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Repositioning Cooperative Poultry Farming as a Vocation for the Unemployed Youths

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ABSTRACT

The widespread impact of the Coronavirus pandemic has led to substantial job losses, prompting increased pressure on policymakers, scholars, and non-governmental organizations to generate sustainable employment opportunities for young individuals, particularly within economically disadvantaged communities. This investigation focuses on the feasibility of integrating unemployed youth into established commercial broiler value chains as a means to address the employment gap resulting from the pandemic. Its objective is to raise awareness among governments, institutions, and stakeholders regarding the hurdles faced by young people aspiring to engage in chicken production. To assess the current status of small-scale poultry farming in the studied region, interviews were conducted with small-scale poultry producers in Umhlathuze Municipality, KwaZulu-Natal, South Africa, along with experts from Owen Sithole College of Agriculture. Insights gathered from participants indicate various obstacles to poultry production in the area, such as insufficient digital, limited space, skill-shortage, restricted market access, low profitability, and instances of theft. Consequently, a proposed solution, the 'Collective Farming Model,' is advocated. Moreover, the authors contend that the efficacy of this model hinges significantly on its apprenticeship-based learning system, validated through successful implementation in a prototype initiative.

KEYWORDS: Cooperative, Poultry farming, Smallholders, Entrepreneurship, South Africa, Collective farming model.

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Reposicionamiento de la agricultura cooperativa de aves de corral como vocación para los jóvenes desempleados

RESUMEN

El impacto generalizado de la pandemia del Coronavirus ha llevado a una pérdida de empleo sustancial, lo que provocó una mayor presión sobre los encargados de formular políticas, los académicos y las organizaciones no gubernamentales para generar oportunidades de empleo sostenibles para las personas jóvenes, particularmente dentro de las comunidades económicamente desfavorecidas. Esta investigación se centra en la viabilidad de integrar a los jóvenes desempleados en las cadenas de valor de pollos de engorde comerciales establecidas como un medio para abordar la brecha laboral resultante de la pandemia. Su objetivo es crear conciencia entre los gobiernos, las instituciones y las partes interesadas con respecto a los obstáculos que enfrentan los jóvenes que aspiran a participar en la producción de pollos. Para evaluar el estado actual de la agricultura avícola a pequeña escala en la región estudiada, se realizaron entrevistas con productores avícolas a pequeña escala en el municipio de Umhlathuze, Kwazulu-Natal, Sudáfrica, junto con expertos del Owen Sithole College of Agriculture. Las ideas reunidas de los participantes indican varios obstáculos a la producción avícola en el área, como insuficiente espacio digital, espacio limitado, cambio de habilidad, acceso restringido al mercado, baja rentabilidad e instancias de robo. En consecuencia, se defiende una solución propuesta, el "modelo de agricultura colectiva". Además, los autores sostienen que la eficacia de este modelo depende significativamente de su sistema de aprendizaje, validado a través de la implementación exitosa de una iniciativa prototipo.

PALABRAS CLAVE: Cooperativa, Agricultura avícola, Pequeños productores, Emprendimiento, Sudáfrica, Modelo de agricultura colectiva.

Introduction

The poultry industry offers a sustainable source of food supply to households around the world (Nkukwana, 2018). In other words, poultry farming facilitates the job creation (Smirnov, 2019), and maximizes agricultural production (Gržinić et al., 2023). In recent years, the global outbreak of the coronavirus pandemic has led to substantial job losses in various nations, including South Africa (Omotosho et al, 2023). Research indicates that the national lockdown during the first quarter of 2020 resulted in approximately 2.2 million job losses in South Africa (Cascale & Posel, 2020). Despite the significant role of the chicken industry, particularly as one of South Africa's key agricultural sectors with nearly 100,000 workers, smaller poultry producers continue to

encounter hurdles accessing markets (Hobbs, et al., 2018). In light of this phenomenon, the authors argue that cooperative farming may offer poultry farmers a viable option for collaborating and addressing the above-mentioned challenge collectively.

The concept of cooperative poultry farming has been instrumental in tackling the issue of limited market access, particularly in less affluent countries (Hellin, et al., 2009). For instance, in 2017, over 75% of the milk produced in the United States was sold through dairy cooperatives (Wadsworth et al., 2021). Furthermore, disparities in cooperative market shares are notable across industries and countries (Bunse, et al., 2011). While Italian cooperatives held a mere 5% market share in the olive oil industry in 2010, Spanish cooperatives dominated with 70% (Stasi et al., 2018). Similarly, in the pig meat market, French and Danish cooperatives secured 86% and 94% shares, respectively, whereas other European Union nations lagged behind (Bijman et al., 2012). The foregoing suggests that cooperative farming model is a community development approach that allows individuals with shared interests to work together for mutual benefit.

The attractiveness of cooperatives stems from their access to global markets and their focus on export-oriented, high-quality products, encouraging farmers to join (Morakile, 2018). Through cost-cutting measures and leveraging market dominance, cooperatives have the potential to boost community development and membership remains voluntary and self-sustaining, fostering mutually beneficial partnerships with the community and government (Candemir et al., 2021). Poultry farming not only enhances food security but also supports sustainable agriculture in impoverished nations, with over 80% of rural households utilizing it as a renewable resource and raw material for the confectionery industry (Nkukwana, 2018). To meet the demand for animal protein, governments and non-governmental organisations has initiated various programs, including the Future Farmers Foundation, World Poultry Foundation, and Supreme Poultry among others (Alders et al., 2009). These initiatives aim to empower farmers in developing nations and foster global poultry production and consumption. Notably, training provided by international and national organisations and experts has greatly benefited small-scale chicken farmers in South Africa (Wiskirchen et al., 2022). Moreover, these programmes primarily educate farmers on modern, efficient livestock rearing methods, which subsequently increase farmers' income (Aladejebi et al., 2014). Despite the establishment of these initiatives, the poultry industry in Umhlathuze

Municipality falls short of achieving self-sufficiency in poultry production, and the level of involvement of the youths in this sector remain unsatisfactory (Mhlongo, 2017).

In light of the above, the study poses the following inquiries:

RQ1. How satisfied are youths who operate as poultry farmers?

RQ2. What challenges do youths face in their endeavour to operate as poultry farmers?

RQ3. What strategies are necessary to engage youths in sustainable poultry farming?

1. Theoretical Foundation

The theoretical framework for this study lies in the theory of cooperative learning. This theory suggests that participants, believing their group's ability to cooperate influences their success, are inclined to encourage actions that benefit the group's success (Swortzel, 1997). Furthermore, they tend to provide mutual support in completing tasks (Yager et al., 1986). Consequently, cooperative efforts enhance the likelihood of participants' success. Within groups of resource-limited poultry producers, collaborative endeavours facilitate clearer articulation of thoughts and ideas through discussions and debates (Kirui's, 2019). This heightened level of discourse surpasses that found in instructor-led sessions, thereby fostering progress in the farmers' enterprises. According to the constructivist perspective, such cooperative engagement encourages critical thinking among members as they develop their own solutions (Davis, Mahler, & Noddings, 1990). The resulting implication is that cooperation among poultry farmers stands as the optimal approach. This collaborative effort will generate tangible economic benefits essential for ensuring sustained food production.

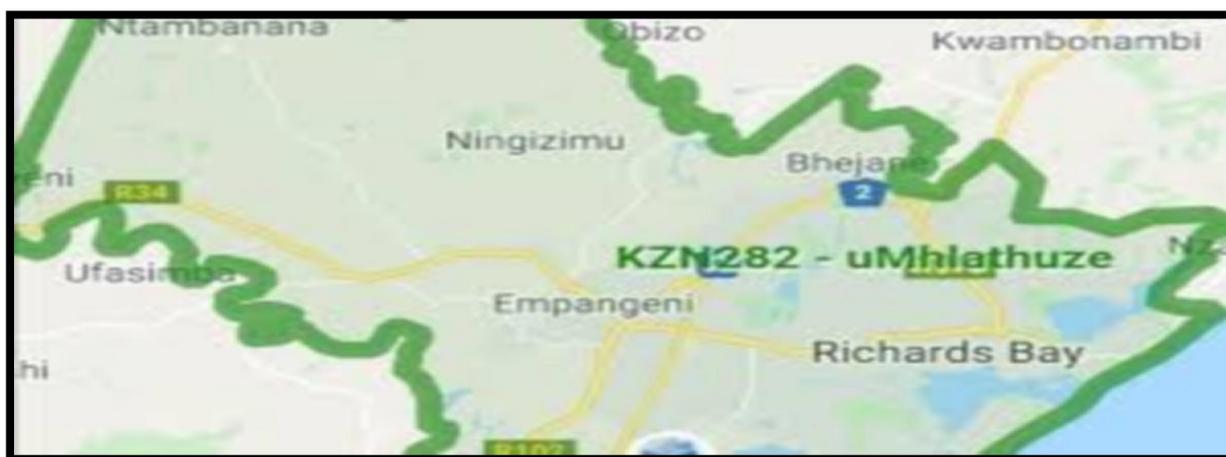
2. Selection and Description of the Study Area

Umhlatuze Municipality, positioned on the northeast coast of KwaZulu-Natal, spans an area of 94,361 km², contributing 7.7% to South Africa's total expanse. Notably, the KZN Province boasts substantial agricultural productivity, hosting the highest number of farming households in the country (Nino et al, 2020). The primary towns of Richards Bay and Empangeni, along with various chieftain areas within the Zulu Kingdom under the Ingonyama Trust Landfall, are encompassed within the municipal boundaries.

Covering 1195 km², Umhlathuze sustains a population of 384,449 (Official Gazette, 2021). The decline in formal employment within agriculture is evident in the region, where the sector's significance in job creation has dwindled. Agriculture here is more of a cultural pursuit, illustrating rural residents engaging in limited cattle rearing or subsistence farming for household needs. However, this often falls short in ensuring household food security or generating economic activity. Conversely, the education sector emerges as the primary job provider, exhibiting a consistent upward trend.

Considering the pivotal role of agriculture in national development, the declining significance of these sectors raises concerns. KwaZulu-Natal comprises five local municipalities, namely: uMhlathuze, Nkandla, uMfolozi, Mthonjaneni, and uMlalazi. Refer to Figure 1 for a map depicting Umhlathuze Municipality.

Figure 1. Map of Umhlathuze Municipality



3. Methodology

Multi-stage and purposive sampling methods were employed to select a location whose units of observation meet specific criteria. The process involved a multi-stage sampling technique that deliberately chose Sokhulu, Mabuyeni, Ongoye, Port Durnford, Eshawini, Matshana, and Mzingazi due to their agricultural potential. In contrast, the uMhlathuze Local Municipality, despite having the lowest economic contribution from its agricultural sector at 3.2%, faces challenges where small-scale poultry farmers struggle to sustain themselves and engage in food value chains. This struggle results in their exclusion from capital markets, posing significant hurdles for their economic survival (Nino et al, 2020).

3.1. Research Design

This study employs a qualitative research approach to comprehensively depict the operational landscape of small-scale poultry farms in the designated area. Data were acquired through structured interviews conducted with the explicit consent of participants, some of which were audio-recorded with the permission of the academic staff involved. These interviews, including focus group sessions, explored diverse facets such as the state of technological learning environments within the institution, the accessibility and reliability of internet services for both staff and students, the impact of these technological spaces on teaching and learning well-being, challenges related to available technological resources, and recommendations for enhancement.

3.2. Sampling

The sampling methodology aligns with Kumar's (2018) suggestion of utilizing the formula $K = N \div n$, where K represents the interval width, N the total population, and n the sample size. Ten percent of the total population of small poultry farmers was sampled due to the limited presence of such farmers in the Umhlathuze Municipal area, South Africa. Data collection focused on eight (8) small poultry farmers within this region, employing a systematic approach. All participants possess substantial experience in poultry farming and possess comprehensive knowledge regarding the status of poultry farms within the municipal area.

3.3. Data Analysis

Extensive volumes of transcribed data underwent meticulous scrutiny to identify recurrent patterns and discrepancies. The identification of these patterns in participant responses facilitated the development of overarching themes and sub-themes crucial to addressing the study's core research inquiries. Theme analysis served as the framework for presenting empirical data and formulating conclusions.

3.4. Ethical Considerations and Trustworthiness

Ethics in research, as elucidated by Resnik et al. (2015), encompass the strategies, procedures, and foundational principles governing ethical conduct and addressing complex research-related issues. Participants received assurances of strict confidentiality regarding the collected data, ensuring its exclusive utilization for

academic purposes. Furthermore, to safeguard participants' anonymity and privacy, no requests for personal information such as names or addresses were made during interviews. The study's findings were presented in a manner that precluded any identification of the participants. Importantly, ethical clearance was secured from the institution housing the participants before data collection. Ensuring validity and dependability were central to establishing credibility in this qualitative research, thereby necessitating ongoing analysis and interpretation of data until accurately reflecting participant perspectives.

4. Results and discussion

The findings were presented based on three primary facets delineated as themes: the age demographics of participants, their educational attainment, and the degree of contentment in their poultry farming endeavours, along with the challenges impeding youths from engaging in poultry farming and the requisite strategies for their involvement.

4.1. Participants' Age

The findings unveiled that the majority of participants fell within the middle-aged bracket, with an average age of 41.25%. Notably, youth representation among participants was markedly scant. These outcomes align with the observations made by Vusi & Oladele (2013) in their study conducted in the Capricorn District of Limpopo Province, South Africa, which highlighted the paucity of youth involvement in poultry projects. Additionally, Ekunwe et al. (2014) reported that 58% of individuals aged 20-49 and 33.3% aged 50-59 were engaged in poultry businesses. Collectively, these findings underscore that poultry-based enterprises predominantly attract middle-aged and elderly women. Hence, strategies in extension programs should be tailored considering the demographic realities of target cohorts. Furthermore, there is a need to explore why younger individuals are not participating in these income-generating activities, particularly amidst prevalent youth unemployment in the Umhlathuze region. Insights gleaned from these studies can inform the development of more pertinent extension strategies to effectively mobilize and involve young individuals sustainably.

4.2. Level of Education

The study ascertained that all participants possessed a minimum of a matric certificate, indicating their potential to comprehend the intricacies of poultry management given appropriate training. This corroborates Kirui's (2019) assertion that poultry projects perform better when members boast higher educational levels. Emaikwu et al. (2011) further established that education significantly influences the inclination to adopt innovations that enhance profitability, and higher educational attainment is associated with more adept management and production in poultry projects. Therefore, the provision of continual education and training should be an integral component of agricultural extension efforts for poultry-based enterprises.

4.3. Farmers' level of satisfaction with poultry farming

When participants were asked to comment on their satisfaction levels with the current state of their poultry farms, a variety of responses were received. Nearly all participants expressed dissatisfaction with their farm situations, as reflected in the verbatim remarks provided:

Participant 1: No

Participant 2: No

Participant 3: Not satisfied due to lack of capital, inadequate infrastructure, and limited resources such as water access.

Participant 4: No

Participant 5: Not at all

Participant 6: No

Participant 7: Not yet

Participant 8: Yes

This finding suggests that farmers were facing challenges in carrying out their daily farming activities. Virtually all participants affirmed their discontent with the status quo, indicating a need for urgent intervention from stakeholders to address the situation. According to Moloto et al. (2016), SMEs in the poultry industry struggle to survive, contributing to a high failure rate among poultry farmers. Leong (2017) also notes that small poultry farmers face numerous constraints in daily operations, making the business a challenging endeavour. The challenges faced by youth aspiring to become poultry farmers were further highlighted:

Participant 1: Limited space; capital and infrastructure are too expensive.

Participant 2: Problem of theft; wishes to expand poultry house.

Participant 3: I am still learning, made mistakes, and has a shortage of equipment.

Participant 4: No access to market.

Participant 5: No enough support from the Department of Agriculture.

Participant 6: Difficulty in accessing assistance from extension officers and private sector agents.

Participant 7: Small chicken coop limits production.

Participant 8: Lack of proper structure for the chickens.

Major challenges identified by participants included limited space, poor access to markets, and the inability to expand poultry structures. Mtelga et al. (2016) also observed similar challenges faced by South African small poultry farmers. The study emphasizes the need for public extension services to intervene by providing mentoring, skills-based training, and funding to enhance the success of small poultry farmers. To encourage youth engagement in sustainable poultry farming, participants suggested measures such as coaching, funding, mentorship, and the creation of a marketplace. However, the challenges of strict regulatory procedures and the need for organizational support were acknowledged.

Additionally, the prospects of collective marketing of broilers were explored, with agriculture experts providing insights as follows:

-Agriculture Expert 1: experiential education is highly essential, marketing within the organization, and collaboration with poultry-related entities.

-Agriculture Expert 2: it is imperative to have cooperative efforts among small-scale poultry farmers.

-Agriculture Expert 3: the importance of marketing in poultry farming cannot be overstated, therefore collective marketing is recommended to enhance sustainability through digital platforms.

-Agriculture Expert 4: there is a need for subsidized purchasing of inputs and the attachment of agricultural graduates to small-scale poultry farms.

-Agriculture Expert 5: collective marketing helps to share cost of production.

-Agriculture Expert 6: I am not optimistic about the impact of collective farming on the current situation.

The use of low-cost digital devices to improve poultry welfare was also discussed by agriculture experts:

-Agriculture Expert 1: Digital devices are needed for business growth and reducing costs.

-Agriculture Expert 2: Digital platforms is relevant for advertising and improving product quality during harvesting.

-Agriculture Expert 3: Experimentation with low-cost digital devices is required to enhance production, prevent food insecurity, and improve product quality.

-Agriculture Expert 4: It is useful to have low-cost digital devices with continuous monitoring and support.

-Agriculture Expert 5: There is a necessity for small poultry farmers to familiarize themselves with digital tools.

-Agriculture Expert 6: There is potential for higher profitability through the adoption of low-cost digital tools.

Overall, the findings suggest a widespread awareness among participants and agriculture experts regarding the importance of digital tools in enhancing poultry welfare and ensuring sustainability. This aligns with the perspective of Gal et al. (2019), emphasizing the benefits of digitalization for small firms in improving productivity and competitiveness.

5. The Proposed Collective Farming Model and Discussion

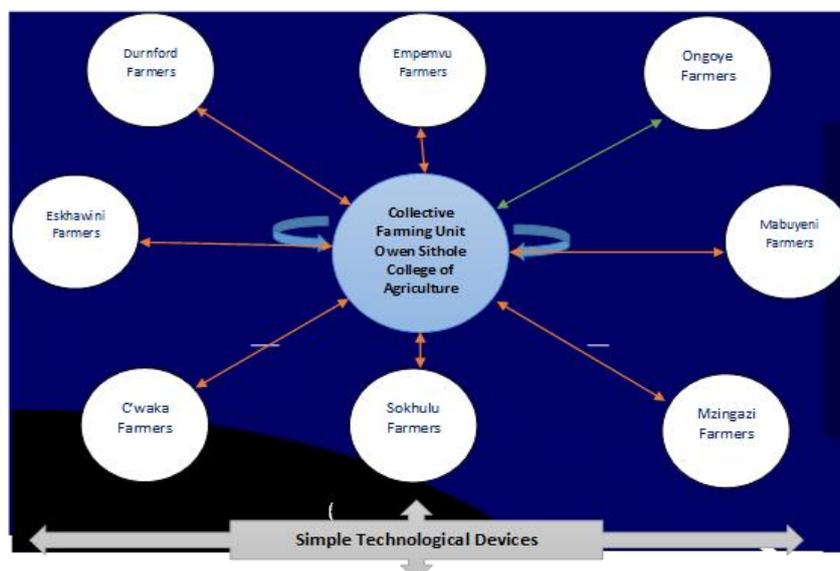


Figure: 2: The Proposed Collective Farming Model / Source: Authors own creation

The model underscores the interconnectedness between the Department of Agriculture and Rural Development and small poultry farmers, as delineated in Figure 2. The model posits that isolated farming is not viable; instead, uniformity in product quality across all farms is imperative. All training sessions will be mandatory and practical, while aid will be offered through direct procurement rather than cash disbursements. Additionally, the promotion of innovation among small poultry farmers involves recommending the adoption of simple digital tools within poultry facilities. An Intelligent System necessitates smartphones for real-time monitoring, controlling environmental factors like temperature, humidity, and disease occurrences. The envisioned benefits of this recommendation encompass reduced production costs, access to new technologies, heightened efficiency, and a wealth of knowledge and resources.

Stakeholders' role in implementing this model include:

-Owen Sithole College of Agriculture: This institution, where the study was conducted, operates on an apprenticeship learning system and is well-positioned to take a leading role in implementing the proposed model.

-Department of Agriculture and Rural Development: This department will initiate the project, conduct necessary research, oversee project progress, identify participants, aid in marketing, and offer grants for mentors.

-King Cetshwayo Municipal District: Responsible for providing land for essential infrastructures and assisting in regulatory matters concerning erecting broiler processing plants and environmental assessments.

-Small-scale farmers: Required to upgrade their broiler houses to meet quality standards for raising marketable chickens.

-Department of Economic Development (LED): To finance the procurement of necessary infrastructure such as storehouses, silos, and offices.

Conclusion and Recommendations

The outcome of this study indicates that poultry production in Umhlathuze Municipality region is primarily managed by middle-aged and elderly individuals. In other words, Despite the large number of unemployed young people in the region, youth involvement is almost nonexistent. In this regard, the identified barriers include

insufficient knowledge, skills shortage, space constraints, limited market access, low profitability, and theft. Despite these challenges, it is established that the sector holds promise for progress. Revamping the local extension service is crucial to addressing these challenges, necessitating platforms for cooperative learning among farmers. Additionally, supporting small poultry holders with inputs, vaccines, infrastructure, and government regulations to counter unfair import competition is imperative. Collaborations with academic institutions can offer innovative solutions, contributing significantly to food security and economic growth. Achieving these objectives requires cohesive efforts from all involved parties.

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Conflicto de interés

Los autores de este manuscrito declaran no tener ningún conflicto de interés.

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