



AGRICULTURE IN THE MUGHAL ERA: A HISTORICAL STUDY OF LAND REVENUE AND RURAL DEVELOPMENT

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Abstract: Agriculture formed the economic foundation of the Mughal Empire and sustained its political power, urban growth, military organization, and commercial expansion. This article examines Mughal agriculture through the connected themes of land revenue and rural development. It argues that Mughal agrarian history cannot be understood simply as a story of peasant production or imperial taxation taken separately; rather, it was the interaction between cultivation, assessment, monetization, irrigation, local landed rights, and market growth that shaped the rural economy. Under the Mughals, especially from Akbar onward, agriculture was organized within a more systematic revenue framework than before. The *zabt* and *dahsala* arrangements, associated with Todar Mal's reforms, used measurement, crop schedules, and average prices to assess revenue, usually in cash. Contemporary and modern historical accounts suggest that the state demand often ranged from one-third to one-half of the produce value, which made the system fiscally powerful but also potentially burdensome for cultivators. At the same time, the imperial state encouraged the extension of cultivation through loans, concessional assessment on wasteland, and efforts to preserve productive capacity. Major crops included food grains as well as commercial crops such as cotton, indigo, sugarcane, and poppy, while the seventeenth century also saw wider adoption of maize and tobacco. Irrigation relied mainly on wells, tanks, flood-water use, and local lifting devices rather than on large centralized canal systems across most regions. Rural development in the Mughal context therefore consisted less in modern state-led development and more in the expansion of cultivation, commercialization of produce, growth of *qasbas*, and increasing integration of villages into cash and trade networks. Yet these gains were uneven. *Jagirdars*, *zamindars*, moneylenders, and grain dealers often appropriated large shares of the agrarian surplus, and heavy assessment limited peasant capacity for investment. The article concludes that Mughal agriculture was productive, diversified, and commercially important, but rural development remained constrained by the extractive structure of the revenue regime and the unequal social relations of the countryside.

Keywords: Mughal agriculture, land revenue, *zabt*, *dahsala*, rural development, peasantry, *zamindars*, *jagirdars*, commercialization, Mughal India

INTRODUCTION

Agriculture was the backbone of the Mughal economy. The empire's fiscal structure, military maintenance, urban prosperity, and commercial networks all depended ultimately on the produce of the countryside. Britannica notes that the Mughal Empire was a centralized and bureaucratic polity in which revenue collection was a major administrative function, while the empire's wider importance lay in drawing the regions of the subcontinent together through enhanced overland and coastal trade. That political and commercial integration rested on an agrarian base capable of producing both subsistence and surplus.

A historical study of Mughal agriculture must therefore go beyond crop lists or tax terminology. It must ask how cultivation was organized, how land was measured, how demand was assessed, how irrigation functioned, how local rights were distributed, and how village production related to markets. In that sense, land revenue and rural development are inseparable subjects. Revenue shaped cropping decisions, monetization, and the relationship between peasants and the state, while rural development, understood historically, involved expansion of cultivation, use of irrigation, spread of cash crops, creation of market linkages, and growth of rural service centres.

The term "rural development" requires historical caution. In the Mughal context, it does not mean modern development planning, welfare administration, or scientific agricultural extension in the contemporary sense. Rather, it refers to the historical processes through which cultivation spread, wasteland was brought under the plough, irrigation supplemented rainfall, crop variety widened, *qasbas* and grain markets multiplied, and the countryside became more tightly connected to state and market forces. Satish Chandra notes that Mughal agriculture fed a growing urban population, supplied raw materials for manufacture, and contributed to the growth of the money economy, while Cambridge economic history points to artificial irrigation, crop rotation knowledge, and diversified cultivation as significant agrarian features.

This article studies Mughal agriculture as a historical system with both strengths and contradictions. On the one hand, the agrarian order under the Mughals was productive, diversified, and responsive to commercial opportunity. On the other hand, the fiscal pressure of assessment, the role of *jagirdars* and *zamindars*, and the regressive effects of cash demand often constrained the peasantry. The article is organized around the agrarian structure of the Mughal countryside, crop patterns, irrigation and technique,

land revenue administration, the social relations of surplus extraction, and the broader implications of these processes for rural development.

METHOD AND HISTORIOGRAPHICAL ORIENTATION

This article follows a historical-analytical method based on authoritative secondary materials and institutional reference works. It draws on Britannica's essays on Mughal administration and Akbar's revenue system, the *Cambridge Economic History of India* chapter on Mughal India, an e-PG Pathshala module on Mughal taxation and agrarian relations, and Satish Chandra's *History of Medieval India*. These sources combine political history, agrarian history, and economic interpretation, allowing the article to link administrative design with peasant experience and rural change.

The article also takes seriously a major historiographical insight associated with work on the Mughal agrarian system: the countryside cannot be described only in terms of imperial order from above. It must also be understood through peasant rights, local intermediaries, caste and village hierarchy, and the pressures of commercialization. That is why the discussion below treats agriculture, revenue, and rural development as part of one integrated agrarian structure rather than as separate topics.

THE AGRARIAN BASIS OF THE MUGHAL STATE

The Mughal state derived the bulk of its income from land revenue. Britannica describes Akbar's revenue administration as a remarkable feature of Mughal governance and notes that its implementation took roughly two decades. The revenue system was not peripheral to the empire; it was the fiscal core that supported the mansabdari order, the payment of personnel, and the functioning of the central administration. The fact that jagirdars were typically paid through transferable land assignments shows how directly imperial power was tied to agrarian extraction.

The agrarian base of the empire was extensive and regionally diverse. Major crops included food grains and commercial crops such as sugarcane, indigo, fibers, and poppy. Britannica also notes that by the late seventeenth century Mughal India was one of the richest economies in the world, a scale of wealth that would have been impossible without substantial agrarian productivity. Agriculture did not merely feed villages; it underwrote urbanization, military organization, and long-distance trade.

Satish Chandra adds an important corrective to romanticized pictures of the countryside. He argues that Mughal agriculture was, on balance, efficient and capable of feeding expanding towns and supplying raw materials to manufacturing, but he also stresses that the ordinary peasant, burdened by heavy state dues, often retained only enough for subsistence and basic reproduction. Thus, the agrarian order was productive at the macro level but unequally rewarding at the level of cultivator welfare.

CROPPING PATTERNS AND AGRICULTURAL DIVERSITY

One of the strongest features of Mughal agriculture was crop diversity. The countryside produced staple grains while also supporting a growing range of commercial crops. Britannica identifies food grains, poppy, sugarcane, indigo, and fibers as major outputs of the agrarian economy. Satish Chandra further notes that in the seventeenth century Indian cultivators adopted new crops such as tobacco and maize when they found them profitable, showing that Mughal peasants were not passive traditionalists but capable of responding to market opportunities.

This diversity mattered for both the state and the market. Cash crops such as cotton, indigo, oilseeds, and sugarcane were especially important because their state demand was generally assessed in cash, not in kind. Satish Chandra explains that under systems such as *batai*, although peasants could in some situations choose between cash and kind, crops like cotton, indigo, oilseeds, and sugarcane were effectively treated as cash crops. This reinforced commercialization and tied agrarian production to monetary exchange.

The spread of new crops is one of the clearest signs of agrarian dynamism. Satish Chandra explicitly states that tobacco and maize were added in the seventeenth century, while silk and tussar cultivation became so widespread in Bengal that imports from China were no longer necessary. This is historically significant because it demonstrates both peasant adaptability and regional specialization. Agricultural diversification was not only ecological; it was economic, shaping revenue flows and market linkages.

Table 1. Major categories of crops in Mughal agriculture

Category	Examples	Historical significance
Food grains	Wheat, rice, barley, millets	Sustained the population and urban demand
Cash/industrial crops	Cotton, indigo, sugarcane, poppy, oilseeds	Generated revenue in cash and supported trade and manufacture
Newly adopted crops	Tobacco, maize	Showed peasant responsiveness to profitability and market opportunity
Regionally specialized products	Silk and tussar in Bengal	Linked certain regions more strongly to commercial networks

Source basis: Britannica on Mughal crops and Satish Chandra on crop diversification and commercialization.

The diversity of crops also implies that Mughal agriculture cannot be reduced to subsistence production. By the sixteenth and seventeenth centuries, cultivation in many regions had become deeply interwoven with commercial and fiscal demands. This does not mean every peasant household was prosperous; rather, it means that peasant agriculture operated within a broader agrarian-commercial economy.

IRRIGATION, TECHNIQUE, AND THE MEANS OF CULTIVATION

Mughal agriculture depended heavily on the monsoon, yet it was not purely rain-fed. The *Cambridge Economic History of India* notes that artificial irrigation was used to supplement rain and flood, and that wells and tanks were the main sources of irrigation. It also describes different devices for lifting water into field channels, including the simple wooden scoop or *dhenkli*. This suggests a countryside in which local irrigation technologies played an important role in stabilizing and extending cultivation.

The irrigation picture, however, was decentralized. Instead of a uniformly canal-based agrarian regime, Mughal agriculture relied largely on local water structures and region-specific methods. Wells, tanks, flood irrigation, and lifting devices mattered more in many zones than centrally organized hydraulic intervention. In historical terms, this meant that rural development often depended on local initiative, localized capital, and community labour rather than on large-scale state engineering alone.

At the level of agronomic knowledge, the evidence is mixed but suggestive. The Cambridge account observes that there is little information on fertilizer use, though some use of fish manure on the coasts is recorded, and that traditional knowledge of crop rotation helped maintain soil productivity. Satish Chandra also argues that although no dramatic new agricultural techniques were introduced, Indian agriculture remained efficient. This is a useful corrective to both extremes: Mughal agriculture was neither stagnant nor technically revolutionary in a modern sense. Its strength lay in accumulated experience, crop diversity, local irrigation, and the adaptability of cultivators.

The ability of cultivators to shift from one crop to another according to prices further underlines their agency. Satish Chandra explicitly states that peasants could move from one crop to another depending on profitability. That statement is historically important because it challenges any simplistic view of the peasant as trapped in immobile subsistence. The Mughal countryside included choice, though such choice remained constrained by revenue demands, custom, caste, and access to land, water, and credit.

THE MUGHAL LAND REVENUE SYSTEM

The most famous aspect of Mughal agrarian administration is its land revenue system, especially under Akbar. Britannica explains that in 1580 Akbar obtained the previous ten years' local revenue statistics on productivity and prices, grouped districts with similar agricultural conditions, replaced hemp rope measurement with bamboo rods linked by iron rings, and fixed the revenue according to continuity of cultivation and soil quality. In the *zabt* system, the assessment generally ranged from one-third to one-half of the production value and was payable in copper coin. This compelled peasants to sell produce in the market, thereby reinforcing monetization.

The e-PG Pathshala module provides further detail on the evolution of the system. It notes that the Mughal state's basic claim was on the crop, not simply on land as an abstract unit. Earlier forms of crop sharing such as *batai* or *ghalla-bakhshi* coexisted with estimation methods such as *kankut*. Over time, the Mughal state developed a more elaborate measurement-based system, and by Akbar's later years cash rates were determined for each kind of crop in specific revenue circles on the basis of yield, prices, and area cultivated over a ten-year period. This was the mature form of *zabt*.

Satish Chandra's account complements this by showing that Mughal assessment was not monolithic. Alongside *zabti* and *dahsala*, other systems such as *batai*, *ghalla-bakhshi*, and *nasaq* continued in different regions. He also notes that peasants were sometimes allowed to choose between systems in specific circumstances, especially when crops had been ruined. This regional diversity is historically important because it reveals a flexible empire adapting standard principles to local conditions rather than enforcing a single rigid method everywhere.

Table 2. Major land revenue methods in Mughal India

Method	Basic principle	Historical implication
Batai / ghalla-bakhshi	Crop-sharing between state and cultivator	Considered fairer but administratively demanding
Kankut	Estimation of yield and demand	Reduced need for actual crop division but depended on local estimation
Zabt	Measurement-based cash assessment using schedules and average prices	Strengthened fiscal centralization and monetization
Dahsala	Ten-year averaging of yields and prices within assessment circles	Increased regularity and predictability of assessment
Nasaq	Rough calculation based partly on past dues/estimation	Offered administrative convenience in some areas

Source basis: Britannica on Akbar's revenue reforms, e-PG Pathshala on taxation and agrarian relations, and Satish Chandra on Mughal assessment methods.

The fiscal sophistication of the Mughal state should not obscure the burden of the system. The e-PG module states that the trend of the Mughal fiscal system was to maximize revenue by preserving and extending cultivation, and that in practice Akbar's *zabt* could extract nearly half the produce in some contexts. Satish Chandra similarly states that state dues were often very heavy, sometimes approaching nearly half of the produce, leaving ordinary peasants with little capacity for investment in land improvement. Thus, the revenue system was both a remarkable instrument of state formation and a severe limit on peasant prosperity.

PEASANTS, JAGIRDARS, AND ZAMINDARS

Mughal agrarian relations cannot be understood without distinguishing peasants, jagirdars, and zamindars. Britannica explains that jagirdars were paid through transferable land assignments and normally had no magisterial or military authority over those territories, though they collected taxes through their agents and depended on moneylenders and local dealers for remittance. The state thus separated assignment from ownership, but in practice revenue rights gave substantial leverage over cultivators.

The e-PG module emphasizes that jagirs comprised much of the empire's assessed revenue and that the jagirdar often sought to exact as much as possible because his assignment was temporary. It notes that jagirdars were frequently in conflict with both zamindars and peasants and that large jagirdars could exercise considerable pressure despite formal limits. Since assignments were transferable, jagirdars had incentives to maximize short-term realization rather than to invest patiently in the agrarian base. This is one of the major reasons why rural development under Mughal rule remained constrained.

Zamindars formed another crucial layer. Britannica states that Mughal officials often dealt with local community leaders and superior landholders, the zamindars, who collected revenue from peasants and paid it to the treasury while retaining a portion for themselves. The e-PG module adds that zamindars possessed hereditary claims over the produce of peasants, could impose local cesses, and in many regions held semi-military and clan-based authority. Their rights were saleable and mortgageable, which points to the increasing monetization of rural property relations.

For peasants, this layered system meant that the fiscal demand of the state was mediated through multiple social powers. Satish Chandra notes that peasants possessed hereditary cultivation rights and were not ordinarily dispossessed so long as they paid revenue; they could even sell land under certain conditions and their children inherited it. Yet he also stresses that the landless and poorer cultivators, often lacking ploughs and bullocks, could barely survive, and that the burden of state dues limited their ability to invest. The peasantry thus enjoyed some customary security but little real insulation from pressure.

RURAL DEVELOPMENT: EXPANSION, MONETIZATION, AND QASBAS

If "rural development" is understood historically as the extension of cultivation, growth of markets, use of irrigation, and closer integration of village and town, then the Mughal period did witness important developments. The state offered *taccavi* loans for seeds, animals, implements, and other needs. Satish Chandra writes that Akbar wanted officials to act "like a father" toward peasants, to advance loans, and to induce them to plough as much land as possible and sow superior crops. He also notes concessional assessment for land newly brought under cultivation, which helped bring wasteland into production over time.

Commercialization was another major aspect of rural transformation. Satish Chandra states that under the *zabti* system land revenue had to be paid in cash, and even where peasants could opt for other systems, the state's share was commonly sold in the village with the help of grain dealers. He estimates that around 20 percent of rural produce was marketed, a substantial proportion, and that this stimulated the rise of *qasbas*, small townships functioning as local market centres. In this sense, Mughal agrarian administration contributed not only to state extraction but also to the growth of a more monetized rural economy.

Britannica similarly notes that Akbar's revenue system encouraged rapid economic expansion and increased the activity of moneylenders and grain dealers in the countryside. This is a key point for understanding rural development. The Mughal countryside was not isolated from commerce. Villages were increasingly tied to markets, cash demand, credit, and merchant activity. Such connections helped widen the agrarian economy, but they also made peasants more vulnerable to price fluctuations, debt, and the bargaining power of local intermediaries.

At the same time, the agrarian gains of the Mughal period were deeply dependent on local initiative. Satish Chandra explicitly states that the expansion and growth of cultivation would hardly have been possible without local efforts, initiative, and investment. This is an important historiographical point. Mughal rural development was not simply handed down by imperial policy. It emerged from the interaction of peasant labour, local landed power, irrigation structures, and market demand. The state could encourage and tax; it could not alone create a prosperous countryside.

LIMITS AND CONTRADICTIONS OF THE AGRARIAN ORDER

The Mughal agrarian system was in many ways advanced, but it contained deep contradictions. The same system that brought measurement, fiscal rationalization, market growth, and crop diversification also imposed a heavy and often regressive burden on cultivators. The e-PG module describes the tax system as one aimed at appropriating the surplus "by any means" and concludes that it was regressive for poorer peasants, especially under conditions of cash payment. It also notes that the state struggled to control intermediaries effectively.

Satish Chandra's analysis similarly shows a structural limit on rural improvement: although peasants were productive and adaptable, the heaviness of state dues often left them with barely enough to survive and little scope to invest in land or irrigation improvements. Famines and scarcities further exposed the fragility of lower rural strata. The landless and village artisans suffered especially in such times. Thus, while Mughal agriculture supported a large empire and a substantial urban economy, its gains were unequally distributed and often rested on sustained pressure on the lower countryside.

Another contradiction lay in the jagirdari structure. Because jagirdars were frequently transferred, they often lacked long-term incentives for careful agrarian stewardship. The e-PG module remarks that jagirdars wanted to exact the maximum because they did not remain long in one place. This instability could undermine sustained rural improvement even where the formal revenue system was sophisticated. A revenue apparatus optimized for imperial extraction did not always produce conditions favorable to peasant welfare.

CONCLUSION

Agriculture in the Mughal era was the foundation of imperial wealth and one of the most dynamic sectors of early modern Indian life. It was marked by crop diversity, peasant adaptability, localized irrigation, commercialization, and a more systematized revenue administration than in many earlier regimes. The *zabt* and *dahsala* systems under Akbar represented major efforts to standardize assessment through measurement, crop schedules, and average prices. The countryside produced food grains as well as commercial crops such as cotton, indigo, sugarcane, and poppy, and by the seventeenth century cultivators were also adopting tobacco and maize. These developments linked village production to broader markets and helped sustain manufacturing and urban expansion. Yet the same agrarian order also exposed the limitations of Mughal rural development. The state's fiscal demand could be heavy, often approaching one-third to one-half of the produce value. *Jagirdars*, *zamindars*, moneylenders, and grain dealers mediated the extraction of surplus, and poorer cultivators had limited capacity to invest in improvement. Rural development therefore advanced in a historically real but uneven sense: cultivation expanded, markets deepened, and *qasbas* grew, but the benefits of these processes were not equally shared. In this lies the central historical character of Mughal agriculture: it was productive and commercially significant, but structured by an extractive revenue regime that constrained the developmental possibilities of the peasantry.

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