INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY: APPLIED BUSINESS AND EDUCATION RESEARCH
2025, Vol. 6, No. 12, 6167 – 6175
http://dx.doi.org/10.11594/ijmaber.06.12.24

Research Article

Lived Experiences among Rice Farmers on Tare Weight Deduction in Lapinig, Kapatagan, Lanao Del Norte

Arnel A. Esparcia*, Zanlin Undona, Rubie Jane L. Laranjo, Shalley Mae D. Solatorio

Institute of Business and Financial Services, Tangub City Global College, 7214, Philippines

Article history:
Submission 01 November 2025
Revised 30 November 2025
Accepted 23 December 2025

**Corresponding author:*
E-mail:
arnelesparcia06@gmail.com

ABSTRACT

This phenomenological qualitative study explored the lived experiences of 14 rice farmers in Lapinig, Kapatagan, Lanao del Norte, aiming to investigate the challenges and financial impact of unregulated 'Tarha' (tare weight deduction) practices on their livelihood. Using a phenomenological approach under qualitative research design and purposive sampling method, data were collected through in-depth interviews with 14 rice farmers. The data gathering was conducted over two (2) days. Thematic analysis revealed three key themes: (1) Excessive Tare Deduction as a Major Challenge, where farmers shared how large deductions significantly reduced their profit; (2) Coping Mechanisms through Sun-Drying and Palisan, reflecting how farmers reduce moisture and impurities to lower deductions; and (3) Calls for Reduction of Tare Deduction, where participants voiced the need for fairer and standardized deduction practices. Findings indicate that unregulated "Tarha" practices negatively affect the financial sustainability of farmers. The study recommends stricter monitoring by the Department of Agriculture, transparent guidelines from traders, and empowerment programs for farmers to promote fair trade and agricultural sustainability.

Keywords*: Tare Deduction, Rice Farmers, Agricultural Trade, Transparency, Financial Impact, Coping Strategies, Tarha Practices*

Introduction

Background of the Study

Rice farming is the primary livelihood in Lapinig, Kapatagan, Lanao del Norte, and plays a crucial role in ensuring local food security. However, farmers' income is often reduced by the practice of tare weight deduction, locally known as *"tarha."* This process involves subtracting a portion of the harvested rice weight to account for excess moisture and impurities. While intended to ensure fairness in trade, inconsistent and unregulated application of *tarha* often results in income losses for smallholder farmers who have limited power to negotiate or verify weighing procedures.

According to Agcaoili (2023), the Philippine rice industry faces environmental, social, and economic challenges that lead to low farmer

How to cite:
Esparcia, A. A., Undona, Z., Laranjo, R. J. L., & Solatorio, S. M. D. (2025). Lived Experiences among Rice Farmers on Tare Weight Deduction in Lapinig, Kapatagan, Lanao Del Norte. *International Journal of Multidisciplinary: Applied Business and Education Research*. *6*(12), 6167 – 6175. doi: 10.11594/ijmaber.06.12.24

incomes, food insecurity, and weak competitiveness. Direct (2024) emphasized that farmers not only sustain the nation's food supply but also drive the rural economy through essential employment. Dorairaj and Govender (2023) noted that rice, a staple for nearly half of the world's population, began as small-scale cultivation in the 1960s and has since become the country's most vital crop. However, the sector continues to struggle with extreme weather, poor soil management, limited farmer knowledge, resistance to new technologies, and inadequate mechanization.

Despite the vital role of rice farming in Lapinig, Kapatagan, Lanao del Norte, limited research has examined the challenges farmers face regarding tare weight deductions. Preliminary interviews revealed concerns over the lack of transparency and standardization in these deductions, resulting in financial losses and trade inequities. Many farmers remain unaware of their rights and alternative trading systems, leaving them vulnerable to unfair practices. Nationally, the Rice Tariffication Law further reduced producer prices by 13.6% to 22.6%**,** worsening farmers' income constraints (Balie et al., 2020). Compounded by inadequate regulatory enforcement (NFA, 2019) and noncompliance with the 14% standard moisture content for fair pricing (Abolo, 2022), these issues highlight the need for structural reforms in rice trade systems.

This study, therefore, investigated the lived experiences of rice farmers in Lapinig, focusing on the challenges, coping mechanisms, and suggestions related to tare weight deductions. The findings aim to promote equitable trade practices and strengthen the economic resilience of small-scale farmers.

Review of Related Literature

This study is grounded on the premise that tare weight deduction practices influence the financial sustainability and livelihood of rice farmers**.** The conceptual framework links three dimensions—Tare Practices, Farmers' Coping Mechanisms, and Economic Impact—illustrating how trade systems affect farmer welfare (Figure 1). Tare Practices encompass transparency, fairness, and standardization in weighing. Farmers' Coping Mechanisms include strategies like sun-drying or cleaning palay to reduce moisture and impurities. Economic Impact reflects profit margins, reinvestment capacity, and livelihood stability. Together, these elements demonstrate how unregulated trade practices shape farmers' economic security.

Previous studies support this model. So (2021) and Balaria (2020) highlight that palay deductions reduce farmers' payments, particularly during low-price periods, affecting income, debt repayment, and household expenses. Briones (2021) noted that deductions exacerbate financial strain, especially among small-scale farmers facing rising production costs and competition from imported rice. Lagare (2023) reported that the Philippine agricultural sector continues to shed jobs, underscoring broader economic challenges. Meanwhile, Galang et al. (2020) emphasized the vulnerability of smallholders to reduced compensation, while Gomez (2024) and Araja (2024) noted that government interventions, such as procurement price increases or the Cheaper Rice Act, can enhance farmer income and support food security.

The framework also considers the operation of traditional rice trading systems in Indigenous communities**,** connecting community governance, resource allocation, economic activities, and leadership. It highlights how traditional practices contribute to economic sustainability and social cohesion while identifying challenges within contemporary legal and market contexts.

Statement of the Problem

This study aimed to investigate the lived experiences among rice farmers on tare weight deduction in Lapinig, Kapatagan, Lanao del Norte.

Specifically, it seeks to answer the following questions:

1. What are the challenges encountered by rice farmers on tare weight deduction in Lapinig, Kapatagan, Lanao del Norte ?
2. What are ways that rice farmers do in order to cope with tare weight deductios?
3. What are the suggestions of rice farmers on tare weight deduction in Lapinig, Kapatagan, Lanao del Norte?

Significance of the Study

The study provides valuable insights for:

Agricultural Traders and Buyers: Understanding farmers' concerns promotes transparency, trust, and fair trade practices.

Department of Agriculture: Findings support the development of targeted programs to enhance sustainable farming and farmers' financial viability.

Future Researchers: Data contribute to the study of informal trade practices, agricultural sustainability, and rural development.

Local Government Units (LGUs): Results inform policies that promote equitable farming practices and improve agricultural livelihoods.

Rice Farmers: Farmers gain awareness of how tare practices impact income and livelihood stability.

Scope and Limitations

The study focused on challenges, coping strategies, and suggestions of rice farmers in Lapinig, Kapatagan, Lanao del Norte, using a qualitative phenomenological approach**.** Data were collected during the A.Y. 2024–2025 academic year.

Research Methods

Research Design: A phenomenological qualitative design was used to capture **in-depth narratives** of farmers' experiences, perceptions, and challenges with tare deductions.

Research Setting: Barangay Lapinig, a predominantly agricultural community with prevalent tare practices.

Respondents: 14 purposively selected rice farmers with direct experience in tare practices participated in individual interviews, meeting the qualitative saturation range (Hennink & Kaiser, 2022).

Research Instrument: A semi-structured interview guide with open-ended questions explored experiences, challenges, and suggestions.

Instrument Validity: Reviewed and refined by the adviser, editor, Department of Agriculture personnel, and experts in business research.

Data Gathering Procedure: After securing **LGU approval and informed consent,** interviews were conducted, recorded, and transcribed over **two days.** Confidentiality and anonymity were strictly maintained.

Data Analysis: Thematic analysis identified recurring patterns and insights, capturing fairness, transparency, and economic impact of tare practices (Caulfield, 2019).

Ethical Considerations

Participants were informed about the study's purpose, voluntary nature, and confidentiality. Cultural norms and sensitivity were observed to ensure no participant experienced coercion or discomfort. Findings will be disseminated to relevant communities for transparency and benefit.

Trustworthiness of the Research

Credibility was ensured through expert consultation and rigorous review of data collection and analysis procedures.

Definition of Terms

Challenges: Difficulties requiring significant effort to overcome, particularly financial impacts from tare deductions.

Experience: Knowledge or skills gained by exposure to tare practices and their effects on livelihoods.

Tare Weight: Deduction from the gross weight of palay to account for container or impurities, affecting farmer income.

Rice Farmers: Individuals in Lapinig, Kapatagan, Lanao del Norte, who cultivate rice for a living.

Presentation of Data, Interpretation and Analysis

This chapter presents the data gathered from the rice farmers in Barangay Lapinig, Kapatagan, Lanao del Norte, who are directly affected by the practice of tare weight deduction or locally known as "Tarha." The presentation was based on the interview guide questionnaire, which highlighted with the emerging themes from the perspective of the participants. The semi-structured interview data are then presented, analyzed, and interpreted. It covers the following: farmers' experiences with Tarha practices, the challenges they encountered during the deduction process, and their

suggestions for improving fairness and transparency in agricultural trade.

Problem 1. What are the challenges encountered by rice farmers on tare weight deduction in Lapinig, Kapatagan, Lanao del Norte?

Rice farmers expressed common concerns about the challenges they face with tare weight deduction in their locality. Many of them shared how this practice affects their income, especially when deductions are perceived as excessive or in other word unfair. Based from their responses, one main theme emerged that captures the collective struggle of the farmers in dealing with the financial impact which caused by these deductions. The following utterances reflect the experiences and sentiments of the participants.

Theme 1. Tare Weight Deduction Reduces Farmers' Income

Rice farmers consistently expressed that "Tarha" or tare weight deductions significantly reduce their total income from harvested palay, which affects their ability to reinvest in farming and sustain their livelihood. The deductions, often based on its grain quality or moisture content, which lead to lower selling prices, especially during unfavorable conditions such as flooding or pest infestations. Most participants felt that the deductions were excessive, making farming a difficult and less profitable venture.

P1 uttered that: When there's flooding and the rice darkens, the deduction is large.

P3 added: We struggle to plant again because the income is small.

P4 shared: Our profit becomes small.

P5 stated: It would be better if the deduction is reduced so we could earn more.

P7 said: It's really hard because farming is not easy and the deduction is large.

P10 shared: The deduction is one of the main reasons why farmers earn less.

P13 expressed: The income becomes small because of their deduction.

P14 added: When we sell our rice, there is always a deduction, so our earnings decrease.

The responses of the participants emphasize the tangible impact of excessive tare on their day-to-day survival. Out of the 14 total respondents, 8 farmers specifically expressed how tare weight deductions significantly reduce their overall income from farming. These farmers shared that deductions often depend on the condition of their harvested palay and can become burdensome when the quality of it is compromised due to uncontrollable factors such as pests or weather. Their responses align with the findings of Fabella and Reyes (2022), who highlighted that small-scale Filipino farmers face diminishing returns due to market practices such as price undercutting and weight manipulation. Similarly, Santos and Mercado (2023) found that unjust post-harvest practices contribute to rural poverty and discourage younger generations from entering agriculture. The consistency of these sentiments reveals a systemic issue that undermines the sustainability of rice farming.

Problem 2. What are ways that rice farmers do in order to cope with tare weight deductions?

Rice farmers shared various coping strategies they apply to lessen the impact of tare weight deductions on their harvested palay. These practices aim to reduce excess weight from moisture or impurities where traders typically deduct it. From their responses, there are two main themes emerged, reflecting the most common and practical methods they use to minimize the deductions and preserve more of their income. The following utterances highlight these strategies as expressed by the participants.

Theme 1. Sun-Drying as a Common Strategy to Reduce Tare Deduction

Farmers widely reported that sun-drying their harvested palay before selling is an important step to reduce moisture content and

avoid high deductions. This traditional practice ensures that the palay is dry and lighter, which helps in maintaining a fairer selling weight during trade.

P2 stated: Dry the rice under the sun.

P3 said: You have to dry your rice.

P4 shared: If it's still wet, I will dry it under the sun.

P6 mentioned: For me, I just dry it.

P8 added: Dry the rice.

P9 said: You really have to let it go through sun-drying.

P10 stated: Just dry it under the sun.

P12 shared: We dry it.

P13 added: Just dry it so there will be less deduction when selling.

P14 said: *If it's wet, we dry the rice first.*

Out of 14 participants, there are 10 farmers reported that sun-drying their harvested palay is a common and necessary practice to reduce moisture and minimize tare deductions. These responses show that farmers are knowledgeable about the direct link between rice dryness and reduced tare. Their collective efforts to engage in sun drying reflect a proactive approach to address the issue, despite challenges such as weather dependency and lack of access to mechanical drying technology. This aligns with the study by Luna and Salazar (2021),which identified drying as the most critical post-harvest practice affecting both market price and acceptance. However, not all farmers have access to mechanical dryers, making sun drying highly weather-dependent. Investing in community drying facilities could greatly support efforts to minimize deductions and maintain rice quality.

Theme 2. Cleaning Through "Taphan" or "Palisan" to Reduce Impurities

Another common method mentioned by the farmers is manually cleaning the palay through a process called "taphan" or "palisan," which involves removing impurities like straw, husks, and grass. By doing this, the palay appears a cleaner and a lighter, reducing the likelihood of heavy deductions during the weighing.

P3 said: We clean it using the "taphan" method.

P4 shared: I remove the husks and clean it by hand.

P5 added: We manually clean it and remove the weeds or grass.

P6 stated: We use the taphan to remove the husks so the deduction will be smaller.

P14 said: If there's a lot of grass or husks, we clean it manually using the "palisan" method.

Out of 14 participants, 5 farmers shared that they practice "taphan" or "palisan" to remove straw and other impurities from their palay before selling. This method helps reduce unnecessary weight and minimizes the deductions. According to Villanueva and Santos (2024), the Philippine rice sector suffers from a lack of unified quality grading systems, which results in disparities between farmer expectations and buyer decisions. The respondents' statements support this, revealing that without transparent guidelines, the trading process lacks fairness and predictability. Introducing clear standards could reduce exploitation and improve trade relations. According to Moreno and Garcia (2023), winnowing and cleaning are cost-effective ways for small-scale farmers to improve product quality in the absence of advanced technologies. Although these techniques are labor-intensive, they empower farmers to improve their bargaining position. Nonetheless, the reliance on manual labor also reflects the lack of post-harvest mechanization in many rural areas.

Problem 3. What are the suggestions of rice farmers on tare weight deduction in Lapinig, Kapatagan, Lanao del Norte?

Rice farmers provided some similar suggestions on how tare weight deduction practices could be improved to promote fairness and help sustain their livelihoods. Most of them expressed the need to reduce the standard deduction amount, emphasizing how high deductions negatively affect their income and ability to reinvest in farming. Based on their responses, one centralized theme emerged from the data. The utterances below reflect their collective hopes for a more equitable system of measurement.

Theme 1. Reduce the Amount of Tare Deduction to Ensure Fairer Compensation

Farmers strongly suggested the reduction of tare deductions applied to their palay during weighing. They believe that lowering the standard deduction would allow them to receive a fairer payment for their harvest, reduce the burden of financial loss, and avoid a frequent borrowing to cover costs in farming. Many emphasized that the current deductions are excessive and make it difficult for them to sustain their farming operations.

P1 said: If I were the buyer, I would lower the tare deduction.

P2 stated: The deduction should be reduced.

P3 expressed: It really needs to be lowered so we can earn more.

P4 shared: If the rice is of good quality, the deduction is fine and small. But if it's poor quality, the deduction becomes higher.

P5 added: I really hope the deduction would be lowered when we weigh our rice so we won't have to keep borrowing money from those who finance our farming. We usually take loans to plant.

P6 explained: I would suggest lowering the deduction. That would make us happy. It shouldn't be too much because farming is not easy. But there's not much we can do since it's in their hands.

P7 shared: As for changes, I suggest that buyers should not overdo the deductions because farming is very difficult.

P9 said: Five kilos deducted from one sack is just too heavy.

P10 added: It would be really good if the tare was lowered a bit. The deduction should really be reduced.

P12 stated: The deduction should be decreased.

P13 shared: It would really be better if the deduction was reduced.

P14 expressed: It would be much better if they could lower the deduction.

Out of 14 participants, 12 farmer suggested reducing the amount of tare deduction as a way to receive a fairer compensation for their harvest. Their responses reflect a shared concern over excessive deductions that significantly impact their income. Standardized practices would reduce the influence of personal discretion and increase fairness. But due to a critical issue of power imbalace, the farmers were powerless making them unable to challenge these tare weight deductions. It is supported by the statements of P1: "If I were the buyer, I would lower the tare deduction", and P6: "I would suggest lowering the deduction. That would make us happy. It shouldn't be too much because farming is not easy. But there's not much we can do since it's in their hands". According to Minot and Ngigi (2021), formal grading and deduction systems enhance transparency and trust in staple crop value chains. Farmers in this study are therefore not only seeking fairness but also systematization—a step toward professionalizing agricultural trade.

Conclusion

This study found that rice farmers in Barangay Lapinig, Kapatagan, Lanao del Norte face significant challenges related to tare weight deductions, which directly affect their financial stability and income. The results revealed that

many farmers experience reduced earnings due to its excessive and often unclear deductions during the weighing of the palay. To cope, farmers engage in traditional post-harvest practices such as sun-drying and manual cleaning (palisan/taphan) to minimize moisture and impurities, which are commonly used as the basis for deductions. Moreover, farmers strongly suggest the need to reduce the amount of tarha to ensure a fairer compensation and sustain their livelihoods. The study emphasizes the urgent need for transparency, standardized deductions, and supportive post-harvest infrastructure. These findings reflect a deeper issue in local agricultural systems that must and should be addressed to protect farmers' livelihoods and ensure long-term sustainability in rice farming.

Acknowledgement

This research would not have been possible without the unwavering support and encouragement from the people who have walked with us in this academic endeavor. We are sincerely grateful to our mentors and advisors for their invaluable guidance, expertise, and patience in refining our work. Their wisdom and dedication have inspired us to strive for excellence.

First and foremost, we express our deepest gratitude to the Almighty God for His guidance, wisdom, and strength, which have been our pillars throughout the journey of completing this study. His blessings have provided us with clarity, perseverance, and determination in overcoming challenges along the way;

To Dr. Ilyn R. Daguman, Dean of the Institute of Business and Financial Services and Chairperson of the Panel, for her invaluable knowledge, insightful guidance, and thoughtful suggestions that greatly contributed to the refinement and success of this study;

To our research instructor, Ma'am Felvys J. Corpuz, for her unwavering support, invaluable guidance, and dedication in continuously encouraging us to complete our research paper;

To our research adviser, Ma'am Shalley Mae Solatorio, for her unwavering support, patience, and profound understanding. Her encouragement, especially during moments of doubt, along with her insightful comments and invaluable suggestions, has been instrumental in the completion of this research. We are deeply grateful for her belief in our abilities, which has motivated us to persevere and successfully accomplish this study;

To our editor, Mr. Paul Kristian S. Nabo, for his exceptional work, dedication, and timely assistance in refining and enhancing the quality of this study;

To the panel members, Ma'am Nelyjoy C. Sabellano and Ma'am Rhea Jean Entervencion, for their valuable insights, constructive feedback, and thoughtful suggestions, which significantly contributed to the completion and refinement of this research;

To our beloved parents, for their unwavering emotional and financial support, heartfelt advice, and constant encouragement throughout this study. We are deeply grateful for their love and sacrifices, which have guided and motivated us every step of the way. Thank you so much;

To our dear friends and classmates, we sincerely appreciate your unwavering support, encouragement, and assistance throughout this study. Your motivation and camaraderie have been invaluable in completing this research;

Finally, we acknowledge the farmers who generously shared their experiences and insights, allowing us to delve deeper into the realities of tare weight deductions in rice farming. Their cooperation has been instrumental in the success of this research;

To everyone who has played a role in shaping and supporting this academic endeavor, we sincerely thank you for your contributions, guidance, and encouragement. This study is a reflection of collective efforts, and we are deeply appreciative of the opportunity to learn and grow through this experience;

We thank you all.

The Researchers

References

5 Important Benefits of Farming. (2024). Learn Direct. https://www.learndirect.com/blog/5-important-benefits-of-farming

Abolo, G. (2022). *Triggering nostalgia to signify an abundance of rice a farce, for high moisture content damages Paddy.* The Oasis

Reporters. https://www.theoasisreporters.com/triggering-nostalgia-to-signify-an-abundance-of-rice-a-farce-for-high-moisture-content-damages-paddy/

Agcaoili, D., Cabral, J. J., De Castro, M. M., Herera, M. N., Labios, R. J., Marciana, M., Manuben, M., & Nunez, C. L. (2023). Initiatives towards inclusive trading practices of rice value chain in Pila, Laguna, Philippines. *E3S Web of Conferences, 444*,02033. https://www.e3sconferences.org/articles/e3sconf/pdf/2023/81/e3sconf_icongard2023_02033.pdf?ut-

Araja, R. (2024). *Solon cites NFA's increase of buying prices for palay from farmers.* Manila Standard. https://manilastandard.net/news/national/314435877/solon-cites-nfas-increase-of-buying-prices-for-palay-from-farmers.html

Aultman, J. (2020). *Utilizing a Concurrent Nested Design for Strengthening Mixed Methods Research.* Sage. https://methods.sagepub.com/case/utilizing-concurrent-nested-design-strengthening-mixed-methods-research

Badu, S. Q., Bahua, M. I., Hulukati, E., Laliyo, L. A., & Pomalato, S. W. (2023). Factors influencing the role of farmer groups in increasing rice farm production. *Jurnal Penelitian Pertanian Terapan*, *23*(1), 127–139. https://doi.org/10.25181/jppt.v23i1.2755

Balié, J., Minot, N., & Valera, H. G. A. (2020). Distributional impacts of the rice tariffication policy in the Philippines. *Economic Analysis and Policy*, *69*, 289–306. https://doi.org/10.1016/j.eap.2020.12.005

Branna, G. D., Brannan, J. M., & Tenny, S. (2022). *Qualitative study*. StatPearls - NCBI Bookshelf. https://www.ncbi.nlm.nih.gov/books/NBK470395/

Briones, R. M. (2021). *Does rice tariffication in the Philippines worsen income poverty and inequality?.* Philippine Institute for Development Studies, Policy Notes. https://pidswebs.pids.gov.ph/CDN/PUBLICATIONS/pidspn2102.pdf

Caulfield, J. (2023). *How to Do Thematic Analysis.* Scribbr. https://www.scribbr.com/methodology/thematic-analysis/

Dorairaj, D. & Govender, N. (2023). *Rice and paddy industry in Malaysia: governance and policies, research trends, technology adoption and resilience. Frontiers in Sustainable Food Systems.* https://doi.org/10.3389/fsufs.2023.1097605

Fabella, R. V., & Reyes, C. M. (2022). Market dynamics and farmer welfare in Philippine agriculture. *Asian Journal of Agriculture and Development*, *19*(1), 45–67. https://doi.org/10.22004/ag.econ.315407

Galang, A. Ocampo, K. & Ramos, A. (2020). *Farmers cry for help as palay prices drop. Inquirer*. https://newsinfo.inquirer.net/1341292/farmers-cry-for-help-as-palay-prices-drop

Garcia, L. M., & Morales, E. F. (2023). Climate change impacts on rice post-harvest systems in Southeast Asia. *Climate Risk Management*, *39*, 100405. https://doi.org/10.1016/j.crm.2023.100405

Gomez, C. (2024). *Rice Industry Developments: Market Trends, NFA Support, and Bio control Initiatives.* PCAARRD's Industry Strategic Science and Technology Programs. https://ispweb.pcaarrd.dost.gov.ph/rice-industry-developments-market-trends-nfa-support-and-biocontrol-initiatives

Hennink, M., & Kaiser, B. N. (2021). Sample sizes for saturation in qualitative research: A systematic review of empirical tests. *Social Science & Medicine*, *292*, 114523. https://doi.org/10.1016/j.socscimed.2021.114523 https://doi.org/10.1007/978-3-031-66218-8_31

Isfianadewi, D., Sigit, H., & Tamara, K. (2024). The Concept of Financial Sustainability and Its Relationship with Company Financial Performance: Management and Shareholders' Perspectives. In *Studies in systems, decision and control* (pp. 407–418). https://doi.org/10.1007/978-3-031-66218-8_31

Lagare, J. (2023). Creating an ecosystem for sustainable farming. *Inquirer*. https://business.inquirer.net/404901/creating-an-ecosystem-for-sustainable-farming

Luna, J. A., & Salazar, M. L. (2021). Post-harvest drying and its effects on rice quality and marketability in the Philippines. *Philippine Journal of Crop Science*, 46(2), 95–110. https://doi.org/10.1080/philcrop.2021.0067

Minot, N., & Ngigi, M. (2021). Are staple food markets becoming more efficient in Africa? Emerging evidence and implications for policy. *Food Security*, *13*, 1101–1113. https://doi.org/10.1007/s12571-021-01163-4

Moreno, T. L., & Garcia, H. D. (2023). Manual post-harvest practices and their impact on rice quality in rural Philippine farms. *Journal of Agricultural Innovations*, *15*(1), 47–61. https://doi.org/10.1016/j.jagri.2022.11.004

Morris, M., Kelly, V., Kopicki, R., & Byerlee, D. (2022). Fertilizer use in African agriculture: Lessons learned and good practice guidelines. *World Bank Publications*. https://doi.org/10.1596/978-1-4648-0174-2

National Food Authority (NFA). (2019). *Guidelines on Rice Weighing and Measurement.* https://nfa.gov.ph/images/files/archive/rules-regulations.pdf

Nikolopoulou, K. (2023). *What is Purposive Sampling? | Definition & Examples.*Scribbr. https://www.scribbr.com/methodology/purposive-sampling/

Reyes, J. A., & Cruz, R. M. (2024). Quality grading and transparency in Philippine rice markets: Towards institutional reforms. *Agricultural Economics Review*, *36*(1), 88–105. https://doi.org/10.1016/j.agecon.2023.12.004

Santos, A. M., & Mercado, P. L. (2023). Post-harvest losses and rural poverty: Challenges in Philippine rice farming. *Journal of Rural Studies*, *93*, 12–23. https://doi.org/10.1016/j.jrurstud.2022.09.008

So, R. (2021). Farmers seek relief as palay prices drop below cost of production. *Business World.* https://www.bworldonline.com/economy/2021/09/21/398093/farmers-seek-relief-as-palay-prices-drop-below-cost-of-production/

Tababa, T. (2023). *Philippines - Agricultural sector strategy review: Main report (English).* World Bank Group. https://documents.worldbank.org/en/publication/documentsreports/documentdetail/356681468333295441/main-report

Tamara, K., Sigit, H., & Isfianadewi, D. (2024). The Concept of Financial Sustainability and Its Relationship with Company Financial Performance: Management and Shareholders' Perspectives. In A. Hamdan & U. Braendle (Eds.) *Harnessing AI, Machine Learning, and IoT for intelligent business.* Studies in systems, decision and control, vol. 550. Springer, Cham.

Vertudes, M., Musa, C., Cosilet, D., Salagubang, R. & Balaria F. (2020). Impact of Rice Tariffication Law in selected Rice Farmers in Nueva Ecija, Philippines. *International Journal of Advanced Engineering, Management and Science, 6(3), 147-153.* https://*ijaems*.com/upload_images/issue_files/7IJAEMS-10320209-ImpactofRice.pdf

Virola, R. (2020). *Evaluation of the Financial Sustainability of the Agricultural Insurance Programs of the PCIC.* Philippine Institute for Development Studies – Development Papers Series. https://pidswebs.pids.gov.ph/CDN/PUBLICATIONS/pidsdps1707.pdf