
THE IMPACT OF THE PALM OIL REPLANTING PROGRAM (PSR) ON OIL PALM FARMERS AT KUD MITRA USAHA, BUATAN BARU VILLAGE, KERINCI KANAN DISTRICT, SIAK REGENCY, INDONESIAHerman Farmi*^{1,2}, Reza Pahlepi³¹ *Magister Ilmu Pertanian Sekolah Pascasarjana Universitas Lancang Kuning
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ABSTRACT

Indonesia is the world's largest producer of palm oil, with over 40% of plantation areas managed by smallholder farmers. However, many of these plantations are aging and were initially established using uncertified seeds, leading to a significant decline in productivity. To address this issue, the government launched the People's Palm Oil Replanting Program (PSR) in 2017 through the Palm Oil Plantation Fund Management Agency (BPDPKS), offering replanting funds, certified seedlings, technical training, and institutional support. This study aims to analyze the impact of PSR on the economic, social, and institutional aspects of farmers in Buatun Baru Village, Kerinci Kanan District, Siak Regency, Riau Province. A qualitative descriptive approach with a case study method was employed, using in-depth interviews with 50 farmers, field observations, and document analysis. The results show a significant increase in both productivity and income: average production rose from 10–20 tons in 2020 to 36–53 tons in 2024 per 2 hectares, while gross income increased from IDR 30–50 million to IDR 100–145 million. Farmers began adopting sustainable farming practices and actively participating in cooperatives. However, challenges such as delayed fund disbursement, limited post-planting training, and unstable market access remain. These findings provide a valuable evaluation for improving future PSR policies.

Keyword: PSR, Palm Oil Farmers, Productivity, Cooperatives, Sustainability

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I. INTRODUCTION

Indonesia is the world's largest palm oil producer, with over 40% of plantations managed by independent smallholders. However, the majority of these plantations are entering their unproductive years, planted with uncertified seeds, and experiencing significant yield declines. This situation has a direct impact on declining farmer incomes, declining household welfare, and contributing to the weakening of the overall

competitiveness of the national palm oil industry. To address these challenges, the Indonesian government launched the Smallholder Oil Palm Replanting Program (PSR) in 2017 through the Indonesian Oil Palm Plantation Fund Management Agency (BPDPKS). This program is designed to provide incentives in the form of financial assistance of IDR 30 million per hectare, certified superior seeds, technical training, and institutional strengthening through cooperatives. This support is expected to increase productivity, agricultural business efficiency, and the community ecosystem (Alamanda, 2023).

One of the implementation locations for this program is Buatan Baru Village, Kerinci Kanan District, Siak Regency, Riau Province, which has been an active area for PSR implementation since 2020. A total of 70 farmers participated in this program, coordinated by the Mitra Usaha Cooperative (KUD) and the Manunggal Sakti Farmers Group (Gapoktan). Despite being operational for more than three years, in-depth evaluation of the impact of the Smallholder Oil Palm Replanting (PSR) program on the economic, social, and institutional aspects of farmers at the local level remains very limited. Many previous studies have focused on macro or administrative aspects, while community-based micro-research examining dynamics at the farmer level has been underdeveloped. This gap is crucial to bridge to provide a more contextual and evidence-based understanding for policy-making.

From a theoretical perspective, this research is relevant in enriching studies on subsidy-based policy interventions and institutional strengthening in sustainable agricultural development. Meanwhile, from a policy perspective, the results are expected to provide concrete input for policymakers, particularly in developing PSR schemes that are more responsive to farmer needs and challenges on the ground. Therefore, this study aims to comprehensively analyze the impact of the Smallholder Oil Palm Replanting Program on farmers in Buatan Baru Village, focusing on changes in productivity, income, cost efficiency, environmental behavior, institutional involvement, and obstacles and opportunities in its implementation. This research will not only be an evaluation tool, but also a scientific contribution to inclusive and sustainable agribusiness development in Indonesia.

II. METHODOLOGY

This study employed a qualitative descriptive approach with a case study method to analyze the impact of the People's Palm Oil Replanting Program (PSR) on smallholder oil palm farmers in Buatan Baru Village, Kerinci Kanan District, Siak Regency. The analysis focused on changes in economic aspects (such as production, income, and cost efficiency),

social aspects (including behavioral changes and farmer participation), and institutional aspects (such as the roles of cooperatives, training opportunities, and access to markets).

Buatan Baru Village was purposively selected as the research site because it has been one of the actively engaged areas in PSR implementation since 2020. A total of 70 farmers have participated in the program, organized under the Village Unit Cooperative (KUD) Mitra Usaha and the Farmers' Group Association (Gapoktan) Manunggal Sakti. From this population, 50 farmers were selected as respondents, while 20 of them were designated as key informants due to their active involvement in the program's activities.

Data collection was carried out through in-depth interviews with farmers, cooperative leaders, and other relevant stakeholders; field observations to examine the physical condition of plantations, irrigation systems, and post-planting maintenance practices; and document studies involving secondary data from BPDPKS reports, cooperative archives, and farmers' production and financing records. The main research instrument was the researcher themselves as a human instrument, supported by semi-structured interview guides, observation sheets, and structured survey forms used to gather quantitative data related to production levels, income, and farming costs.

The data analysis combined thematic analysis for qualitative data and descriptive comparative analysis for quantitative data. The latter was used to compare the economic conditions of farmers across three key periods: 2019 (before program implementation), 2020 (early stage of implementation), and 2024 (fourth year after replanting). The analysis followed three main steps: data reduction by selecting relevant information according to the research objectives, data presentation in the form of thematic narratives and tables, and conclusion drawing and verification through triangulation of data sources, time periods, and supporting theoretical references.

III. RESULT AND DISCUSSION

A. Changes in Farmers' Productivity and Income

Based on interviews with 50 farmers, the study found significant fluctuations in productivity during the replanting phase. In 2019, before the implementation of the PSR program, the average Fresh Fruit Bunch (FFB) production was between 30–36 tons per 2 hectares. Following the initiation of replanting in 2020, productivity declined to 10–20 tons due to the regeneration phase. However, by the fourth year after replanting (2024), productivity had increased significantly to 36–53 tons. This increase also corresponded with a rise in gross income from IDR 30–50 million in 2020 to IDR 100–145 million in 2024.

Table 1. Average Production and Gross Income per Farmer (2 Ha)

Year	Average Production (Ton/2 Ha)	Average Gross Income (IDR)
2019	30–36	Rp 70–100 million
2020	10–20	Rp 30–50 million
2024	36–53	Rp 100–145 million

This upward trend demonstrates the positive impact of using certified superior seedlings through the PSR program.

B. Cost Efficiency and Fertilizer Use

At the early stages of the PSR program, farmers incurred high production costs due to land clearing, replanting, and seedling maintenance. However, by 2024, cultivation costs had stabilized at around IDR 6–15 million per 2 hectares. Over 75% of farmers adopted basic irrigation systems and practiced efficient fertilizer usage:

Organic fertilizer: 1,500–3,000 kg/year

Non-organic fertilizer: 1,500–2,500 kg/year

This cost efficiency led to higher net profits compared to the pre-PSR period. The increase in profitability is reflected in Table 1.

C. Environmental Behavior and Land Legality

All respondents reported that they avoided forest clearing or land burning both before and after joining the PSR program. This indicates the program’s success in promoting sustainable farming practices. Over 90% of farmers obtained ISPO certification, and all possessed legal land ownership documents, such as land certificates, SKT, or other valid forms of ownership. Cooperative support played a critical role in facilitating the certification process.

D. Market Access and Middlemen Dependence

Despite improved productivity, market access remained suboptimal. As shown in Table 4.2, 52% of farmers sold directly to processing firms, while 48% still relied on middlemen offering lower prices. The absence of formal contracts also weakened farmers' bargaining power. Sales Channels Used by Farmers:

Table 2. Sales Channel

Sales Channel	Percentage
Direct to processing firms	52%
Through middlemen	48%

This reflects a need for strengthening contractual relationships and market integration for smallholders.

E. Institutional Support, Training, and Farmer Capacity

All farmers were members of farmer groups or cooperatives. However, most had only attended one training session since 2020, indicating a lack of continuous technical assistance. Farmers expressed the need for guidance in managing newly replanted oil palm. KUD Mitra Usaha played a crucial role in linking farmers to financial institutions, seed suppliers, and buyers. Nonetheless, its capacity to provide ongoing technical support remained limited. The main challenges faced by PSR farmers in Buatan Baru Village are summarized in Table 3.

Table 3. Key Challenges Faced by PSR Farmers in Buatan Baru Village

Challenge	Description
Delays in fund disbursement	Disrupted fertilization and early plant growth due to cash flow issues
Limited post-planting extension	Lack of guidance in fertilization, pest control, and harvesting
Difficulty accessing capital	Limited access due to collateral and low financial literacy
Distance to support services	Facilities located 30–38 km away increased logistical and support burdens

F. Comparative Analysis with Previous Studies

These findings reinforce the results of Siregar (2020), who stated that the significant impact of the People's Palm Oil Replanting Program (PSR) on farmers' productivity typically begins to emerge in the third or fourth year after replanting. Similarities are also found in the study by Marlina et al. (2021) in Jambi, which concluded that the success of the PSR program is largely determined by the presence of active cooperatives and access to extension services.

Furthermore, research by Safitri (2022) in West Kalimantan highlights the importance of local government support in accelerating land legality processes and strengthening farmers' technical capacity-factors that also represent key challenges in the study location.

IV. CONCLUSION

This study shows that the implementation of the People's Palm Oil Replanting Program (PSR) since 2020 in Buatan Baru Village, Kerinci Kanan District, Siak Regency, has

had a significant medium-term impact on improving the productivity and income of independent oil palm smallholders. The use of certified superior seedlings has proven effective in boosting yields from the fourth year onwards, accompanied by greater cost efficiency in production compared to the pre-PSR period. Socially and institutionally, the PSR program has strengthened the role of cooperatives and farmer groups as intermediaries between farmers and supporting institutions, including banks, input suppliers, and certification bodies. Most farmers have adopted more sustainable agricultural practices and now possess legal land ownership documents and ISPO certification.

However, the program still faces key challenges such as delayed fund disbursements, limited post-planting technical support, unstable market access, and bureaucratic barriers to credit. These constraints hinder optimal outcomes, particularly among farmers with limited institutional support or distance from extension services.

Based on these findings, several policy recommendations are proposed:

1. Accelerate and simplify PSR fund disbursement mechanisms through more transparent procedures and digital tracking systems.
2. Establish continuous post-planting technical assistance programs through collaboration between local governments, cooperatives, and agricultural extension officers.
3. Strengthen farmers' access to markets by encouraging contract-based sales with palm oil mills and reducing dependence on middlemen.
4. Enhance the institutional capacity of cooperatives in managing PSR programs through training, accountability systems, and performance-based incentives.
5. Facilitate credit access by improving financial literacy and providing guarantee schemes for smallholders without collateral.

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