION OF BRICK KILN IN PALUS TEHSIL

Sr. No	Village wise	Number of Brick Kiln	Percentage
1.	Palus	3	27.28
2.	Andhali	4	36.36
3.	Sandagewadi	4	36.36
	Total	11	100

Source: Field Survey, Google earth

There are a total of 35 villages in Palus tehsil, out of which only three villages have brick kilns. From the above table it can be seen that there are a total of 11 brick kilns in Palus tehsil. Out of which, there are four in Andhali village, four in Sandagewadi village and three in Palus village.

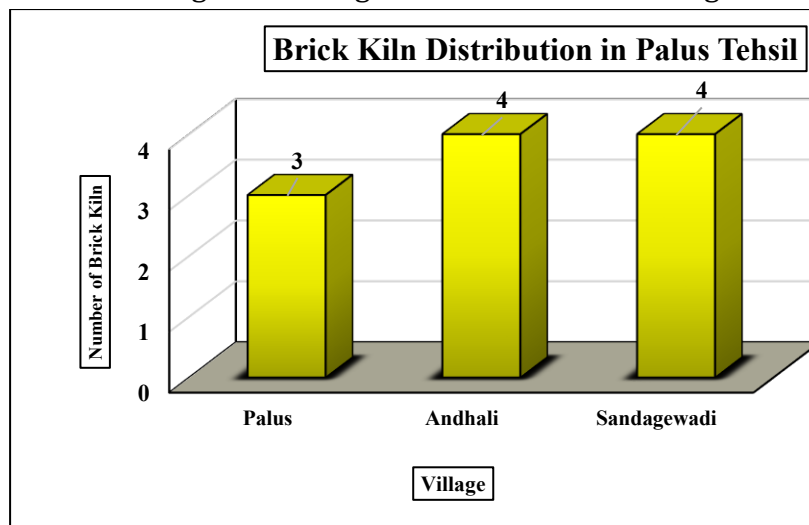


Fig. No.2 Brick Kiln Distribution in Palus Tehsil

FACTORS AFFECTING THE BRICK KILN LOCATION:

Many factors affect the brick kiln location as follows

A. Physical Factor

1. Soil

The most important factor affecting the brick kiln industry is soil. Alluvial type of soil is required to make bricks. But these types of soil is not found everywhere. So this soil is brought to the brick kiln by truck from river banks and wastelands.

2. Water

Water is used extensively in the production of bricks. Water is supplied to the brick kiln and workers through bore wells, wells, farm ponds and water tankers. Brick kilns are not established in places where water facilities are not available.

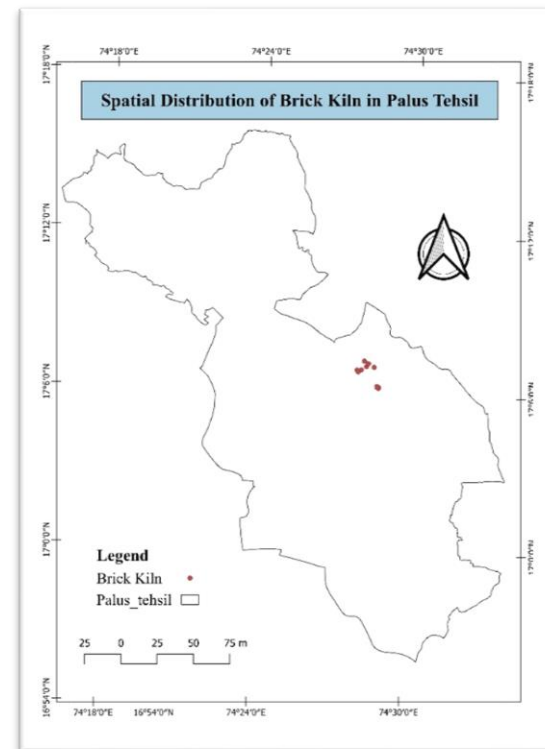


Fig. No. 2 Spatial Distribution Brick Kiln

3. Level of land

Flat land is required for making bricks and setting up a brick kiln. Brick kilns cannot be set up in rocky areas with uneven land. The brick kilns in this area are on the left side of Old Satara Road and Andhali Road. The land here is flat.

4. Coal and bagasse

Coal and bagasse are used to bake bricks. The bagasse is brought from a nearby sugar factory and the coal is brought from Kolhapur or Chandrapur districts.

B. Social Factor

1. Workers

All the work of the brick kiln is completed by laborers. These laborers are from the local and state. The brick kiln owner brings them to work by paying them an advance amount. In recent times, the wage rates of workers have increased, so they are not working for low wages. Due to this, workers are not meeting on time.

2. Education

Educated owners understand modern technology, eco-friendly methods, and legal compliance. Educated workers help improve production processes and quality. Education for workers' children reduces the chance they will stay in the industry for generations.

3. Gender

Women are mainly engaged in manual, labor-intensive tasks like molding and carrying bricks; their work often remains 'invisible.' Wage inequality and the dual burden of household responsibilities and brick kiln work affect women's health. The male-dominated social structure limits women's participation in decision-making processes.

4. Influence of the local community

Local people provide clay, grant permission, or sometimes oppose brick kilns. In some areas, kilns are welcomed due to employment opportunities; in others, there is resistance because of pollution and health issues. Local governing bodies like Panchayat play a significant role in decisions about kiln establishment and operation.

5. Standard of living & working conditions

In regions with lower living standards and widespread poverty, workers accept physically demanding, low-paid kiln jobs. The availability of seasonal migrant labor encourages the growth of kilns in such areas. In areas where people are more educated and have alternative job opportunities, kiln industries tend to remain limited.

C. Economical Factor

1. Capital

If capital is high, modern machinery, improvements in molds, and automation can be used, which increases the speed and quality of production. If capital is high, production can be increased by using modern machinery. Due to low capital, one has to rely on traditional methods, which limits production and increases costs.

2. Transporting

Brick kilns are set up in such places. The brick kilns in Palus tehsil have to bring soil from a long distance. This soil has to be brought from the banks of Amanapur and Krishna rivers. The roads in this area are not good. Therefore, ease of transportation is a major problem. Brick kilns are not set up in places where there is no suitable place for transportation.

3. Demand

The brick kilns in Palus tehsil are in high demand because the bricks produced here are of good quality. At the same time, bricks are not produced in the areas outside Palus, so people from the surrounding areas demand bricks from this place.

4. Salary/Wage

The level of wages has a major impact of the localization of the brick kiln industry. Where low wage workers are readily available, kilns are built in large numbers because the cost of production is low. In areas with high wages, costs increase, so the industry does not grow much there. Thus wages determine where the industry will be concentrated.

5. Technology

The bricks produced here are made in the traditional way, only in the RRS brick kiln, bricks are made with the help of machinery. Using machinery requires a huge investment, so various traditional methods are practiced in this area.

6. Government policy

Government policies have a major impact on the brick kiln industry. Strict government regulations for environmental protection require the use of new technologies for pollution control, which increases production costs. Licensing, registration, taxes, and labor laws make the management of the industry more disciplined and costly.

Conclusion:

The brick kiln industry is done as a supplementary business to agriculture. This paper is about the distribution of brick kilns in Palus tehsil and the factors affecting brick kilns. There are a total of 11 brick kilns in Palus tehsil. These brick kilns have been in operation for many years and there are two main centers of brick kilns. One is on the right side of Andhali-Palus Road and the other is on the left side of Sandagewadi-Morale Road, Old Satara Road. The average height of these brick kilns above sea level is more than 600 meters. There are four brick kilns in the village of Andhali, four brick kilns in the village of Sandagewadi and three brick kilns in Palus. Brick kilns are clustered more towards the central and northern parts of Palus tehsil. The southern and western parts of the tehsil seem to have no marked brick kilns on this map. These brick kilns are of small and large size. The raw material i.e. clay required for these brick kilns is also brought from the banks of the Krishna River in Amanapur and is easily available. Brick production in the brick kilns here is done in the traditional way. Only in the RRS brick kiln, are bricks made with the help of machines. The type of brick kilns in this place is camp. Many geographical, social and economical factors affect the brick kiln here. For example, soil, coal-bagasse, water, labor, education, gender, influence of the local community, standard of living and working condition, demand, wages, technology and land price and brick price etc.

From this it is seen that the distribution of brick kilns in Palus tehsil is uneven and centralization type.

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