



Land Measurement Systems and Their Economic Significance in Early Medieval Bengal (5th - 12th Century CE): An Epigraphic and Literary Inquiry

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ABSTRACT

This study investigates the units of land measurement and valuation practices in ancient Bengal from the 5th to the 12th century CE, primarily based on epigraphic and literary sources. The research reveals a striking dependence on agrarian standards, specifically grain capacity, to define land units such as **kulyavāpa**, **droṇavāpa**, and **āḍhavāpa**, among others. These units were not determined by fixed areal extent but rather by the quantity of seed-grain that could be sown, reflecting a crop-centric agrarian economy. The paper also traces the evolution of measurement tools such as **nala** (measuring sticks/rods), as well as regional variations in standards like **pāṭaka**, **hala**, **khāḍika**, and **unmāna**. Based on inscriptional data from regions such as Puṇḍravardhana, Samataṭa, Śrīhaṭṭa, and Varendra, the study reconstructs how socio-economic demands influenced increasing precision in land measurement. The paper also provides rare evidence of land valuation in **dīnāras**, highlighting price variations across

regions. Through a detailed analysis of terminologies, metrological systems, and grain-to-land conversions, this paper contributes to the understanding of rural administration, agrarian economy, and regional metrology in early medieval eastern India

Introduction

The measurement of land in early historical and early medieval Bengal, roughly between the 5th and 12th centuries CE was primarily grounded in agrarian logic, with units based not on abstract spatial metrics but on grain capacity. A close analysis of inscriptions from this period reveals a consistent use of seed-based metrology, where the amount of cultivable land was defined by the volume of grain that could be sown upon it. The terminology employed - **kulyavāpa**, **droṇavāpa**, **āḍhavāpa** (or later, **āṭhaka**) makes this clear. These terms, frequently attested in inscriptions from regions like Puṇḍravardhana (North Bengal), Samataṭa (East Bengal), and Śrīhaṭṭa (Sylhet), suggest a sophisticated but practical method of defining agricultural territory, rooted in everyday agrarian practices.

Middle Body of the Research

From the 5th to the 7th centuries CE, a clear hierarchy of land measurement units can be discerned in the inscriptions of Ancient Bengal. The highest unit of land was the *kulya* or *kulyavāpa*, followed by the *droṇavāpa*, and the smallest being the *āḍhavāpa*. The terms *kulya*, *droṇa*, and *āḍha* (or *āṭaka*, known in later inscriptions from eastern Bengal as *āḍhā*) all denote seed-capacity units, and the land area was calculated based on the quantity of seeds sown. This method of land measurement by seed-capacity is not at all unusual in the agrarian context of early Bengal.

The term ***kulyavāpa*** refers to a tract of land where the amount of seed required to sow one *kulya* of grain could be sown. According to ancient grammatical sources, the land where seeds are sown is called *vāpa-kṣetra*. Thus, the land that could be sown with one *kulya* of seeds was called *kulyavāpa*. Similarly, a ***droṇavāpa*** and ***āḍhavāpa*** represented the area of land required to sow one *droṇa* and one *āḍha* of grain respectively. Some scholars identify the *kulya* with the traditional measuring basket *kulā* still used in eastern Bengal. The *kulubāya* term still in use in the Mymensingh-Sylhet-Cachar region is likely a derivative of *kulyavāpa*.



The *droṇa* has survived in the modern dialects of rural Bengal as *dona* or *ḍona*. Likewise, *āḍha* is still known as *āḍhā* in many regions. According to ancient traditions, the ratio between land units was as follows:

- 1 Kulyavāpa = 8 Droṇavāpa
- 1 Droṇavāpa = 4 Āḍhavāpa
- 1 Āḍhavāpa = 4 Prastha.

This correlation is supported by epigraphic evidence. For example, the Pāhārpura Inscription indicates that 12 droṇavāpa is equal of 1.5 kulyavāpa. A similar implication is found in the Baigrāma Copper-plate Inscription.

These units were intimately tied to the agricultural economy of Bengal, where rice (*dhānya*) was the principal crop. In the *Manusmṛti*, the term *droṇa* refers specifically to a *dhānya-droṇa* (grain-measure), which was later explained by Bengali commentators like Kullūkabhaṭṭa. According to Kullūkabhaṭṭa and Raghunandana, the following measurements are observed:

- 8 Muṣṭi = 1 Kuñci
- 8 Kuñci = 1 Puṣkala
- 4 Puṣkala = 1 Āḍhaka (Āḍha)
- 4 Āḍhakas = 1 Droṇa and according to *Medinīkoṣa*
- 7 Droṇas = 1 Kulya. Previously already mentioned that *1 Kulyavāpa = 8 Droṇavāpa* according to ancient traditions.

One *āḍhaka* generally held 16 - 20 *sera* of rice, implying that one *droṇa* held between 64 and 80 *sera* of rice and one *kulya* held between 512 and 640 *sera* (approximately 12–18 *maṇa*). The tract or place of land needed to sow this amount of grain is then defined as one *kulyavāpa*, though exact correlation remains speculative.

Measuring Land with the Nala

The land *kulyavāpa*, *droṇavāpa*, or *āḍhavāpa*, was measured by the *nala* (measuring stick/rod). This *nala* constituted the standard in ancient North and East Bengal for measuring land. According to Baigrāma Copper-plates, Pāhārapura Copper-plates, and Faridpura Copper-plates, 1 *māna* equals 8 and 9 *nalas*. However, the inscriptional formula is ambiguous and suspicious:



(i) Does 1 māna denote an area in “width × length” (i.e. a rectangular plot), (ii) Do “8” and “9” refer to two different stick/rod-lengths (an eight-nala or stick/rod versus a nine nala or stick/rod) and (iii) is it specifying the measure for kulyavāpa, droṇavāpa, or āḍhavāpa etc. Moreover, the actual length of a nala varied with the arm-span of the person whose hand served as the standard. According to the Baigrāma Copper-plate, the nala was based on the hand of a man named Dabbīkarma, whereas the Faridpura Copper-plate uses the hand-measure of Śivacandra. It is reasonable to assume that their spans approximated or slightly exceeded in the regional average. Such personalized stick/rod-standards persisted in Bengal well into the 18th century.

The Pāṭaka: A New Land-Measurement Unit

Two inscriptions, Guṇāighara Copper-plate of Bainyagupta and the Āmrāphapura No. 1 Copperplate of Devakhaḍga mention a novel unit called the pāṭaka, immediately followed by references to droṇavāpa (6th - 8th centuries CE). By analysing the recorded land grants, one can infer the relationship between the two:

Āmrāphapura No. 1 Copperplate Analysis:

The total donated land, when expressed in *droṇavāpa*, yields a ratio of **50 droṇavāpa = 1 pāṭaka**. The reading of this plate is beyond a reasonable doubt.

Guṇāighara Copper-plate Evidence:

Rudradatta’s grant of 11 pāṭaka of cultivable land (to his five distinct holdings) corresponds to 90 droṇavāpa in total. Since 90 droṇavāpa = 2¼ pāṭaka, it follows that 1 pāṭaka = 40 droṇavāpa. Taken together, these two independent sources suggest that the ratio lies between 40 - 50 droṇavāpa per pāṭaka, reflecting either regional variation or diachronic change in measuring practice.

It is a self-evident truth that, in agrarian societies, population growth inevitably increases the demand for land. Though direct evidence of demographic expansion in early Bengal is scarce, inscriptional records allow us to infer that the need for cultivable and habitable land was growing steadily from the 5th century CE onwards.

The Dual Function of Pāṭaka: Unit of Land and Settlement Name

The term *pāṭaka* undoubtedly functioned as a unit of land measurement. However, as evidenced in the Āmrāphapura inscriptions, *pāṭaka* was also employed to denote a village or a segment of a village. Names such as *Talapāṭaka*, *Markaṭāśī-pāṭaka*, *Vatsanāga-pāṭaka*, and *Dara-pāṭaka* clearly indicate



settlement designations rather than measurement units. Indeed, it may be reasonably inferred that the Bengali word *pāḍā* derived from either *pāṭaka* or the indigenous *pāḍā* evolved into *pāṭaka* in epigraphic parlance. Thus, *Talapāṭaka* likely corresponds to *Talapāḍā*, *Bhaṭṭapāṭaka* to *Bhāṭapāḍā*, and *Madhyapāṭaka* to *Madhyapāḍā* - nomenclature patterns still widely prevalent across present-day West Bengal and Bangladesh.

Such naming conventions also appear in epigraphs outside Bengal - for instance, settlements named *Mūlavarmapāṭaka* and *Viśālapāṭaka*. The synonymous usage of *pāṭa* or *pāṭaka* for “village” or “village part” (= *pārā*) was not confined to Bengal; in north and western India, variants such as *paḍra* or *paḍraka* are attested, e.g., *Baḍapaḍrakāvidhāna-grāma*, *Śamīpaḍraka-grāma*, and *Śirīṣapaḍra-grāma*.

Hierarchies of Land Measurement: From Pāṭaka to Kākaṇikā

It is difficult to determine the exact land measurement standards during the reign of the Pāla emperors. In most cases, what was granted consisted of entire villages or multiple villages, possibly one of the reasons for the absence of finer measurement references. However, by the eleventh century, the *Rāmapāla* Copper-plate of Śrīcandra indicates that *pāṭaka* had emerged as the highest standard unit of land. In Faridpur, this unit was in use as early as the eighth century; and by the eleventh century, it appears in Vikramapura as well. Roughly during the same period in Śrīhaṭṭa, *hala* is attested as the highest unit.

Some scholars have speculated that *hala* is simply another name for *kulyavāpa*. Whether this identification holds or not, the Bhāṭera Copper-plate of Govindakēśava records that across twenty-eight villages there existed 296 homestead plots (*vāstu-bhūmis*) and 375 *hala*-units of land. The smallest unit mentioned there was *krānti*. From the available inscriptions of Śrīhaṭṭa, a general order of units emerges as follows:

3	<i>Krānti</i>	=	1	<i>Kaḍā</i>
4	<i>Kaḍā</i>	=	1	<i>Gaṇḍā</i>
20	<i>Gaṇḍā</i>	=	1	<i>Paṇa</i>
4	<i>Paṇa</i>	=	1	<i>Bekhā</i>
4	<i>Bekhā</i>	=	1	<i>Saṣṭhī</i>
7	<i>Saṣṭhī</i>	=	1	<i>Poyā</i>



4 *Poyā* = 1 *Kēdāra*

12 *Kēdāra/Kēyāra* = 1 *Hala* (= approximately 10.5 *Bighās* or 3.5 Acres)

Although *pāṭaka* appears as the highest unit in Śrīcandra's Rāmpāla Copper-plate, in the *Dhullā* inscription of the same king, *hala* is the highest. From the *Dhullā* Copper-plate, learn that *drona* was the next lower unit below *hala*, though the exact proportion between them is unspecified. In Bhojavarman's *Belāva* Copper-plate (12th century), *pāṭaka* is again the highest, with *drona* as the subordinate measure. The Sena inscriptions provide further evidence for a hierarchy:

1. *Pāṭaka* or *Bhūpāṭaka*
2. *Drona* or *Bhūdrona*
3. *Āṭhaka* or *Āḍhavāpa*
4. *Unmāna* (also *Udāna*, or *Uyāna*)
5. *Kākiṇikā* or *Kāka*

An exception is found in the Sundarban Copper-plate of Lakṣmaṇasena, where the standard deviates slightly: *khāḍikā* is mentioned below *drona*, followed by *unmāna* and *kākiṇikā*. Unfortunately, the inscriptions do not clearly define the ratio between *khāḍikā* and *drona*, or between *bhū-khāḍī* and *khāḍikā*. However, the Sundarban plate does provide one precise standard:

1. 12 *Āṅgulis* = 1 *Hāta*
2. 32 *Hāta* = 1 *Unmāna* (also *Udāna* or *Uyāna*)

From Grain and Coin to Field and Furrow: Semantic Evolution of Land Measures

Terms like **kulyavāpa**, **dronavāpa**, and **āḍhavāpa** clearly derive from **śasyamāna** (grain volume measures), with **vāpa** literally meaning 'sowing' - referring to the amount of land required to sow one **kula**, **drona**, or **āḍhaka** of seed grain. Units such as **pāṭaka** and **hala** likely also originated as field-size references based on sowing or ploughing capacity.

The unit **khāḍī** (or **khābī**, a dialectal form) appears to have also been based on grain capacity. The diminutive **khāḍikā** (with the suffix - *kā* indicating smaller size) likely signified a sub-unit of **khāḍī**.



Similarly, **kāka** or **kākaṇikā**, in its earliest usage, was likely a **coinage term**, not a land unit. This is supported by Śrīdhara's verse from his *Triśatikā*:

Soḍaśapaṇaḥ purāṇaḥ paṇo bhavet kākiṇicatuṣkeṇa |
Pañcāhataiścaturbhirvarāṭakaiḥ kākiṇī hyekā ||

This reveals that **kākiṇī** was a sub-denomination in the monetary system, used in combination with other coins like *paṇa*, *purāṇa*, and *varāṭaka*.

The term **unmāna** most likely denoted a **weight measure** (*tulamāna*) in its original sense. However, over time, as agrarian needs grew more sophisticated and recordkeeping became more granular, these terms - whether originally from coinage, grain, or weight - were absorbed into the standard land measurement system.

Among all these units, only **unmāna** and **kākiṇikā** appear to have been rooted in weight or currency systems. The rest—*kulyavāpa*, *drona*, *āḍhaka*, *hala*, *pāṭaka* - were either agricultural or spatial in nature.

It is in the copperplate inscriptions of the **Sena period** that first see efforts to interrelate all four measurement systems:

1. **Land measures (Bhūmimāna)**
2. **Grain measures (Śasyamāna)**
3. **Weight measures (Tulamāna)**
4. **Monetary measures (Mūdrāmāna)**

This synthesis indicates that by the late 11th to 12th century CE, agrarian administration in Bengal had become **sufficiently mature** to correlate land area, expected grain yield, tax weight, and monetary value - all within a unified fiscal logic.

Folk Systems and the Continuity of Land Measures: The Evidence from Mallabhūmi and Śubhankari Verses

As we move into the post-classical period, inscriptions fall silent on certain unitary relationships, but folk memory and local documentation step in to fill some of these gaps. **Yogendra Chandra Roy** had access to several copperplate grants issued by **Caitanyasimhadeva**, a regional ruler. One such land grant records the donation of:



‘two **droṇa**, two **āḍi**, thirty **uyāna**, and one **kāna** of land’ to Janakiram Hazra.

From associated documents of the same period and region, can reconstruct the following equivalences:

- 4 **Kākiṇī** (in East Bengal, especially Chittagong: **Kānī**; in Rāḍha: **Kāna**) = 1 **Uyāna**
- 50 **Uyāna** = 1 **Āḍi** (Āḍhi)
- 4 **Āḍi** = 1 **Droṇa**

This local equivalency finds further support in a verse found in a late medieval **Śubhankarī** manuscript, authored by a certain **Śrīsanātana Maṇḍal Dās** (c. 1230 BE / 1823 CE):

Khete māṭhe raśi nā pāi,
sāla cheṣe kāhana bālāi ||
Cāri kāne layāna hay
pañcās uyāne āḍi ||
Cāri āḍite ḍoṇa hay
āṭhās hāta daḍi ||

Translated:

“When rope fails to measure the field,
A kāhana is said to weigh the yield.
Four kāna make one uyān,
Fifty uyān make an āḍi again.
Four āḍi then make one droṇa,
Measured with rope, eight-and-thirty hands long.”

Another traditional unit is **kūḍava** (also spelled **kurava**), mentioned in folk literature and still remembered in some rural parts of Bengal. Some scholars speculate that **kūḍava** may have been synonymous with **kulyavāpa**, though this remains unverified. According a verse from the mathematical treatise **Lilāvati**:

4 Kūḍava = 1 Prastha
4 Prastha = 1 Āḍhā
4 Āḍhā = 1 Droṇa



Which implies:

- 64 **Kūḍava** = 1 **Droṇa**
- And since 8 **Droṇa** = 1 **Kulyavāpa**, then
→ 1 **kulyavāpa** = 512 **Kūḍava**

This mathematical inference aligns with Dinesh Chandra Sen's hypothesis that a **kulyavāpa** could represent up to **40 - 42 acres**, or about **125 bīghās**, though the exact size may have varied.

It remains uncertain whether **kūḍava** was functionally equivalent to the **bīghā**, but the suggestion does indicate a **scale of agrarian magnitudes** that was consistent with pre-modern perceptions of land productivity.

Royal Sticks/Rods and Regional Rulers: The Standard of the *Nala* as Land-Measurement Instrument

As previously indicated, the **nala** served as the principal standard of land measurement in early Bengal, both before and during the *Pāla-Sena* period. From the eighth century CE onward, epigraphic sources repeatedly attest to its centrality in demarcating land boundaries and calculating land grants.

In the *Ānuliā* Copper-plate of Lakṣmaṇasena, the measuring unit used is described as the **Vṛṣabhaśaṅkara-nala**, named after King **Vijayasena**, whose royal epithet was *Vṛṣabhaśaṅkara*. This suggests that the *nala* in question was standardized based on the length of King Vijayasena's forearm or handspan - essentially tying metrology to royal authority and the person of the monarch. This practice of deriving units from a king's physical dimension is not uncommon in ancient India. The inscription suggests that this *Vṛṣabhaśaṅkara-nala* remained in use well into **Lakṣmaṇasena's reign**, pointing to its institutionalization. Curiously, however, **Vijayasena himself** issued a land grant in accordance with a different standard: the **Samatata-nala**, indicating a local norm used in the **Samatata-maṇḍala** (Eastern Bengal).

The **Barrackpur Copper-plate of Vijayasena** provides further confirmation that the *Samatata-nala* was used not only in coastal Samatata but also in **Khāḍī and Viṣaya**, a subdivision of the **Puṇḍravardhana-bhukti**. This implies that the *Samatata-nala* had a reach extending well beyond its



point of origin, and raises the possibility that it might eventually have become synonymous with the *Vṛṣabhaśaṅkara-nala*.

In regions of **Uttara-Rāḍha** and the **Vyāghrataṭī-maṅḍala** (lower western Bengal), this same *Vṛṣabhaśaṅkara-nala* appears to have been prevalent, as evidenced by multiple **Sena-period copperplate grants**. But in the **Varendrī region** (Northern Bengal), the inscriptions speak instead of measurements taken by the local *nala* in use in that country - a clear indication that land standards were **regionally determined**, even within the same imperial framework.

From the Govindapur Copper-plate of Lakṣmaṇasena, heard that in the **Barddhamana-bhukti**, the local *nala* measured **56 hastas (hands)**. In the **Bhāwal inscription**, another *nala* measuring **22 hastas** is mentioned, likely used in north-eastern **Dhaka district**. This diversity in *nala*-lengths reflects a **polycentric metrological system**, likely responsive to local ecological, agricultural, or customary needs.

Outside Bengal, this diversity continued. In the **Nilagaṅḍu Inscription** of the Chalukya king **Taila II**, the measurement is described as taken by '*rājyamānena daṅḍena*' - literally, the 'royal rod/stick being wielded,' showing that rods (*daṅḍas*) functioned similarly to *nala*. In a copperplate of **Nṛsimhadeva** of Orissa, land is said to be measured by rods named after officials, as in:

'Candradāsakaraṅasya nala-pramāṇena',

and

'Śrīkaraṅśivadāsanāmakānala-pramāṇena'

Such statements show that **individual functionaries' arm-lengths** could serve as benchmarks for land measurement, a highly personalized and decentralized metrological tradition.

The Price of Land: Epigraphic Insights into Value and Revenue Estimation

While inscriptions from the **pre-pāla period** (especially from the 5th - 7th centuries CE) provide valuable data on **land prices** and **later records**, particularly from the **Pāla and Sena periods**, tend to leave these details, as most surviving charters from these centuries are **donative**, not **sell or transactional** in nature. Despite this, a careful examination of **output and revenue estimates** in some later inscriptions allows for an indirect assessment of land valuation during that time.



In the **Damodarpur Copper-plates**, specifically nos. 1, 2, 4, and 5, which span over a century and relate to grants in the **Koṭivarṣa-ṣaya** of the **Puṇḍravarddhana-bhukti**, the price of land is stated quite clearly that **one *kulyavāpa* of land** was valued at **three *dīnāras***. In contrast, the **Faridpur Copper-plates** issued over roughly fifty (50) years and covering grants by three different rulers suggest a price of **four *dīnāras* per *kulyavāpa*** in eastern Bengal.

The **Baigrama Copper-plate** records a price of **two *dīnāras* per *kulyavāpa***, with the donated land located in **Pañcanagarī ṣaya** (likely situated on the border of modern Dinajpur and Bogura districts). Interestingly, this is the same rate we find in the **Damodarpur Copper-plate (No. 3)**, which refers to a grant in **Caṇḍagrāma**, a village situated immediately adjacent to Baigrama and both falling under the **Pañcanagarī** jurisdiction.

The **Pāhārpur Copper-plate**, also records a land price of **two *dīnāras***, and given its geographic proximity to Baigrama (roughly 19–20 miles), it can be inferred to lie within the same administrative unit.

From these observations, can deduce a **regional variation in land value**:

- **Pañcanagarī-ṣaya**: 2 *dīnāras* per *kulyavāpa*
- **Koṭivarṣa-ṣaya**: 3 *dīnāras* per *kulyavāpa*
- **Eastern Bengal (Faridpur region)**: 4 *dīnāras* per *kulyavāpa*

Nearly every copper-plate includes language such as:
“Iha ṣaye... dīnārikyavigrayonuvṛttaḥ”,
 indicating the locally accepted valuation during purchase.

Estimating Historical Monetary Value

From an economic standpoint, it is essential to understand that the **actual value** of coinage depends on **purchasing power**, not nominal denomination. Historians like **Moreland** have shown that a rupee during **Akbar’s reign** could purchase nearly **six times** more than the same rupee in 1912. Extrapolating from this logic, it becomes evident that a *dīnāra* in early medieval Bengal had **substantially greater purchasing power** than any modern equivalent.



In ancient Bengal, one *dīnāra* equaled **16 rūpya (silver coins)**. Thus, even conservatively estimating, a single *dīnāra* likely held a value equivalent to **at least Rs. 96/- in modern Indian currency** at 20th century. Based on this, the per-*kulyavāpa* land prices would approximate at 20th century :

- **Pañcanagarī-viṣaya: Rs. 192/-**
- **Koṭivarṣa-viṣaya: Rs. 288/-**
- **Faridpur region: Rs.384/-**

These prices were by no means insignificant, especially in the context of a **rural, agrarian economy**.

Later Mentions of Land Revenue (Not Price)

Although **Pāla and Sena inscriptions** generally do not mention the *purchase price* of land, they occasionally provide data on **land revenue or annual yield**, expressed in terms of **ancient coins** such as *purāṇa*, *kapardaka*.

For instance, the **Idilpur Copper-plate of Keśavasena** refers to a grant of the village *Tālapadā-pāṭaka* in the **Vikrampur region**. While the area of land is not stated, the **annual revenue (or possibly the total valuation)** is noted as **200 coins**, likely *kapardaka-purāṇas*.

Similarly, the **Sāhityaparṣad Inscription of Viśvarūpasena** mentions a land donation of **336.5 unmnāna** spread over **six villages** in **eleven plots**, with an annual yield of **500 purāṇas**.

Thus, while direct **land prices** are absent in later records, such inscriptions permit **approximate estimations of value based on yield**, reinforcing the observation that **land had become a more politically mediated and less commercially transacted commodity** in the Pāla-Sena period. The correlation between population growth and increasing demand for land is nearly axiomatic, especially in agrarian societies. Even though direct evidence is limited, it is not difficult to infer that in ancient Bengal as well, population expansion was paralleled by a rise in land demand.

Conclusion

The present study, based on epigraphic and literary evidence, has traced the evolution and complexity of **land measurement systems** and their **economic implications** in early medieval Bengal (5th 12th century CE). A multi-tiered hierarchy of measurement units, such as *pāṭaka*, *drona*, *āḍhavāpa*,



unmāna, *kākaṇikā*, and *kulyavāpa* - demonstrates the increasing **granularity** of land assessment in response to growing agricultural demand and socio-political administration. These units, often rooted in **agrarian logic**, whether in terms of plough capacity (*hala*) or grain yield (*dronavāpa*) reflect not only practical considerations but also reveal regional variation and dynastic preferences across Pāla, Sena, and other contemporary polities. The analysis also underscores the **dual usage** of several terms (e.g., *pāṭaka* as both a land unit and a village subdivision), indicating a flexible and culturally embedded system of land categorization.

Importantly, inscriptions from the Gupta and immediate post-Gupta period provide rare but vital references to **land valuation** in terms of *dīnāras*, with notable regional disparities ranging from 2 to 4 *dīnāras* per *kulyavāpa*, depending on the location (*Koṭivarṣa*, *Pañcanagarī*, *Vikrampur*, etc.). While **Pāla and Sena records** tend to omit explicit prices and they provide data on **annual revenue** in *purāṇas*, *kapardakas*, and other denominations, permitting a reconstructed understanding of value through yield estimation. The **standard of measurement** - the *nala* (measuring reed)—also evolved, with dynastically-named reeds such as the *Vṛṣabhaśaṅkara-nala* under Lakṣmaṇasena coexisting with older regional standards like the *Samataṭa-nala*.

Taken together, these findings reveal a **highly stratified, functionally adaptive, and economically responsive** system of land measurement in early medieval Bengal. The inscriptions not only illuminate **fiscal structures** and **agrarian organisation**, but also serve as critical evidence for reconstructing **historical geography, rural settlement patterns, and economic transactions**. The interlinking of **measurement units, revenue logic, and valuation models** attests to the administrative sophistication of early medieval Indian polities, wherein land was not merely a resource, but a calculable, tradable, and taxable economic asset.

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