

Government Paddy Development Schemes And Their Impact On Production And Market Supply: A Review Of The Literature With Special Reference To Palakkad, Kerala

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Abstract

Rice is the staple food of Kerala, yet the state produces only a fraction of its requirement and has experienced a sustained contraction in the area under paddy over the past half-century. Successive central and state governments have responded with a dense architecture of paddy development schemes, comprising minimum support price and assured procurement, input subsidies and per-hectare cultivation assistance, mechanisation and group-farming support, conservation incentives, and agricultural credit and crop insurance. This article reviews the theoretical and empirical literature bearing on the evaluation of these schemes and their impact on paddy production and market supply, with special reference to Palakkad, the leading rice-producing district of the state. Drawing on foundational works in agricultural and development economics, the diffusion-of-innovations and technology-adoption literatures, supply-response theory, and the political science of policy implementation, together with empirical studies from Kerala, India, and comparable developing-country settings, the review synthesises current knowledge around five themes: the decline of paddy cultivation and its causes; the design of government schemes; farmers' awareness and utilisation of schemes; the impact of schemes on production and marketed surplus; and the role of implementation and extension in shaping outcomes. The review finds that scheme effectiveness cannot be inferred from expenditure or aggregate production figures, and that awareness, utilisation, and realised outcomes must be treated as distinct. It identifies a need for district-level, dual-perspective evaluation that separates awareness from utilisation and incorporates the viewpoint of implementing officers alongside that of farmers, and outlines directions for future research.

Keywords: - Paddy Development Schemes, Minimum Support Price, Market Supply, Technology Adoption, Agricultural Extension, Palakkad, Kerala

I. INTRODUCTION

Rice is the staple food of the majority of the Indian population and occupies the largest share of the country's gross cropped area under any single crop, making it central to national food security and to the livelihoods of millions of small and marginal farmers. Kerala, however, presents a paradox within this national picture. Although rice is the staple of the state and demand for it is high, Kerala produces only a small and shrinking fraction of its own requirement and depends heavily on rice imported from other states. The area under paddy in the state has contracted from more than seven lakh hectares in the late 1950s to under two lakh hectares in recent years, even as productivity has risen (Kerala State Planning Board, 2016; Anuradha & Rejimon, 2025). Palakkad, the state's leading rice-producing district, accounts for around two-fifths of Kerala's rice output and is therefore central to any effort to sustain the state's rice economy.

In response to this decline, central and state governments have deployed a wide range of paddy development schemes, including price support and procurement, input subsidies, mechanisation and group-farming support, conservation incentives,

and credit and insurance. Whether, and through what mechanisms, these schemes affect paddy production and market supply is an important policy question, and answering it requires an understanding of the theoretical basis of such interventions and of the empirical evidence on their effects. This article reviews the literature relevant to that question, organising it around the concepts and theories that underpin scheme evaluation, the decline of paddy cultivation in Kerala, the design of the schemes, farmers' awareness and utilisation of them, their impact on production and market supply, and the role of implementation and extension.

1.1. Objectives of the review

Against this background, the present review pursues the following objectives:

- To clarify the key concepts and to review the theoretical frameworks that underpin the evaluation of government paddy development schemes.
- To review the trends in, and the causes of, the decline of paddy cultivation in Kerala, with particular reference to Palakkad district.
- To examine the architecture of government paddy development schemes and the empirical evidence on farmers' awareness and utilisation of these schemes.
- To synthesise the evidence on the impact of the schemes on paddy production and on market supply.
- To assess the role of implementation and agricultural extension, and the differential impact of the schemes across categories of farmers.
- To identify the research gap emerging from the literature and to outline directions for future research.

1.2. Scope and method of the review

The review is narrative and thematic rather than exhaustively systematic. Sources were identified through searches of scholarly databases and repositories and of official publications, using combinations of terms relating to paddy and rice, Kerala and Palakkad, minimum support price and procurement, subsidies, crop insurance and credit, technology adoption and extension, and market or marketed surplus. Preference was given to peer-reviewed empirical studies and to foundational theoretical works, supplemented by official statistical and policy sources such as the Economic Review of the Kerala State Planning Board, Agricultural Statistics at a Glance (Government of India, 2023), and reports of public-policy research bodies. The literature is organised below into thematic sections that move from concepts and theory to empirical evidence and finally to the identification of gaps and directions for future research.

II. CONCEPTUAL AND THEORETICAL FRAMEWORK

2.1. Key concepts

Four concepts recur throughout the literature and require clarification. Paddy production is the total quantity of unmilled rice harvested in an area and period, and is conventionally decomposed into area under cultivation and yield per unit area; decomposition analyses of Kerala consistently show that the fall in production has been driven by the contraction of area rather than by any decline in yield (Kerala State Planning Board, 2016; Anuradha & Rejimon, 2025). Market supply, or marketed surplus, is the portion of production that a household sells rather than retains, and is modelled as a function of production together with household, institutional, and market characteristics (Mulatu & Ansari, 2024). Government paddy development schemes are the ensemble of price, input, income-transfer, and regulatory instruments through which the state supports cultivation. Finally, awareness and utilisation are treated as distinct constructs, following the consistent finding that knowledge of a scheme does not translate automatically into participation in it (Sabu & Roy, 2024).

2.2. Theoretical foundations

Schultz's (1964) account of the transformation of traditional agriculture provides the broad economic premise for scheme evaluation: farmers are efficient allocators who respond to the profitability of new inputs and to the information available to them, so that government schemes raise production only insofar as they alter the profitability of cultivation and the information environment. The diffusion-of-innovations theory of Rogers (1962, 2003), whose intellectual lineage runs from Ryan and Gross (1943) and Griliches (1957), explains how awareness of an innovation is converted, or fails to be converted, into adoption, and provides the theoretical justification for treating scheme awareness and utilisation as separate stages. The economic literature on adoption, surveyed by Feder, Just, and Zilberman (1985) and Feder and Umali (1993), identifies farm size, credit, education, information, and risk as the determinants of participation, to which Bandiera and Rasul (2006) added social networks; this literature supplies the control variables that credible evaluation must accommodate.

Nerlovian supply-response theory (Nerlove, 1958), together with its classic Indian application by Krishna (1963), explains why the production and marketing response to an improved support price is real but typically modest and lagged, being larger where the improved price is regarded as durable. The agricultural household model of Singh, Squire, and Strauss (1986) explains why marketed surplus is not a fixed proportion of output but varies with household and market conditions, since production and consumption decisions are non-separable under market imperfections. Policy-implementation theory (Sabatier & Mazmanian, 1980) directs attention to the gap between policy as designed and policy as delivered, and thus to the front-line role of agricultural officers, while the theory-of-change approach to evaluation (Weiss, 1995) supplies the logic of tracing effects along the causal chain from scheme provision, through awareness and utilisation, to outcomes.

These mid-range theories sit within a wider development-economics literature. Mellor (1976) argued that agricultural growth drives broader development, Lipton (1977) drew attention to urban bias in the allocation of public resources, and Rao (1975) analysed the distribution of the gains from technological change among cultivators. The long-running debate on the inverse relationship between farm size and productivity, from Sen (1962) to Chand, Prasanna, and Singh (2011), remains

relevant to questions of differential impact, and standard treatments of development (Ellis, 1993; Todaro & Smith, 2015; World Bank, 2007) provide the overarching frame within which the evaluation of paddy schemes is situated.

III. PADDY CULTIVATION IN INDIA AND KERALA: TRENDS AND DECLINE

India's rice economy was transformed by the Green Revolution from the late 1960s, as high-yielding varieties, expanded irrigation, and the price-support and procurement system carried the country from recurrent shortage to self-sufficiency, albeit unevenly across regions and with growing concern about sustainability and distribution (Evenson & Gollin, 2003; Pingali, 2012; Bhalla & Singh, 2001). Kerala departs sharply from this national trajectory. Scholarly attention to the state's agrarian difficulties is long-standing (Kannan & Pushpangadan, 1988; Vaidyanathan, 2000), and recent trend analyses document a fall in the area under paddy from about 8.74 lakh hectares in the early 1970s to roughly 1.17 lakh hectares by 2023–24, alongside a rise in productivity to over 3,100 kilograms per hectare that has been insufficient to offset the loss of area (Anuradha & Rejimon, 2025; Kerala State Planning Board, 2016).

The regional literature converges on a common set of causes. The foremost is the rising cost of cultivation, driven above all by the scarcity and high cost of agricultural labour in a high-wage state. The second is the higher relative profitability of competing crops such as rubber, coconut, banana, and areca nut, to which land has been reallocated. The third is the fragmentation of holdings and the ageing of the cultivating population, and the fourth is the conversion of paddy land to non-agricultural uses, especially construction. Because paddy land performs important ecological functions (recharging groundwater, moderating floods, and sustaining wetland biodiversity), its conversion prompted the Kerala Conservation of Paddy Land and Wetland Act of 2008, which is generally assessed to have slowed but not reversed the decline in area (Government of Kerala, 2008; Kerala State Planning Board, 2016). Field studies add that these causes are mutually reinforcing, so that the decline, once begun, proved difficult to arrest (Review of Agrarian Studies, 2011).

IV. PALAKKAD: THE RICE BOWL OF KERALA

Palakkad occupies a distinctive position in Kerala's rice economy, accounting for around forty-one per cent of the state's total rice production, well ahead of the next-ranking districts (Kerala State Planning Board, 2016). Its pre-eminence rests on comparatively favourable agro-climatic conditions, larger operational holdings, and a cultivating tradition that has persisted even as paddy has retreated elsewhere. Empirical work confirms both the district's importance and its vulnerability: Ravikumar and Sudheesh (2013) analysed the economics of paddy cultivation in the district, while Sabu and Roy (2024), in a mixed-methods study conducted in 2023, observed that although Palakkad records the highest paddy production in the state, its cultivation has declined over the preceding two decades, and noted that earlier research had rarely addressed the specific constraints faced by its farmers. This explicit acknowledgement of a district-specific research deficit is significant, because it indicates that work connecting farmers' experience of government schemes to production and market outcomes in Palakkad remains scarce. The partial revival of cultivation in the district has been attributed to a combination of enhanced procurement prices, group-farming initiatives, and mechanisation support (Review of Agrarian Studies, 2011).

V. GOVERNMENT PADDY DEVELOPMENT SCHEMES

5.1. Minimum support price and procurement

The minimum support price is the floor price at which government agencies purchase a crop, announced for paddy by the Commission for Agricultural Costs and Prices. In Kerala the central price is supplemented by a State Incentive Bonus, so that the procurement price received by farmers exceeds the central floor, and procurement is operationalised by the Kerala State Civil Supplies Corporation, which procures paddy directly, mills it, and distributes rice through the public distribution system (Centre for Public Policy Research, n.d.). The wider Indian literature on price policy has a long lineage (Dantwala, 1967; Kahlon & Tyagi, 1983; Chand, 2003; Acharya & Agarwal, 2011) and offers a mixed assessment of effectiveness. Some studies find positive income effects (Singh & Joshi, 2025; Singh & Kumar, 2018), while others emphasise that access to the support price is uneven and conditioned by farm size, location, and awareness (Das, 2020; Jha, 2019), and that the effectiveness of price support depends critically on the reach of the procurement network. The recommendations of the National Commission on Farmers (Swaminathan, 2006) gave renewed prominence to linking the support price to the cost of production.

The mechanics of procurement are themselves consequential for the marketing outcome. In Kerala, paddy is procured directly from farmers by the state civil supplies corporation, which mills it and distributes rice through the public distribution system, and the procurement price combines the central support price with a state bonus (Centre for Public Policy Research, n.d.). A prompt-payment mechanism, under which farmers are paid against a receipt at the time of delivery rather than after the release of central dues, is designed to address one of the most persistent complaints in the marketing literature, namely the delay in payment that forces cash-constrained farmers into distress sales. The scale and timeliness of procurement, and farmers' awareness of and access to these arrangements, therefore mediate the effect of the support price on both the income farmers realise and the quantity of paddy that reaches the formal market rather than being sold to private traders at lower prices.

5.2. Input subsidies and cultivation assistance

A second class of instruments operates on the cost side of cultivation, comprising subsidies on seeds, fertilisers, and other inputs, together with per-hectare cultivation assistance paid directly to farmers. Following Schultz's (1964) logic, lowering the effective cost of inputs raises the return to cultivation and, in principle, encourages farmers to retain area under paddy. The design of input support in Kerala has moved toward direct per-hectare assistance, which reduces leakage but depends for its effect on the timeliness of disbursement and on farmers' awareness of entitlement; where assistance is delayed or its documentation is burdensome, its incentive effect is blunted. The general literature further cautions that subsidy benefits

may be captured disproportionately by larger farmers, reinforcing the need to examine the distribution of benefits across farmer categories.

5.3. Mechanisation and group farming

Because the binding constraint on paddy cultivation in Kerala is the scarcity and cost of labour, mechanisation and collective cultivation assume particular importance. Studies of specific mechanised practices, such as drum seeding in Kuttanad, report gains in profitability (Muralidharan et al., 2015), and the wider literature notes that on-farm capital formation is itself shaped by policy and prices (Katania et al., 2012). Group farming has attracted particular attention in Kerala through the Kudumbashree programme, under which women's joint liability groups cultivate leased land. Agarwal (2018) found that group farms can outperform individual family farms on several measures, and Mehta and Tiwari (2022) documented how landless and land-poor women, organised into groups, gained access to land, credit, and inputs and thereby sustained cultivation on fields that would otherwise have been left fallow. This experience is directly relevant to Palakkad, where group farming has been among the means of reviving cultivation.

5.4. Conservation and credit and insurance instruments

The Kerala Conservation of Paddy Land and Wetland Act of 2008 combines the statutory protection of paddy land with positive incentives, including a royalty payment to owners, and is assessed to have contributed to a stabilisation of area without reversing the long-term decline (Kerala State Planning Board, 2016). Complementing the paddy-specific instruments are broader instruments of agricultural credit and risk management. Studies of the Kisan Credit Card report higher productivity, income, and input use among beneficiaries, alongside persistent gaps in coverage and delays in sanction (Shekhar, 2025; NABARD, 2022), while evaluations of the Pradhan Mantri Fasal Bima Yojana find that adoption is shaped by farm size, credit access, and loanee status (Swain & Hembram, 2020), that awareness is frequently low (Ghanghas, 2018), and that performance in coverage and claim settlement has been uneven across states (Bhushan & Kumar, 2017; Kalia et al., 2018). These instruments interact with the paddy schemes, since a farmer's ability to use a mechanisation subsidy or to avoid distress sales depends in part on access to credit.

VI. AWARENESS AND UTILISATION OF SCHEMES

A consistent finding across the Indian literature is that the effectiveness of agricultural schemes is limited less by their design than by low awareness and by the gap between awareness and actual utilisation. Studies of schemes such as the Kisan Credit Card and crop insurance repeatedly report that a substantial proportion of eligible farmers are unaware of the schemes for which they qualify, and that awareness, where it exists, does not translate automatically into participation because of procedural complexity, documentation requirements, low digital literacy, and weak extension contact. The information environment matters: farmers' knowledge of schemes flows through public extension, the local Krishi Bhavan, fellow farmers, input dealers, and, increasingly, digital and social media, and the mix of channels varies systematically with age, education, and landholding, so that farmers poorly served by the dominant channels are the most likely to remain excluded. The stakes are material, since beneficiary farmers tend to record higher incomes than non-beneficiaries, which foreshadows the expectation that outcomes differ across beneficiary and non-beneficiary categories.

VII. IMPACT OF SCHEMES ON PRODUCTION AND MARKET SUPPLY

Two further features of the awareness–utilisation relationship deserve emphasis. First, participation is best understood as a staged process rather than a single decision, in keeping with the diffusion framework's distinction between knowledge, persuasion, decision, and confirmation (Rogers, 2003); a farmer may be aware of a scheme yet remain at an early stage of the process, so that awareness and utilisation measured at one point in time capture the state of an ongoing process rather than a fixed relationship. Second, the local Krishi Bhavan and the agricultural officer function as the principal change agents who bridge the gap between the availability of a scheme and its uptake, which locates the awareness–utilisation problem squarely within the extension interface examined in section 8. Together these features caution against inferring scheme effectiveness from participation rates alone and reinforce the value of examining the mechanisms through which awareness is, or is not, converted into utilisation.

The evidence on whether government schemes raise paddy production is mixed and context-dependent, consistent with the theoretical expectation that supply response is conditional on the credibility and reach of the intervention. Price support has been found effective in sustaining area and income in surplus states and in specific settings (Singh & Joshi, 2025), and input, mechanisation, and group-farming support have been credited with the partial revival of cultivation in Kerala's rice-bowl districts (Review of Agrarian Studies, 2011). Yet the aggregate record shows continued decline in area, with Palakkad itself recording declines in particular years (Kerala State Planning Board, 2016). The reconciliation lies in recognising that a scheme's production effect depends on awareness, access, and the credibility of its benefits, and in acknowledging the attribution problem that participants are often already better endowed, so that observed correlations partly reflect selection. The relevant comparison, moreover, is not with the past but with the trajectory that would have obtained in the schemes' absence, so that slowing a decline may itself be a substantial achievement.

Underlying the production question is the economics of cultivation. Analyses of cost-of-cultivation data show that paddy profitability has come under sustained pressure from rising input and labour costs, with wide variation across states (Narayanamoorthy, 2013; Chanakya & Nandi, 2024), and that farmer education raises productivity, more so under modern technology (Paltasingh & Goyari, 2018). On the marketing side, the determinants of marketed surplus have been examined most directly by Mulatu and Ansari (2024), who found that farm size, credit, income, and above all the quantity produced significantly affect the market supply of rice, providing empirical support for a direct link from production to market supply. The Indian evidence highlights the institutional obstacles between production and marketed surplus: small and marginal

farmers, lacking direct market access and storage, are often compelled by immediate cash needs to sell to traders below the support price, and regional variation in marketable surplus is well documented (Bajpai, 1994). Assured procurement at a bonus-enhanced price, together with prompt-payment mechanisms, is intended to convert a larger share of production into marketed surplus and to shift sales away from distress transactions.

VIII. IMPLEMENTATION, EXTENSION, AND DIFFERENTIAL IMPACT

The gap between the design of a scheme and its delivery is mediated by the extension system and the front-line officials who staff it, and implementation theory predicts that outcomes depend heavily on their capacity, resources, and discretion (Sabatier & Mazmanian, 1980). A substantial empirical literature examines the determinants and effectiveness of extension. Studies from India find that access to and adoption of extension advice depend on education, landholding, and social position (Nagar et al., 2021, 2022, 2024), and that structured training can improve knowledge and practice (Nagaratna et al., 2017). International evidence converges: farmer-to-farmer extension and training can raise adoption and rice productivity (Nakano et al., 2018), extension interacts with social networks (Wang et al., 2020), and adoption is shaped by perceptions of an innovation’s attributes and by learning and risk (Adesina & Baidu-Forson, 1995; Marra et al., 2003; Mwangi & Kariuki, 2015; Nlerum, 2013; Paudel & Thapa, 2004).

A recurring theme is that the benefits of schemes are not distributed evenly. The diffusion framework anticipates that larger, wealthier, and better-connected farmers adopt earlier and benefit more (Rogers, 2003), and the adoption literature confirms that farm size, credit, education, and information exposure systematically determine participation (Feder et al., 1985). The inverse-relationship debate (Sen, 1962; Chand et al., 2011) and the marketing literature further imply that small and marginal farmers are disadvantaged. The impact of paddy schemes on production and market supply is therefore likely to differ across categories defined by farm size, location, and beneficiary status, an expectation of direct relevance to the equity of scheme delivery in a state dominated by small holders. Table 1 summarises representative studies underpinning this review.

Table 1. Selected studies underpinning the review

Author (Year)	Focus / Context	Method	Key finding
Ryan & Gross (1943)	Diffusion of hybrid corn, Iowa	Field survey	Adoption follows an S-curve; interpersonal communication is decisive.
Nerlove (1958); Krishna (1963)	Supply response, USA and Punjab	Econometric	Output responds to expected price with a lag; response is inelastic.
Schultz (1964)	Traditional agriculture	Theoretical	Farmers are efficient; growth requires profitable new inputs.
Feder, Just & Zilberman (1985)	Adoption in developing countries	Survey / review	Farm size, credit, education, risk and agro-climate drive adoption.
Singh, Squire & Strauss (1986)	Agricultural household behaviour	Modelling	Production and consumption are non-separable under market imperfection.
Agarwal (2018)	Group vs family farms, India	Comparative empirical	Group farms can outperform individual family farms.
Das (2020)	Access to MSP, India	Empirical	MSP access is conditioned by farm size, location and awareness.
Swain & Hembram (2020)	Crop insurance adoption, Odisha	Probit regression	Farm size, credit and loanee status shape insurance adoption.
Paltasingh & Goyari (2018)	Education & productivity, paddy, India	Regression	Education raises paddy productivity, more so under modern technology.
Mulatu & Ansari (2024)	Rice market supply, Ethiopia	Multiple regression	Output, farm size, credit and income determine market supply.
Sabu & Roy (2024)	Constraints of paddy farmers, Palakkad	Mixed methods	Identifies key constraints; confirms district-specific research gap.
Singh & Joshi (2025)	Impact of MSP, Uttarakhand	Survey / analysis	MSP raised incomes and reduced poverty incidence.
Anuradha & Rejimon (2025)	Paddy trends, Kerala	Trend / CAGR analysis	Area and production decline; productivity gains cannot offset area loss.

Source: Compiled by the authors from the reviewed literature.

IX. RESEARCH GAP AND DIRECTIONS FOR FUTURE RESEARCH

Synthesising the literature makes it possible to state what is known, what is contested, and what remains unexamined. It is well established that paddy cultivation in Kerala has declined for reasons rooted in labour scarcity, competing land uses, and the changed economics of cultivation; that a dense architecture of government schemes has been deployed in response; and that, in other settings, the effect of such schemes on production and marketed surplus depends on awareness, access, and the efficiency of delivery. What remains contested is the magnitude and even the direction of the net effect of these schemes, given the countervailing pressures on cultivation and the difficulty of attribution.

Four gaps stand out. First, the literature is overwhelmingly conducted at the state level or aggregates evidence across districts, so that district-level evaluation of scheme awareness, utilisation, and effectiveness in Palakkad, the state’s leading

rice producer, remains scarce, a point noted explicitly by Sabu and Roy (2024). Second, existing evaluations typically rely on a single source of evidence, either farmers or official records, and rarely combine a structured survey of farmers with the perspective of the agricultural officers who implement the schemes; the methodological value of a dual-perspective design is largely unrealised. Third, much of the literature treats the existence of a scheme as equivalent to its benefit, without separating awareness from utilisation and utilisation from realised outcomes in production and market supply. Fourth, there is limited district-level, evidence-based policy feedback that draws on both beneficiaries and implementers.

Future research should therefore undertake district-level, dual-perspective evaluation of paddy development schemes that distinguishes awareness from utilisation, estimates their relationship to production and market supply, compares outcomes across meaningful categories of farmers, and reads the quantitative evidence against the testimony of implementing officers. Such research would enable the state's substantial expenditure on paddy schemes to be directed with greater confidence to the points at which it would do most good, identifying whether the binding constraint lies in awareness, in access, or in scheme design, and which categories of farmers are being reached and which are being missed.

9.1. Policy implications

Several implications for policy follow from this synthesis. First, because the awareness–utilisation gap is a recurrent constraint, investment in the reach and quality of extension and in the simplification of scheme procedures may yield larger returns than further increases in the monetary generosity of schemes whose benefits many eligible farmers never claim. Second, because the benefits of schemes tend to accrue disproportionately to larger and better-connected cultivators, the deliberate targeting of small and marginal farmers, and the strengthening of collective institutions such as group farming, are important for both equity and the preservation of the cultivating base. Third, because the production and marketing effects of price support depend on the credibility and timeliness of procurement and payment, the efficiency of the procurement machinery and of prompt-payment mechanisms deserves at least as much policy attention as the level of the support price itself. Finally, because the relevant benchmark for evaluating schemes in a declining sector is the counterfactual rather than the past, the arrest or slowing of decline should be recognised as a legitimate policy achievement, even where aggregate production does not rise.

9.2. Limitations of the review

This review has several limitations. It is narrative and thematic rather than exhaustively systematic, so that the selection of sources, while wide, does not follow a formal protocol with pre-registered inclusion criteria. The regional literature specific to Palakkad and to Kerala is relatively thin and is dispersed across institutional repositories and journals that are not fully indexed in international databases, so that some relevant studies may not have been captured. A number of the empirical studies drawn upon differ in context, crop, and method, which limits the strength of any synthesis across them. These limitations are themselves informative, however, since the scarcity of district-level, methodologically consistent evidence is precisely the gap that future research is called upon to address.

X. CONCLUSION

This review has synthesised the theoretical and empirical literature on government paddy development schemes and their impact on production and market supply, with special reference to Palakkad. The literature offers a well-developed understanding of why paddy cultivation in Kerala has declined, a rich theoretical apparatus for analysing how schemes are expected to work, and a substantial body of evidence on the awareness, utilisation, and impact of agricultural schemes across India and comparable settings. Its central lesson is that scheme effectiveness cannot be inferred from expenditure or from aggregate production figures, but must be assessed through evidence that distinguishes awareness from utilisation, links both to measurable outcomes, and incorporates the perspective of implementers alongside that of beneficiaries. Addressing this need through district-level, dual-perspective evaluation offers the most promising route to strengthening the design and delivery of paddy development schemes in Kerala and comparable agrarian economies.

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