

Evaluation on the Effectiveness of Rice Competitiveness Enhancement Fund (RCEF) Program in Monkayo, Davao de Oro

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ABSTRACT

This study was conducted to evaluate the effectiveness of a government agricultural support program among rice farmers. The research aimed to determine how the program contributed to improving farming practices, productivity, and the overall livelihood of farmers. A descriptive research design was used to gather information from selected respondents through a structured survey questionnaire. The collected data were analyzed to determine the perceived effectiveness of the program and its benefits to the farming community. The findings of the study indicated that agricultural support programs play an important role in assisting farmers through the provision of resources, technical knowledge, and training opportunities. Farmers generally perceived that the program helped improve their farming practices and contributed to better crop production. However, some challenges were also observed, particularly in terms of accessibility, awareness, and the consistent delivery of services. Overall, the study showed that agricultural support programs contribute positively to the development of the agricultural sector. The results of the study may serve as a basis for improving future program implementation and strengthening support for farmers.

Keywords: Rice Competitiveness Enhancement Fund (RCEF), program effectiveness, rice farmers, agricultural support program, rice production, farming productivity, Monkayo Davao de Oro

INTRODUCTION

Rationale

Rice is the staple for over half the global population, cementing its position as an essential agricultural crop around the world. The Food and Agriculture Organization (FAO) indicates that ongoing improvement in rice production is needed to accommodate increased demand from rising population growth and climatic patterns (FAO, 2020). Trade liberalization in rice by the World Trade Organization (WTO) and other free trade areas has heavily impacted rice-exporting nations, and policies to drive competitiveness while protecting food security have become necessary. Vietnam and Thailand have succeeded in retaining their positions as major rice exporters due to government assistance schemes that increase rice productivity, efficiency, and technology (Nguyen, 2019). Less competitive rice sectors in other nations fail to compete, with attendant economic and social implications.

The WTO and AEC trade liberalization policies have heightened competition in the global rice market considerably. This necessitates that countries like the Philippines adopt initiatives that will raise the competitiveness of their rice sector. To respond to this, the Philippine government established the Rice Competitiveness Enhancement Fund (RCEF) under the Rice Tariffication Law (Republic Act 11203) to improve rice productivity and reduce cost of production (Philippine Institute for Development Studies, 2021).

The Philippines has been plagued with rice self-sufficiency issues for many years. Despite its proclamation as an agricultural country, Philippine rice production typically does not suffice to meet local needs, and it is highly dependent on imports. To address this, the Rice Tariffication Law (RTL) was passed in 2019, substituting import quotas with tariffs, granting easier access to cheaper imported rice and creating a fund—the RCEF—to support local farmers (Department of Agriculture, 2020). The program aims to enhance farm productivity in a variety of ways, including through mechanization, the distribution of seeds, credit, and farmer training programs.

Rice imports, based on the Philippine Statistics Authority (PSA, 2022), have been on the rise since the RTL was implemented, casting a shadow on local farmers' competence to compete. The RCEF was established to offset these issues by providing farmers with new technologies and high-yielding rice strains to boost production. Its success in reaching its target beneficiaries and fulfilling its goals, however, remains in question (Briones, 2021). As rice continues to be a Filipino staple, its success is critical in maintaining food security and livelihood of millions of farmers.

The Rice Competitiveness Enhancement Fund (RCEF) program was established under Republic Act No. 11203, also known as the "Rice Tariffication Law," to improve the competitiveness of Filipino rice farmers amidst a liberalized rice trade policy. Allocating PHP 10 billion annually for six years, the program focuses on four main components: mechanization, inbred rice seed development, credit assistance, and extension services. These initiatives are implemented by agencies such as PhilMech, PhilRice, and the Land Bank of the Philippines.

The program addresses the challenges posed by rice trade liberalization by equipping farmers with modern tools, quality seeds, and financial support to increase productivity and profitability. RCEF's emphasis on extension services helps farmers adopt advanced farming techniques. Its implementation has contributed to stabilizing rice prices and reducing inflation. For instance, while food prices rose by 1.6% year-on-year, rice inflation fell to 0.1% in 2021, benefiting both consumers and farmers.

However, RCEF has faced criticism for limited reach and potential inefficiencies. Critics argue that the annual PHP 10 billion allocation is insufficient, with financial assistance averaging PHP 4,000 per farmer, far below the estimated PHP 25,000 to PHP 30,000 in losses per cropping season. Additionally, overlapping objectives with the National Rice Program (NRP) have raised concerns about resource allocation and accountability. These challenges highlight the need for better coordination and increased funding to enhance the program's impact.

Despite its national-level achievements, there is limited empirical evidence on RCEF's localized impacts, particularly in rural areas like Monkayo, Davao de Oro. Existing studies primarily focus on broad outcomes of the Rice Tariffication Law but overlook specific community-level insights. Moreover, the program's effectiveness in addressing gender disparities in access to agricultural resources and knowledge remains underexplored.

Research by Briones (2021) emphasized the need for continuous evaluation of agricultural programs, while the Food and Agriculture Organization (2020) underscored the importance of gender inclusivity in such initiatives. Women farmers often face barriers to accessing resources and training, limiting their participation and benefits from programs like RCEF. This study aims to fill these gaps by examining the program's localized impacts in Monkayo and its effectiveness in bridging gender gaps in agricultural knowledge and technology adoption.

This study is significant for several reasons. First, it provides policymakers and implementers with insights into the RCEF program's effectiveness at the community level, identifying successes and areas for improvement. Second, it contributes to the discourse on gender inclusivity in agriculture by evaluating whether RCEF adequately addresses disparities in resource access and training. The findings may inform policy adjustments to make the program more inclusive and effective. Lastly, the study benefits local stakeholders by offering data-driven recommendations to strengthen support for rice farmers in Monkayo and beyond.

Monkayo has benefited from RCEF's mechanization and seed distribution initiatives, including high-quality seed and equipment delivery. However, challenges such as delays in equipment distribution and limited awareness of training opportunities persist. The Department of Agriculture has expressed its commitment to addressing these issues to ensure that all eligible farmers benefit from the program.

This research evaluates RCEF's effectiveness in Monkayo by examining knowledge dissemination, technology adoption, and access to program resources. It seeks to identify barriers to inclusivity and recommend improvements to ensure that the program supports all farmers equitably. Findings from this study could guide policymakers in refining RCEF and scaling its impact across other regions in the Philippines.

Theoretical Framework

Rogers' Diffusion of Innovations Theory, which describes how innovations like new programs or technologies are embraced and dispersed over time within a social system, serves as the theoretical foundation for this investigation. The theory highlights elements including the innovation's features, communication channels, time, and the social structure that affect adoption, and it distinguishes five stages in the innovation-choice process: knowledge, persuasion, decision, implementation, and confirmation. This theory is especially pertinent to comprehending the uptake and efficacy of the Rice Competitiveness Enhancement Fund (RCEF) program among Monkayo, Davao de Oro, recipients. The study's main objectives are to determine how well-informed the beneficiaries are about the program, how satisfied they are with it as a measure of program acceptance, and how the program affects rice productivity and production as a result of its incorporation into farming methods. Using this idea, the study looks at how the RCEF program spreads among the target community and pinpoints elements that either support or undermine its effectiveness.

This study was anchored on the Diffusion of Innovations Theory developed by Everett Rogers (2003), which explains how new ideas, technologies, and practices spread within a social system over time. According to Rogers, the adoption of innovations occurs through a process where individuals first gain knowledge about the innovation, develop an interest, evaluate its usefulness, and eventually decide whether to adopt or reject it. In the context of agriculture, this theory explains how farmers adopt new farming technologies, improved seed varieties, mechanization, and modern farming practices introduced through government agricultural programs. Several studies have applied the Diffusion of Innovations Theory in examining the adoption of agricultural technologies among farmers. Previous research has shown that access to information, training, and extension services plays an important role in encouraging farmers to adopt improved farming practices. Studies related to agricultural development programs also indicate that farmers who receive technical assistance and support are more likely to adopt innovations that improve productivity and efficiency. These findings support the idea that government programs designed to introduce modern farming technologies can influence farmers' decision-making and adoption behavior.

In relation to this study, the Diffusion of Innovations Theory helps explain how farmers respond to the different components of agricultural support programs such as the provision of improved seeds, mechanization support, and training services. Through these interventions, farmers gain knowledge and experience that may influence their willingness to adopt new technologies and improve their farming practices. Therefore, the theory provides a useful framework for understanding how agricultural programs contribute to improving farm productivity and enhancing the overall development of the agricultural sector.

Conceptual Framework

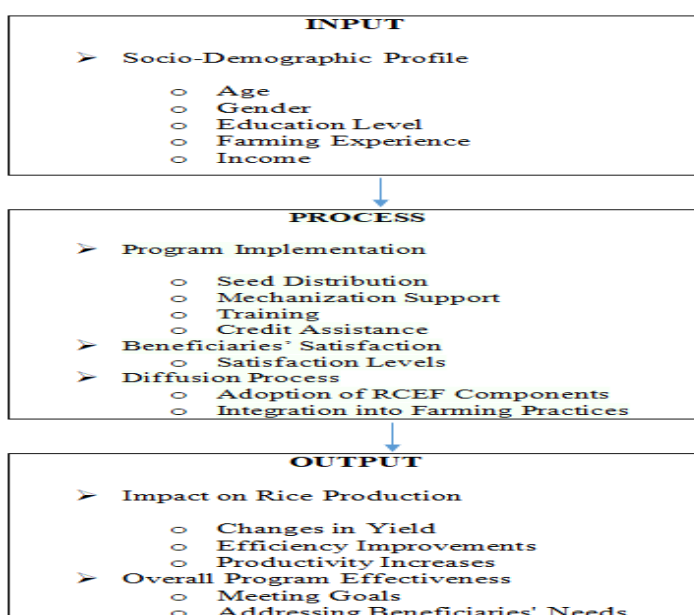


Figure 1: Conceptual Framework of the Study

The RCEF program, the socio-demographic profile of the beneficiaries, their awareness and contentment, and the program's effect on rice production are all depicted in the conceptual framework. The intake, process, and output are its three primary parts. The input contains the socio-demographic profile of RCEF beneficiaries, including their age, gender, income, agricultural experience, education level, and program awareness, which includes their comprehension of the goals, elements, and advantages of the RCEF program. Program implementation is the main focus of the procedure, which includes providing RCEF services including financing help, training, mechanization support, and seed distribution. Additionally, it assesses the degree of satisfaction among the beneficiaries and looks at the diffusion process, which looks at how beneficiaries accept and incorporate RCEF elements into their agricultural methods. The output demonstrates how the program has affected rice production, including shifts in yield, productivity, and efficiency, as well as how effectively it has worked overall to achieve its objectives and meet the needs of beneficiaries. This framework guarantees an organized method for assessing the RCEF program's efficacy and is in line with Rogers' Diffusion of Innovations Theory to determine the elements that contribute to program success.

METHODOLOGY

Research Design

This study utilized a descriptive research design to evaluate the effectiveness of the Rice Competitiveness Enhancement Fund (RCEF) Program in Monkayo, Davao De Oro. This method was chosen to systematically be described and analyzed the program's impact on farmers' productivity, income, and adoption of modern agricultural technologies. Descriptive research was appropriate for gathering detailed data and identifying patterns, providing a comprehensive understanding of the program's performance and areas for improvement.

Research Locale

The study was conducted in the Municipality of Monkayo, Davao de Oro. The municipality is known for its agricultural activities, particularly rice farming, which serves as one of the primary sources of livelihood for many farmers in the area. Monkayo was selected as the research locale because it was one of the municipalities where the Rice Competitiveness Enhancement Fund (RCEF) Program has been implemented to support rice farmers through various forms of assistance such as seed distribution, mechanization support, and training services. The presence of rice farmers who were beneficiaries of the program made the area suitable of the conducted study and gathered the necessary data being evaluated the effectiveness of the program.

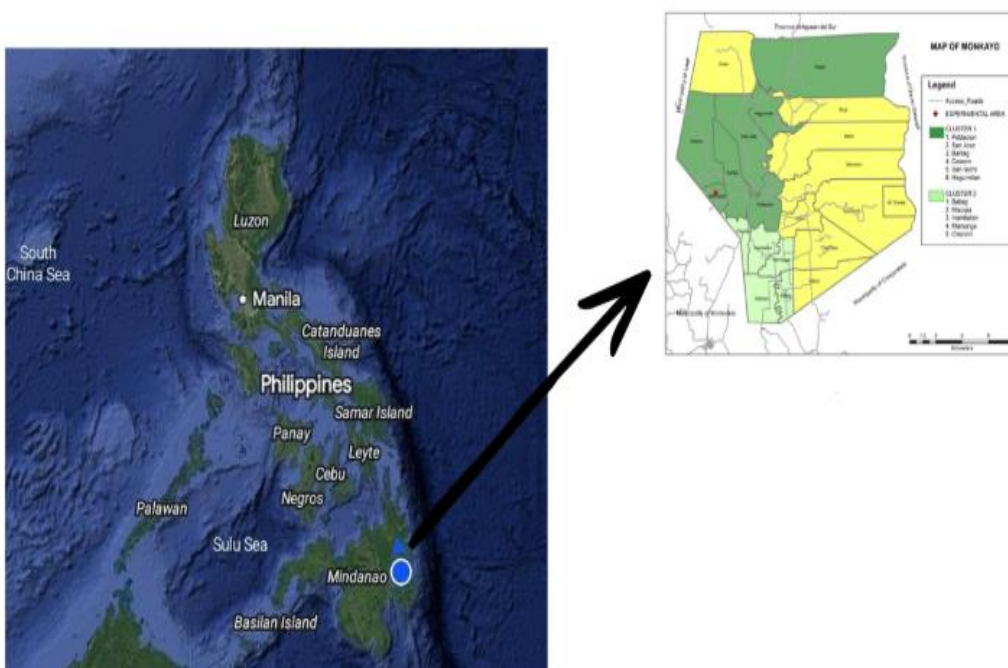


Figure 2. The Google Map Image of the research locale

Population and Sample

The primary data for this study was collected from rice farmers who were beneficiaries of the RCEF program in Monkayo, Davao De Oro. Secondary data were obtained from reports, records, and official documents from government agencies such as the Department of Agriculture, the Philippine Rice Research Institute, and local agricultural offices. These sources provided background information on the implementation of the program and its objectives.

Respondents

The respondents of this survey were rice farmers register in the RCEF program in the municipality of Monkayo, Davao de Oro. This approach guaranteed that the total population is 288, allowing for accurate and dependable results.

Research Instruments

The primary instrument used in this study was an adopted survey questionnaire designed to gather relevant data from the respondents. The questionnaire consisted of two main parts. The first part collected demographic information of the respondents such as age, farming experience, farm size, and involvement in the RCEF program. The second part focused on assessing the effectiveness of the Rice Competitiveness Enhancement Fund (RCEF) program in terms of seed distribution, farm mechanization, training and extension services, and credit support. The questionnaire was designed using simple and clear statements to ensure that the respondents could easily understand and answer the questions. A Likert scale was used to measure the respondents' perceptions regarding the effectiveness of the program. Prior to the actual data collection, the instrument was reviewed and validated by experts to ensure its clarity, reliability, and relevance to the objectives of the study.

Data Collection

The primary data collection instrument used in this study was adopted survey questionnaire. The questionnaire was designed to capture information on the respondents' demographic profiles, farming practices, program benefits received, and perceptions of the RCEF program's effectiveness. The instrument underwent content validation by experts in agriculture and social research to ensure its relevance and accuracy.

Statistical Treatment

The data collected was analyzed using descriptive only. Frequency counts, percentages, and means were used to summarize respondents' profiles and perceptions of the RCEF program. Statistical analysis was conducted using software to ensure accuracy and reliability.

Scoring Procedure

Responses from the survey questionnaire were scored using a Likert scale ranging from 1 (Not Effective) to 5 (Highly Effective). The total scores for each respondent were computed to determine their overall perception of the program's effectiveness. The scores were then categorized into levels of effectiveness (e.g., low, moderate, high) to facilitate interpretation and discussion of the results.

Rating Scale	Parameter Limit	Effectiveness Level	Interpretation
5	4.21 – 5.00	Highly Effective	The RCEF program has significantly improved rice production, reduced costs for farmers, increased competitiveness, and provided substantial benefits to stakeholders.
4	3.41 - 4.20	Effective	The program has met most of its objectives, leading to noticeable improvements in farmer productivity and competitiveness, with

			minor areas for enhancement.
3	2.61 - 3.40	Moderately Effective	The program has achieved some success but has limitations that hinder its full impact. There are issues that need to be addressed for better effectiveness.
2	1.81 - 2.60	Less Effective	The program has only achieved limited results, with significant challenges affecting its overall success. Improvements and policy adjustments are necessary.
1	1.00 - 1.80	Not Effective	The program has failed to meet its objectives, with little to no positive impact on rice competitiveness. Major revisions and interventions are required.

Table 1. Parametric Interpretation of the Evaluation on the Effectiveness of Rice Competitiveness Enhancement Fund Program (RCEF)

RESULTS

I. Socio-Demographic Profile of the Respondents

The table below described the demographic profile of the respondents in terms of age, gender, educational attainment, farmer's experience, and farmers' level of income.

Table 2.1. Age of Respondents

Age Bracket	Frequency (n)	Percentage (%)
1-(Below-40)	43	14.9%
2-(41-50)	29	10.1%
3-(51-60)	172	59.7%
4-(61-70)	44	15.3%
5-(71-Above)	0	0
Total	288	100%

Table 2.2. Gender of Respondents

Gender	Frequency (n)	Percentage (%)
Female	156	54.2%
Male	132	45.8%
Total	288	100.0

Table 2.3. Educational Attainment of Respondents

Educational Attainment	Frequency (n)	Percentage (%)
None	26	9.0%

Elementary Level	70	24.3%
Elementary Graduate	115	39.9%
High School Level	50	17.4%
High School Graduate	27	9.4%
Total	288	100%

Table 2.4. Farming Experince of Respondents

Farming Experience	Frequency (n)	Percentage (%)
1-(Below-40)	81	28.1%
2-(41-50)	73	25.3%
3-(51-60)	69	24.0%
4-(61-70)	47	16.3%
5-(71-Above)	18	6.3%
Total	288	100%

Table 2.5. Estimated Farm Income (BEFORE)

Income (BEFORE)	Frequency (n)	Percentage (%)
1-(Below- 10,000)	72	25.0%
2-(10,001- 20,000)	76	26.4%
3-(20,001-30,000)	112	38.9%
4-(30,001-40,000)	28	9.7%
5-(40,001-ABOVE)	72	25.0%
Total	288	100%

Table 2.6. Estimated Farm Income (AFTER)

Income (BEFORE)	Frequency (n)	Percentage (%)
1-(Below- 10,000)	64	22.2%
2-(10,001- 20,000)	55	19.1%
3-(20,001-30,000)	126	43.8%
4-(30,001-40,000)	23	8.0%
5-(40,001-ABOVE)	20	6.9%
Total	288	100%

Table 2 showed the demographic profile of the 288 respondents who participated in the study. Table 2.1 showed that most respondents at 59.7 percent belonged to the 51-60 age bracket, followed by 61-70 years at 15.3 percent, and below 40 years at 14.9 percent. Table 2.2 revealed that female respondents slightly outnumbered males at 54.2 percent compared to 45.8 percent, indicating a balanced gender distribution among the local farmers. Table 2.3 indicated that 53.3 percent of respondents attained a high school level of education, while 46.7 percent reached senior high school. Table 2.4 showed that most respondents had extensive farming experience, with 28.1 percent having below 40 years of experience, followed closely by the 41-50 year bracket at 25.3 percent. Table 2.5 and Table 2.6 revealed a shift in economic status, as most respondents earning in the 51-60 income bracket increased from 38.9 percent before the program to 43.8 percent after implementation. Overall, the findings revealed that the respondents were predominantly matured individuals with significant farming experience and modest educational backgrounds in Monkayo, Davao de Oro.

Level of Effectiveness of the Rice Competitiveness Enhancement Fund (RCEF) Program

This section presented the findings on the level of effectiveness of the Rice Competitiveness Enhancement Fund (RCEF) Program in Monkayo, Davao de Oro. The study examined six key indicators: Mechanization Support, Seed Distribution, Training and Extension Services, Adoption of Mechanized Technologies, and the Overall Program Impact on rice production, farm income, and farming efficiency.

Table 3.1. Mechanization support

Items	Mean	Descriptive Level
1. Provision of farm machinery under RCEF	3.22	Moderate
2. Timeliness of machinery distribution	3.11	Moderate
3. Accessibility of machinery to farmers	3.03	Moderate
4. Reduction in labor cost due to mechanization	3.07	Moderate
5. Increase in farm productivity due to machinery	3.17	Moderate
Overall	3.12	Moderate

Table 3.2. Seed distribution

Items	Mean	Descriptive Level
1. Quality of certified seeds received	2.74	Moderate
2. Timeliness of seed distribution	2.79	Moderate
3. Increase in yield due to certified seeds	3.05	Moderate
Overall	2.86	Moderate

Table 3.3. Training and extension services

Items	Mean	Descriptive Level
1. Availability of training programs	3.12	Moderate
2. Relevance of training to farmers' needs	3.23	Moderate

3. Improvement of farming skills and knowledge	3.10	Moderate
Overall	3.15	Moderate

Table 3.4. Adoption of mechanized technologies

Items	Mean	Descriptive Level
1. Land Preparation 1.Four-Wheel Tractor 2.Hand Tractor 3.Floating Tiller 4.DTO-Driven Disk Plow	3.72	High
2.Crop Establishment 1.Precision Seeder 2.Walk-Behind Transplanter 3.Riding-Type Transplanter	2.10	Low
3.Harvesting and Threshing 1.Reaper 2.Combined Harvester 3.Thresher	2.46	Low
4.Dying and Milling Distribution 1.Mobile Rice Mill 2.Single Pass Rice Mill 3.Multi-Pass Rice Mill 4.Impeller Rice Mill	2.06	Low
Overall	2.59	Low

Table 3.5 Overall program impact on rice production, farm income, and farming efficiency

Items	Mean	Descriptive Level
1. Increase in rice production	2.84	Moderate
2. Increase in farm income	2.78	Moderate
3. Improvement in overall farming efficiency	3.11	Moderate

4. Overall effectiveness of the RCEF Program in Monkayo, Davao de Oro	2.80	Moderate
Overall	2.88	Moderate

Table 3.1 presented the level of Mechanization Support with an overall mean of 3.12, interpreted as moderate. This was indicated that the provision of farm machinery and equipment under the RCEF program had a moderately positive influenced on the farming operations in Monkayo. Notably, Item 1 (mean of 3.22) registered the highest score in this category, suggesting that certain specific mechanical interventions were more effectively felt by the respondents than others.

Table 3.2 revealed that Seed Distribution obtained an overall mean of 2.86, interpreted as moderate. This finding indicated that the distribution of high-quality inbred rice seeds moderately meets the needs of the local farmers. Item 3 (mean of 3.05) scored the highest in this section, highlighting that while the overall process is moderate, the quality or availability represented by that specific item is more strongly recognized by the community.

Table 3.3 showed Training and Extension Services with an overall mean of 3.15, interpreted as moderate. This suggests that the farmers had a moderate level of engagement and satisfaction with the technical briefings and agricultural technology demonstrations provided. The individual item scores (ranging from 3.10 to 3.23) indicated that the respondents possess a relatively consistent and fair level of knowledge gained through these extension efforts.

Table 3.4 presented the Adoption of Mechanized Technologies with an overall mean of 2.59, interpreted as low. This reveals a significant gap in the actual utilization of modern farming equipment among the respondents. While Item 1 (mean of 3.72) registered as high—indicating a strong recognition of one specific technology—the low scores on Items 2 and 4 (2.10 and 2.06) suggest that substantial barriers remain in the widespread adoption of other mechanized practices.

Table 3.5 showed the Overall Program Impact on rice production, farm income, and farming efficiency with an overall mean of 2.88, interpreted as moderate. This indicates that the RCEF program had moderately influenced the economic stability and productivity of the farmers. Item 3 (mean of 3.11) received the highest score in this category, while the overall findings suggest that while there is progress in efficiency and income, there was still room for significant improvement to reach a high level of effectiveness.

DISCUSSIONS

Discussion and Findings

The results of the study provide a comprehensive understanding of the effectiveness of the agricultural support program in improving farming practices, productivity, and the overall livelihood of farmer-beneficiaries. Based on the data gathered, it is evident that the program has contributed to positive changes, although the level of impact varies across different components.

In terms of socio-demographic characteristics, the majority of the respondents were within the middle-age group and had several years of farming experience. This indicates that most participants are already knowledgeable in traditional farming practices and have established farming systems. Their experience allows them to better appreciate the benefits of agricultural programs; however, it may also influence their willingness to adopt new technologies, as some farmers tend to rely on familiar practices. Despite this, the presence of training and extension services plays a significant role in encouraging them to gradually adapt to modern farming methods.

With regard to farm income, the findings revealed that most farmers were classified under the middle-income category before the implementation of the program. After participation, there was a noticeable but moderate increase in income levels. This improvement can be associated with increased productivity, reduced labor costs due to mechanization, and the use of better-quality inputs such as certified seeds. However, the increase in income was not uniform across all respondents. Some farmers experienced only minimal gains due to external factors such as fluctuating market prices, high input costs, and limited access to post-harvest facilities. These

findings suggest that while the program contributes to income improvement, additional support systems are needed to ensure more stable and significant financial benefits for farmers.

In terms of rice yield, the study revealed a clear improvement in production among many farmer-beneficiaries after the implementation of the program. The use of improved seed varieties, combined with better crop management practices learned through training, contributed to higher yields per hectare. Mechanization also allowed timely land preparation and harvesting, which are critical factors in maximizing production. As a result, many farmers reported increased output compared to their previous harvests. However, the extent of yield improvement varied among respondents. Some farmers experienced only slight increases due to constraints such as unfavorable weather conditions, soil fertility issues, pest infestations, and incomplete access to program components. These variations highlight that while the program has a positive effect on yield, its full potential can only be achieved when all necessary inputs and support services are consistently available.

The effectiveness of mechanization support was rated as effective by the respondents, indicating that this component of the program significantly contributed to improving farming efficiency. The availability of machinery reduced the time required for major farming operations such as plowing, harrowing, and harvesting. It also lessened the physical burden on farmers and minimized delays in farm activities, which are crucial for achieving higher yields. Furthermore, mechanization helped reduce dependence on manual labor, leading to lower labor costs. Despite these benefits, some farmers reported limited access to machinery due to high demand and insufficient units, suggesting the need for improved distribution and accessibility of mechanization services.

Training and extension services were also perceived as effective, emphasizing their vital role in enhancing farmers' knowledge and skills. Through participation in seminars, field demonstrations, and technical training, farmers gained a better understanding of modern agricultural practices, including proper crop management, pest control, and efficient use of inputs. This knowledge enabled them to make informed decisions and improve their farming practices, which in turn contributed to increased productivity and yield. Additionally, extension services helped build farmers' confidence in adopting new technologies, although continuous and more frequent training is still necessary to sustain these improvements.

On the other hand, seed distribution was rated as moderately effective. While many farmers benefited from receiving improved and certified seeds, some encountered challenges such as delays in distribution and insufficient supply. Timely availability of seeds is critical in agriculture, as delays can disrupt planting schedules and reduce potential yield. In some cases, farmers had to rely on alternative or lower-quality seeds, which may have limited their production. This indicates that improving the efficiency and timeliness of seed distribution is essential to maximize the program's impact on productivity.

In terms of changes in labor requirements, the findings showed that the introduction of mechanization led to a reduction in the need for manual labor, particularly in labor-intensive activities such as land preparation and harvesting. This resulted in significant time savings and reduced labor expenses for farmers. However, this shift may also have implications for farm workers who depend on manual labor for income. While mechanization improves efficiency, it is important to consider strategies that can balance technological advancement with the livelihood needs of rural laborers.

The adoption of mechanized technologies was assessed as moderately effective. Although some farmers successfully adopted and utilized modern equipment, others faced barriers such as high costs, lack of technical knowledge, and limited access to machinery. Additionally, some farmers were hesitant to adopt new technologies due to perceived risks and uncertainty about their benefits. This suggests that while the program promotes modernization, there is still a need for stronger support systems, including financial assistance, training, and continuous technical guidance, to encourage wider adoption among farmers.

Overall, the program's impact on rice production, farm income, and farming efficiency was rated as moderately effective. The findings indicate that the program has contributed to improvements in yield, efficiency, and farming practices, which are essential for agricultural development. However, the moderate level of effectiveness suggests that there are still gaps in implementation, particularly in terms of accessibility, consistency of support, and timely delivery of resources. Addressing these challenges will be crucial in

enhancing the overall impact of the program and ensuring that farmers can fully benefit from its intended objectives. Strengthening coordination among implementing agencies, improving resource distribution, and increasing farmer awareness and participation are recommended to achieve more significant and sustainable outcomes.

CONCLUSION

Based on the findings of the study, it can be concluded that the Rice Competitiveness Enhancement Fund (RCEF) Program in Monkayo, Davao de Oro has had a significant positive influence on rice farming practices, productivity, and farmer livelihood, though the overall effectiveness remains moderate. The program has contributed to improving rice yield, farm efficiency, and income through several key components, including mechanization support, training and extension services, and the provision of improved seeds.

Mechanization support was particularly effective in reducing labor requirements and improving the timeliness of farming operations such as land preparation, planting, and harvesting. This allowed farmers to save time, reduce physical labor, and perform operations more efficiently, which directly contributed to increased rice yield. Similarly, training and extension services enhanced farmers' technical knowledge, skills, and confidence in adopting modern agricultural practices. Farmers who actively participated in these programs were able to implement better crop management techniques, pest control measures, and efficient resource utilization, which further improved productivity.

The distribution of certified and improved seeds also contributed to yield increases, as these seeds are more resistant to pests, diseases, and environmental stress, allowing farmers to achieve better harvests. However, some challenges were noted in the distribution process, including delays and insufficient supply, which limited the ability of certain farmers to maximize production. As a result, while overall yield improvements were observed, the degree of increase varied among respondents, reflecting differences in access to program resources, environmental conditions, and adoption of modern technologies.

Income gains were also recorded among farmers following program implementation. The increase in income is linked to higher yields, lower labor costs due to mechanization, and improved management practices. Despite these positive effects, income improvements were moderate for some beneficiaries, suggesting that external factors such as market fluctuations, input costs, and limited post-harvest facilities continue to influence financial outcomes.

While the program has shown significant contributions to rice production and farmer development, challenges remain in ensuring the full potential of its components. Some farmers reported difficulties in adopting mechanized technologies due to high costs, lack of technical knowledge, and limited access. Moreover, reductions in labor requirements, although beneficial for efficiency, may have implications for farm workers who rely on manual labor for income. These factors indicate that for the program to achieve maximum impact, consistent access to resources, continuous training, and technical and financial support must be provided.

Overall, the study concludes that the RCEF Program has positively influenced rice productivity, farm efficiency, and farmer livelihood in Monkayo, Davao de Oro. The program demonstrates that integrated support—combining mechanization, improved seeds, and extension services—is effective in improving agricultural outcomes. However, to further enhance its effectiveness and ensure sustainable benefits, program implementers need to address resource accessibility, timely distribution of inputs, and continuous farmer support. Strengthening these areas will help ensure that rice farmers fully benefit from the program, leading to higher yields, improved income, and greater competitiveness in rice production.

RECOMMENDATIONS

This study aimed to evaluate the effectiveness of an agricultural support program by examining the socio-demographic profile of program beneficiaries and assessing the program's impact on farm productivity, income, efficiency, resource utilization, training and extension services, and adoption of modern farming technologies. A descriptive research design was employed, and data were collected from a sample of farmers who are

beneficiaries of the program. Analysis using frequency, percentage, and mean revealed that the majority of participants were middle-aged, predominantly male, with secondary education and several years of farming experience. Most farmers were in the middle-income category before program implementation, with some improvements observed after participation. In terms of program effectiveness, provision of resources and training/extension services were generally rated as effective, supporting farmers in improving their practices and efficiency. Other aspects, such as adoption of modern technologies, adjustments in labor requirements, and overall impact on farm productivity and income, were rated as moderately effective. Overall, the findings suggested that the program contributed positively to farming practices and productivity, although some components still required improvement to achieve maximum effectiveness.

Based on these findings, it can be concluded that most beneficiaries were experienced farmers whose socio-demographic characteristics influence their participation and response to agricultural programs. The program had provided valuable support through resources and training, which have helped improved efficiency and productivity. However, the overall effectiveness of the program remains moderate, highlighting challenges in implementation, access, and utilization of certain components. Continuous efforts to improved program delivery, increase farmer awareness, and provide better access to resources are necessary to fully achieved program objectives.

Based on the conclusions, it was recommended that program implementers ensure timely provision of resources such as seeds, machinery, and other inputs. Agricultural extension workers conducted additional training sessions, seminars, and field demonstrations to enhanced farmers' knowledge and encouraged adoption of modern practices. Awareness campaigns be strengthened so farmers can fully understand and utilized program benefits. Farmers were encouraged to actively participated in training and adopted available modern technologies to improved productivity and income. Lastly, researchers conducted studies focusing on other aspects of agricultural programs, including long-term impacts on farm productivity, sustainability, and farmer livelihoods.

REFERENCES

1. Akshaya, K. M., & Shivalli, S. (2017). Birth preparedness and complication readiness among the women beneficiaries of selected rural primary health centers of Dakshina Kannada district, Karnataka, India. *PLoS ONE*, 12(8), e0183739. <https://doi.org/10.1371/journal.pone.0183739>
2. Alliman, J., Stapleton, S. R., Wright, J., Bauer, K., Slider, K., & Jolles, D. (2019). Strong Start in birth centers: Socio-demographic characteristics, care processes, and outcomes for mothers and newborns. *Birth*, 46(2), 234–243. <https://doi.org/10.1111/birt.12433>
3. Arbes, J., Villaremo, M., Cabañog, R., Escobar, L., Mindal, M., & Amilbahar, G. (2024). Impact assessment of the rice competitiveness enhancement fund (RCEF) mechanization program on the agricultural productivity among rice farmers in a selected Barangay in Davao Del Norte. *Business Fora: Business and Allied Industries International Journal*, 3(1), 71-87. <https://doi.org/10.62718/vmca.bf-baiij.3.1.sc-1124-001>
4. Balat, M. S., & Sahu, S. K. (2018). Congenital heart disease: factor affecting it and role of RBSK in dealing with situation. *International Journal of Community Medicine and Public Health*, 5(10), 4437. <https://doi.org/10.18203/2394-6040.ijcmph20183990>
5. Briones, R. (2021). The Rice Tariffication Law: Impact and Challenges for Philippine Agriculture. *Philippine Institute for Development Studies*.
6. Briones, R. M. (2021). Assessment of the Rice Tariffication Law and its implications for Philippine agriculture. *Philippine Institute for Development Studies*.
7. Chowdhury, Arijit Ghosh., & Ramchandra, . (2023). Impact of Microfinancing on Socio Economic Status and Employment Condition among the Rural Farmers in Murshidabad District of West Bengal, India. *Journal of Experimental Agriculture International* . <http://doi.org/10.9734/jeai/2023/v45i92174>
8. Clairman, H., Dettmer, E., Buchholz, A., Cordeiro, Kristina., Ibrahim, Quazi., Maximova, K., Toulany, Alène., Taylor, V., Katzman, D., Morrison, K., Hamilton, J., Ball, G., Chanoine, J., Ho, J., Legault, L., Mackie, Pam., Thabane, L., Zenlea, I., & Investigators, on behalf of the Canpwr. (2018). Pathways to eating in children and adolescents with obesity. *International Journal of Obesity* , 43 , 1193-1201 . <http://doi.org/10.1038/s41366-018-0271-2>

9. Department of Agriculture. (2019). Republic Act No. 11203 Implementing Rules and Regulations. Government of the Philippines.
10. Department of Agriculture. (2020). Implementation of the Rice Competitiveness Enhancement Fund. Government Report.
11. Department of Agriculture. (2020). Rice Competitiveness Enhancement Fund Annual Report 2019-2020. Department of Agriculture, Philippines.
12. Department of Agriculture. (2021, February 26). Rice Competitiveness Enhancement Fund - official portal of the Department of Agriculture. Official Portal of the Department of Agriculture. https://www.da.gov.ph/rice-competitiveness-enhancement-fund/?f_link_type=f_inlinenote&need_sec_link=1&sec_link_scene=im
13. FAO. (2020). The State of Food Security and Nutrition in the World. Food and Agriculture Organization.
14. Food and Agriculture Organization. (2020). "Gender and Agriculture: Women's Role in Rice Farming." FAO.
15. Franco. (2024, July 2). rcef. ATI Central Office. https://ati2.da.gov.ph/ati-main/content/rcef?f_link_type=f_inlinenote&need_sec_link=1&sec_link_scene=im
16. Giorgio, Katherine., Walker, Rob F., Maclehose, R., Adrianzen-Herrera, Diego., Wang, Wendy., Alonso, Alvaro., Zakai, N., & Lutsey, P.. (2023). Venous thromboembolism mortality and trends in older US adults, 2011–2019. American Journal of Hematology , 98 , 1364 - 1373 . <http://doi.org/10.1002/ajh.26996>
17. JON VIKTOR D. CABUENAS,GMA News & JON VIKTOR D. CABUENAS, GMA News. (2019, October 16). RCEF funds not enough to cover farmers' losses from Rice Tariffication law —NGO. GMA News Online. https://www.gmanetwork.com/news/money/economy/711892/rcef-funds-not-enough-to-cover-farmers-losses-from-rice-tariffication-law-ngo/story/?f_link_type=f_inlinenote&need_sec_link=1&sec_link_scene=im
18. Karatzi, K., Moschonis, G., Botsi, E., Liatis, S., Tsochev, K., Miguel-Etayo, P. de., Kivelä, Jemina., Wikström, K., Dimova, Roumyana., Antal, Emese., Lamiquiz-Moneo, I., Rurik, I., Cardon, G., Iotova, V., Makrilakis, K., Manios, Y., & Group, On Behalf Of The Feel Diabetes- Study. (2020). Lipidemic Profile Changes over a Two-Year Intervention Period: Who Benefited Most from the Feel4Diabetes Program?. Nutrients , 12 . <http://doi.org/10.3390/nu12123736>
19. Khalikova, Venera R., Jin, Mushan., & Chopra, S. S.. (2021). Gender in sustainability research: Inclusion, intersectionality, and patterns of knowledge production. Journal of Industrial Ecology , 25 , 900 - 912 . <http://doi.org/10.1111/jiec.13095>
20. Khalikova, Venera R., Jin, Mushan., & Chopra, S. S.. (2021). Gender in sustainability research: Inclusion, intersectionality, and patterns of knowledge production. Journal of Industrial Ecology , 25 , 900 - 912 . <http://doi.org/10.1111/jiec.13095>
21. Manna, S., Vashist, P., Senjam, S., Shukla, P., Gupta, N., Bhardwaj, Amit., & Gupta, Vivek. (2022). Vision Delhi: A study of primary eye care model operational in urban slums and resettlement colonies of Delhi. Journal of Family Medicine and Primary Care , 11 , 201 - 207 . <http://doi.org/10.4103/jfmprc.jfmprc 913 21>
22. Mekala, G. D., Jones, Roger N., & MacDonald, D.. (2015). Valuing the Benefits of Creek Rehabilitation: Building a Business Case for Public Investments in Urban Green Infrastructure. Environmental Management , 55 , 1354-1365 . <http://doi.org/10.1007/s00267-015-0471-7>
23. Municipality of Monkayo. (2023). Agricultural Profile of Monkayo. Municipal Government of Monkayo.
24. Murongo, M., Ayuke, OF., & Mwine, TJ. (2022). Situational analysis of abiotic and biotic factors influencing abundance of tissue culture and non-tissue culture bananas in smallholder farms in western Uganda. African Journal of Food, Agriculture, Nutrition and Development . <http://doi.org/10.18697/ajfand.108.19745>
25. Nguyen, H. (2019). Strategies for Sustainable Rice Production in ASEAN. ASEAN Journal of Agricultural Economics.
26. Ntaganira, J., Hass, Laura J., Hosner, Sheila., Brown, L., & Mock, N.. (2012). Sexual risk behaviors among youth heads of household in Gikongoro, south province of Rwanda. BMC Public Health , 12 , 225 - 225 . <http://doi.org/10.1186/1471-2458-12-225>

27. Patel, Jaimin., Shah, Janmesh., Agarwal, M., & Kedia, G.. (2013). Post utilization survey of RSBY beneficiaries in civil hospital, Ahmedabad: A cross sectional study -. International Journal of Medical Science and Public Health , 2 , 1073-1076 . <http://doi.org/10.5455/IJMSPH.2013.230820132>
28. Philippine Rice Research Institute. (2021). RCEF Seed Program and Its Impact on Rice Productivity.
29. Philippine Statistics Authority (PSA). (2022). Rice Production and Importation Data. National Economic Report.
30. Philippine Statistics Authority. (2021). Agriculture Sector Report 2021. Government of the Philippines.
31. Philstar.com. (1970, January 1). National Rice Program underperformed, Rice Competitiveness Enhancement Fund delivered. <https://www.philstar.com/other-sections/supplements/2022/03/23/2169130/national-rice-program-underperformed-rice-competitiveness-enhancement-fund-delivered/amp>
32. Quisumbing, A. R., & McTavish, K. (2022). Gender and Rural Development: Bridging Gaps in Agricultural Knowledge and Resources. International Food Policy Research Institute.
33. RCEF. (2020, February 27). https://mimaropa.da.gov.ph/https://mimaropa.da.gov.ph/rice-competitiveness-enhancement-fund?f_link_type=f_inlinenote&need_sec_link=1&sec_link_scene=im
34. Rogers, E. M. (2003). Diffusion of innovations (5th ed.). New York: Free Press.
35. Samel, D., Senapati, Jai N., & Paradkar, G.. (2016). Socio-demographic profile of copper-T beneficiaries in the family planning out-patient department of a teaching hospital: a record-based descriptive study -. International Journal of Research in Medical Sciences , 4 , 4067-4071 .<http://doi.org/10.18203/2320-6012.IJRMS20162935>
36. The Rice Competitiveness Enhancement Fund and National Rice Program: A comparative explainer. (2022, March 23). Manila Bulletin. https://mb.com.ph/2022/03/23/the-rice-competitiveness-enhancement-fund-and-national-rice-program-a-comparative-explainer/?f_link_type=f_inlinenote&need_sec_link=1&sec_link_scene=im
37. The Rice Competitiveness Enhancement Fund and National Rice Program: A comparative explainer. (2022, March 23). Manila Bulletin. https://mb.com.ph/2022/03/23/the-rice-competitiveness-enhancement-fund-and-national-rice-program-a-comparative-explainer/?f_link_type=f_inlinenote&need_sec_link=1&sec_link_scene=im
38. The Rice Competitiveness Enhancement Fund and National Rice Program: A comparative explainer. (2022, March 23). Manila Bulletin.https://mb.com.ph/2022/03/23/the-rice-competitiveness-enhancement-fund-and-national-rice-program-a-comparative-explainer/?f_link_type=f_inlinenote&need_sec_link=1&sec_link_scene=im
39. Tolentino, V. B., de la Cruz, M. F., & Santos, C. L. (2020). Impact Assessment of RCEF on Rice Farming Communities in the Philippines. Philippine Institute for Development Studies.
40. Yadav, A., Rastogi, R., & Udey, Bharat. (2016). Mental Disability: A Retrospective Study of Socio-Clinical Profile of Patients Seeking Disability Certificate at a Tertiary Care Centre in Delhi., 2, 19-25 . <http://doi.org/10.24321/2455.7048.201703>

Electronic References

1. <https://www.semanticscholar.org/paper/1623b22de86b12e9754efd3bf9238fffd28a7567>
2. <https://www.semanticscholar.org/paper/3fb53a35ba03c317e6e5c1870d69a7a709589694>
3. <https://www.semanticscholar.org/paper/93bee98701a76dba0d2cfd73e6fd17c52f460b7d>
4. <https://www.semanticscholar.org/paper/9f288f36dcdac93b019e6bbc3d843220c18eb8c8>