



Youth agri-preneurship in rural South Africa: A case study of Nqabane, Eastern Cape

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Abstract

This study examines the potential of youth agri-preneurship as a strategic approach to addressing persistent socio-economic challenges, namely poverty, inequality, and unemployment, in Nqabane, a rural area within South Africa's Eastern Cape province. Drawing on quantitative research design, data were collected from 100 youth agri-preneurs through a structured, closed-ended questionnaire. The study aimed to assess perceptions regarding the socio-economic impact of agri-preneurship and evaluate the strength of associations between youth involvement in agricultural entrepreneurship and key development outcomes. Descriptive statistics revealed strong respondent agreement on the role of agri-preneurship in creating employment opportunities, reducing poverty, and contributing to national economic development. However, only selected survey items met the threshold for statistical reliability. Structural Equation Modelling (SEM) and hypothesis testing were used to analyse valid items. The results indicate significant positive relationships between youth involvement in agri-preneurship and perceived reductions in poverty and unemployment, as well as contributions to GDP. Items related to inequality and employment creation were less reliable and excluded from inferential analysis. The findings suggest that while agri-preneurship is widely perceived as impactful by youth participants, empirical claims regarding its macroeconomic contributions must be interpreted cautiously. The study concludes that targeted support, through training, access to finance, market development, and policy incentives, can enhance the viability of agri-preneurship as a rural development strategy. Recommendations are made for local and national policymakers to institutionalise youth agri-preneurship support and conduct further research using mixed-methods to capture nuanced socio-economic dynamics in similar rural contexts.

Keywords: Youth Agri-Preneurship; Rural Development; Poverty Reduction; Inequality; Youth Unemployment; South Africa

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1. Introduction

Agriculture has long been a cornerstone of human civilisation, initially serving to meet basic food needs and later evolving to support clothing, health, and broader economic demands (Bellwood, 2023). Over time, it has become a key driver of employment and income generation, particularly in rural settings. The increasing recognition of agriculture's economic role has given rise to agri-preneurship, a form of entrepreneurship rooted in agricultural production, processing, distribution, and marketing (Okonkwo et al., 2023). In South Africa, where youth unemployment and rural underdevelopment persist, agri-preneurship is gaining attention as a strategy with the potential to address both economic and social challenges.

As Magagula and Tsvakirai (2020) noted, South Africa possesses vast tracts of arable land, a large population of underemployed individuals, many of whom lack formal education, and limited opportunities in the formal economy, particularly in rural areas. These conditions create both a need and an opportunity for agri-preneurship to take root. Youth, in particular, have the potential to revitalise agriculture by bringing innovation, efficiency, and sustainability into the sector (Stevens, 2017). This shift from subsistence farming to agri-business offers a potential pathway for addressing the country's most pressing socio-economic issues.

South Africa continues to face a triad of interconnected challenges, poverty, inequality, and unemployment, with rural youth disproportionately affected (Oqubay et al., 2021; Shifa et al., 2023). These challenges have broader social implications, contributing to substance abuse, teenage pregnancy (Bezuidenhout, 2022a), HIV and AIDS (Bezuidenhout, 2022b), gender-based violence (Xaba & Akinola, 2023), gangsterism (Mlatsheni, 2012), juvenile delinquency (Bezuidenhout, 2022c), and low self-esteem (Roux, 2020). Although these issues are well documented, the specific role of agri-preneurship in responding to them, particularly in under-researched areas like Nqabane in the Eastern Cape, remains insufficiently explored.

This study addresses that gap by investigating whether and how agri-preneurship can serve as a viable strategy to improve the socio-economic conditions of rural youth. Anchored in employment creation theory, the research focuses on Nqabane within the Mbhashe Local Municipality, aiming to generate practical insights on how entrepreneurship in agriculture might contribute to alleviating poverty, reducing inequality, and creating employment. In doing so, the study highlights the potential for youth agri-preneurship to drive rural transformation and economic inclusion in one of South Africa's most vulnerable regions.

2. Literature review

In the Eastern Cape, the enduring problems of poverty, inequality, and unemployment are the three obstacles that have consistently impeded the nation's socio-economic development. This literature review examines the viability of agri-preneurship as a strategic approach to addressing these difficulties, providing a comprehensive analysis of current academic research on the topic. Agri-preneurship, an emerging discipline, involves applying entrepreneurial ideas within the agricultural sector to establish sustainable and profitable agricultural enterprises. The study consolidates pertinent material to clarify how agri-preneurship contributes to poverty alleviation, inequality reduction, and job creation in the Eastern Cape and South Africa as a whole.

2.1. Alleviating poverty through agri-preneurship

The significance of agriculture in the economy is well recognised. Nonetheless, there is little agreement over whether agriculture is the most effective means to combat poverty in developing nations. One perspective posits that since most people in developing nations reside in rural regions and are primarily involved in agricultural production or related activities, agriculture represents the most effective means of alleviating poverty. The second school of thought acknowledges agriculture's role in poverty reduction but prioritises non-agricultural activities, such as rural non-farm firms and social services. Gwiriri et al. (2021) asserted that the belief in the potential for a broadly based smallholder agriculture to be established and to transform the agricultural production system is an unsuitable foundation for developing policy frameworks aimed at enhancing livelihoods in South Africa. Recognising these differing perspectives on the function of smallholder agriculture in poverty alleviation, the following section delineates the beneficial impact of agriculture, particularly smallholder agriculture, on poverty reduction.

The rural sector can be delineated into three distinct sub-sectors: (a) the smallholder sector, which encompasses self-employed farmers engaged in the production of staple foods alongside some commercial goods; (b) the commercial farm sector, characterised by medium and large-scale farmers that offer employment opportunities to a considerable number of landless individuals; and (c) the rural non-farm sector. Mangoejane (2023) posited that smallholder agriculture holds significant importance for employment, human welfare, and political stability in Sub-Saharan Africa, warranting neither neglect nor relegation to the status of a mere peripheral sector within a market economy.

In the 1960s, numerous African governments prioritised large-scale farmers, influenced by donor encouragement (Eicher, 2007). Middle or 'progressive' smallholder farmers received insufficient attention. Due to the elevated failure rate of these schemes, numerous donors redirected their focus and financial resources towards smallholder agriculture in the 1970s. Eicher (2007) posited that middle farmers ought to be regarded as a beneficial influence in advancing agricultural progress. The author advocates for African governments to prioritise the development of both smallholder and middle farmers. Smallholder farmers can generate a marketable surplus with appropriate support. Smallholder farmers in Kenya, operating on farms of less than two hectares, have increased their contribution to national agricultural production from 4% in 1965 to 49% in 1985 (Lele & Agarwal, 1989). Zimbabwe experienced a significant increase in maize production by smallholder farmers during the 1980s, often cited as a success story of Africa's Green Revolution (Eicher, 2007). Between 1980 and 1987, smallholder farmers in Zimbabwe tripled their maize production and raised their share of the national marketable maize surplus from ten per cent to 40 per cent (Eicher, 2007). The success can be attributed to the initiation of a government programme aimed at enhancing maize and cotton production, alongside the advancement of hybrid maize varieties.

Agriculture contributes to poverty alleviation at the rural, urban, and national levels in three distinct ways: (a) by reducing food prices, (b) by creating employment, (c) by increasing real wages, and (d) by enhancing farm income. The results of studies conducted in numerous countries suggest that agricultural development can have a significant pro-poor impact, and it is significantly more effective than other sectors in reducing poverty and starvation in both urban and rural areas. In many cases, the impact of agricultural growth on poverty is both significant and beneficial, surpassing that of other economic sectors (Food and Agriculture Organisation (FAO), 2022). Warr and Suphannachart (2021) analysed the correlation between rural poverty

and agricultural growth. The results indicate that agricultural growth has a substantial impact on poverty alleviation. For instance, it was anticipated that a one-third increase in yield would result in a 25% or greater reduction in the number of impoverished individuals.

The studies indicate that the growth of the agricultural sector is the primary means of achieving household food security. The studies conclude that without a certain level of commercialisation in agriculture, the effects of agricultural growth on food insecurity and poverty alleviation remain constrained. Another significant observation from the studies is that households in the rural sector engaged in agricultural activities tend to experience lower poverty levels and exhibit better nutritional status compared to other households. A study conducted in Indonesia found that agricultural growth reduced poverty by 50% in rural areas, whereas the reduction in urban areas was 36% (FAO, 2022).

The preceding analysis presents a strong argument about the importance of agriculture in reducing poverty. It is important to recognise that the non-farm sector also makes a significant contribution to poverty alleviation. Furthermore, the growth of the non-farm sector plays a vital role in promoting development within the agricultural sector. Agriculture is seen as a model for encouraging economic growth and its potential to help alleviate poverty in South Africa (Mpundu & Bopape, 2022).

2.2. Addressing inequality through agri-preneurship

Widespread poverty and stunted economic and social development are both caused by extreme pay disparity (Bruwer & Petersen, 2022). The agricultural industry is the second-largest provider of job opportunities in South Africa, and unfortunately, inequality and unemployment in this sector are worsening.

Young individuals in rural areas encounter numerous obstacles when it comes to land access and ownership. Despite a constitution that advocates for human rights, the youth in rural South Africa, particularly in the Nqabane area of the Eastern Cape, encounter various manifestations of oppression. Across the globe, many rural youths serve as pivotal contributors and guardians of food security within their households. They assume the responsibilities of food producers, consumers, and family food managers within the agricultural domain. Nevertheless, it has been noted that rural youth continue to encounter numerous challenges, including restricted opportunities for land ownership, cultural and traditional stigmas, insufficient access to support networks, and, crucially, a lack of financial resources (Mulusew & Mingyong, 2023).

In African nations, several young individuals may be deemed impoverished and food insecure due to customs that prohibit them from acquiring any possessions. They often mediate access to land and financial resources via elders or community leaders, who possess power among families and communities. This patriarchal perspective, prevalent in several African countries, undermines the constitutional rights of adolescents in agri-preneurship. In rural Africa, the right of young individuals to own land is often indirect, since it is usually obtained via familial connections, including dads, uncles, and older generations. In KwaZulu-Natal (KZN), 29.67% (2.8 million hectares) of land is regulated by customary rules that confer exclusive rights to productive resources to senior people, a common practice in rural regions. This patriarchal mindset forces several young individuals in Africa to manage all domestic duties with their agri-preneurial obligations. They are underpaid, thus marginalised, and possess minimal power within their houses and communities.

The persistent land inequality among races in the Eastern Cape has resulted in food insecurity at the household level. Unfortunately, minimal action has been taken to address this concerning observation (Masuku

& Jili, 2017, cited in OoNorasak et al., 2023). They expressed concern regarding the inadequate pace of support provided to young people for their development in the agricultural sector.

A significant amount of evidence suggests that young agripreneurs manage fewer than 25% of agricultural enterprises in developing countries. Youth in developing countries exhibit a markedly lower likelihood of land ownership. Upon doing so, their farms tend to be smaller and less fertile (Doss et al., 2015, as cited in Mokati et al., 2024). Leal-Filho et al. (2023) contended that unequal access to land ownership in rural regions, influenced by customary norms, has led to diminished agricultural output and persistent food insecurity in numerous households across Africa.

2.3. Agripreneurship as a job creation engine

Agriculture represents a significant sector in Sub-Saharan Africa (SSA), capable of providing employment for youth and alleviating poverty (Ouko et al., 2022).

Youth participation in agriculture is essential for economic growth and poverty alleviation, however, the significance and challenges related to rural youth involvement in agriculture in many developing countries, especially in the Eastern Cape province, are inadequately acknowledged. This section examines the potential of agripreneurship as a means to reduce poverty and enhance rural employment. Agripreneurship represents a synergistic integration of agricultural practices and business principles aimed at profitability. A farmer engages in a process characterised by determination, creativity, imagination, preparedness for calculated risks, and a continuous pursuit of methods to improve and expand their farm business for profitability (Dzingirai, 2021).

Agripreneurship presents a viable strategy for poverty reduction by facilitating surplus production for sale and engaging the entire value chain (Salia et al., 2022). The agricultural sector possesses significant potential to create new employment opportunities for youth, driven by technological advancements, including greenhouse farming, vertical indoor farming, seed enhancements, agrochemicals, and agricultural machinery. Many youths are unable to benefit from these opportunities due to a deficiency in agripreneurial skills (Mutegeki, 2020). Although agripreneurship has been included in development agendas, it remains underexplored in academic research, highlighting the necessity for this review (Declich et al., 2022).

The principal objectives of the South African vision, aligned with the 2030 Agenda, encompass Growth and Sustainable Development. The plan emphasises the eradication of poverty, the mitigation of income and opportunity disparities, the generation of employment, particularly for the youth, and the confrontation of the challenges posed by swift population growth and urbanisation. The attainment of growth and development through the creation of employment opportunities and the alleviation of poverty necessitates the importance of youth engagement in agricultural entrepreneurship. While poverty diminishes household resources, agripreneurship cultivates sustainable resources that promote development (Ikuemonisan & Akinbola, 2021). Promoting youth engagement in agricultural entrepreneurship may serve as a significant catalyst for alleviating rural poverty.

The phenomenon of unemployment engenders a multitude of societal issues, with young individuals being especially vulnerable to its adverse effects. These repercussions encompass deficiencies in skill development, diminished self-worth, social exclusion, economic hardship, and the unfortunate waste of significant human

potential (Ouko et al., 2022). The challenges associated with unemployment can be effectively mitigated by equipping and educating young individuals through agricultural development initiatives, thereby enabling them to pursue self-employment or become employers within the agricultural sector, ultimately fostering their capacity to generate income independently (Agu, 2013, cited in Ofori & El-Gayar, 2021). The issue of unemployment, along with disguised employment and underemployment, has fostered a disparity between the affluent and the less fortunate within the populace. This necessitates the imperative to close the divide, a goal that can be realised through entrepreneurial endeavours in the agricultural sector (Odoh et al., 2019).

Agricultural endeavours present a plethora of commercial prospects. Nevertheless, the reluctance of young individuals to engage in agricultural endeavours has impeded their ability to invest in the diverse value chains available. This may assist in addressing the complexities surrounding unemployment, food security, and nutrition. A shift has occurred in agriculture, perceiving it as an enterprise that encompasses both agricultural practices and entrepreneurial endeavours, leading to the emergence of agri-preneurship (Omodanisi et al., 2020). The transformation of the agricultural sector will contribute to altering the unfavourable perception that has emerged because of modernisation. This approach will address the issue of unemployment, a significant challenge faced by numerous nations (LaRue et al., 2021).

Agriculture has several options for adolescents to participate in agri-preneurial activities. The ongoing rise in global population, particularly in Sub-Saharan African (SSA) nations, necessitates a significant enhancement in agricultural output to ensure food security. Nevertheless, most farmers are advancing in age. Engaging youngsters in agricultural activities would solve unemployment and enhance the technical and digital advancement in the agricultural food industry. Unlike their more experienced colleagues, contemporary young farmers are vibrant and adept at swiftly integrating new agricultural advances to address the problems presented by evolving customer tastes and food demand. This may be accomplished by fostering agri-preneurship skills among the young (Adeyanju et al., 2023).

To allow logical analysis and conclusions to be made based on the relationships derived from the related variables, deductive logic was used, whereby the researchers commenced with a null hypothesis and then collected data to determine whether or not empirical evidence provided support for the hypotheses (Dube & Shawe, 2022; Manzini & Mhakure, 2022; Struwig & Stead, 2022; Ugwuanyi, 2022; Bartley & Hashemi, 2024). Thus, statistical analysis was conducted under significant testing where the researchers posed a null hypothesis and attempted to reject that hypothesis (Borenstein, 2021). Thus, the following hypothesis was developed:

H₀: Agri-preneurship does not significantly contribute to alleviating the triple challenges (poverty, inequality, and unemployment) faced by youth in Nqabane.

3. Methodology

This study adopted a quantitative research design to examine the role of youth agri-preneurship in addressing poverty, inequality, and unemployment in Nqabane. A quantitative approach was chosen for its ability to quantify patterns and relationships between variables (Maredza et al., 2024). The research followed a non-

experimental design and employed deductive reasoning, allowing the researchers to test hypotheses and assess associations between independent and dependent variables (Anakpo & Mishi, 2024; Bartley & Hashemi, 2024). In line with evidence-based practice, the methodology adhered to principles of objectivity, reliability, and validity in both instrument design and data interpretation (Means & Mowatt, 2024; Fouché & Geyer, 2024).

Participants in the study were selected from a defined population of youth agri-preneurs residing in Nqabane. A simple random sampling technique was used to ensure each eligible individual had an equal chance of selection, enhancing the generalisability of findings (Bougie & Sekaran, 2020; Bloom & Barker-Townsend, 2023; Pietersen & Maree, 2025). The final sample comprised 100 youth agri-preneurs. To ensure gender inclusivity and contextual relevance, participants were chosen based on both their geographic location within Nqabane and their active engagement in agricultural entrepreneurship. This inclusive sampling strategy also considered potential gender-based differences in agricultural participation and experience. As highlighted by Hossan et al. (2023), Makwana et al. (2023), and Zhang (2024), such sampling frameworks support broader applicability of findings within similar rural contexts (Anakpo, 2024).

3.1. Data collection and analysis

Data were gathered using a structured, closed-ended questionnaire, designed to capture consistent responses across a relatively large sample. Closed-ended questions were selected based on their effectiveness in large-scale surveys and their ability to ensure reliability in quantitative research (Mingione & Abrate, 2022; Marzo et al., 2023). The questionnaire included Likert-scale items focused on key variables such as youth participation in agri-preneurship and perceived impacts on employment, poverty reduction, and inequality.

The data analysis followed the logic of hypothesis testing and was aligned with the study's objective of exploring the influence of youth agri-preneurship on socio-economic outcomes in rural South Africa (Jones, 2022; Sardana et al., 2023). Structural Equation Modelling (SEM) was used to explore relationships among the measured variables. To ensure the internal consistency of the instrument, Cronbach's alpha was calculated for each item, with coefficients exceeding 0.70 indicating acceptable reliability. These reliability metrics confirmed the appropriateness of the instrument for statistical interpretation and hypothesis evaluation.

4. Results

This study aimed to investigate the extent to which agri-preneurship helps address the triple challenges of poverty, inequality, and youth unemployment in Nqabane. The following is a presentation and interpretation of the study's findings related to its objective.

4.1. Demographic data

The study involved both males and females, with age groups of 18 to 25 years, 26 to 38 years, and others. The survey also covered the period and experience in dealing with youth agri-preneurship. Table 1 displays the survey items used for demographic data.

Table 1. Questionnaire items on demographic data

A1	Gender	Male / Female			
A2	Age group	18 to 25 years	26 to 38 years	Other:	
A3	Period of service at your agri-preneurship venture	Less than 1 year	1 year	Two years or more	
A4	Experience in dealing with youth agri-preneurship	Less than a year	1 year	Two years or more	Specify if any other

4.2. Descriptive responses on agri-preneurship

The survey measured five key perceptions related to youth agri-preneurship using Likert-scale items. These items evaluated respondents' agreement with statements about the role of agri-preneurship in socio-economic improvement. Table 2 presents the survey items used to assess perceptions of the impact of agri-preneurship among youth respondents, where:

- B1 = There is a need for youth to be involved in agri-preneurship
- B2 = Youth agri-preneurship ventures create employment
- B3 = Youth agri-preneurship ventures reduce poverty
- B4 = Youth agri-preneurship ventures offset inequality
- B5 = Youth agri-preneurship ventures contribute to the country's GDP

Table 2. Questionnaire items on youth agri-preneurship

Agri-preneurship	
B1	There is a need for youth to be involved in agri-preneurship
B2	Youth agri-preneurship ventures create employment
B3	Youth agri-preneurship ventures reduce poverty
B4	Youth agri-preneurship ventures offset inequality
B5	Youth agri-preneurship ventures contribute to the country's GDP

Table 3 presents the distribution of responses to each item, indicating the frequency with which respondents agreed with each statement. Table 2 presents the distribution of responses to each item, indicating the frequency with which respondents agreed with each statement. The items are categorised across five Likert-scale levels: "Never," "Rarely," "Neutral," "Often," and "Very Often." The majority of responses fall under the "Often" and "Very Often" categories across all items, reflecting a strong consensus among youth that agri-preneurship plays a meaningful role in employment, poverty reduction, inequality, and GDP contribution. Notably, no respondents selected "Never" or "Rarely" for any item, further highlighting the positive perception of agri-preneurship's socio-economic value.

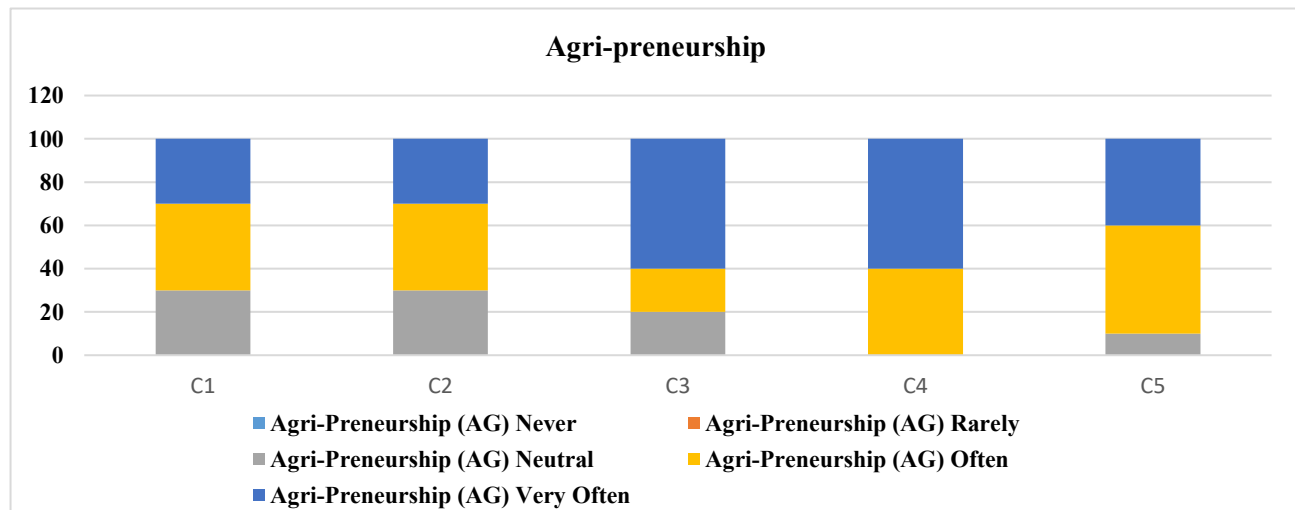
Table 3. Frequency distribution of responses to agri-preneurship items

	Item	Never	Rarely	Neutral	Often	Very Often
1	B1	0	0	30	40	30
2	B2	0	0	30	40	30
3	B3	0	0	20	20	60
4	B4	0	0	0	40	60
5	B5	0	0	10	50	40

The majority of respondents expressed strong agreement with all five statements, particularly those related to poverty reduction and economic contribution. Table 4 summarises the overall trends in responses using means and standard deviations to indicate consensus and variation.

Table 4. Descriptive statistics

	Item	Low	Neutral	High	Mean	sd
1	B1	0	0	100	4.6	0.516
2	B2	0	10	90	4.3	0.675
3	B3	0	20	80	4.4	0.843
4	B4	0	30	70	4.0	0.816
5	B5	0	30	70	4.0	0.816

**Figure 1.** Youth perceptions of agri-preneurship impact in Nqabane

Respondents strongly affirmed the need for youth involvement in agri-preneurship (B1) and its link to poverty reduction (B3). The belief that agri-preneurship contributes to GDP (B5) and reduces inequality (B4) also received considerable support, though with slightly more variability. As shown in Table 3, the highest mean value was for B1 ($M = 4.6$), suggesting a strong perception of the need for youth involvement in agri-

preneurship. Items B2 ($M = 4.3$) and B3 ($M = 4.4$) reflect similarly high levels of agreement regarding the role of agri-preneurship in employment creation and poverty reduction. Items B4 and B5 both had mean scores of 4.0, showing moderate to strong agreement on contributions to inequality reduction and GDP, respectively. The standard deviation values, particularly for B3 ($SD = 0.843$), indicate slightly more variation in views on poverty reduction, while B1 ($SD = 0.516$) showed the most consistent agreement. Overall, the descriptive results reflect a shared perception among youth respondents that agri-preneurship plays a meaningful socio-economic role in their community.

Figure 1 visualises the distribution of responses across the five Likert-scale items measuring perceptions of agri-preneurship.

4.3. Reliability and construct validity

To evaluate the quality and consistency of the measurement instrument used in this study, several reliability and validity metrics were calculated. These include Cronbach's alpha, composite reliability (ρ_C), average variance extracted (AVE), and construct reliability (ρ_A). These indicators help determine whether the scale used to assess youth perceptions of agri-preneurship consistently and accurately reflects the intended construct. Table 5 presents statistical measures that assess the internal consistency, reliability, and validity of the agri-preneurship construct used in the analysis.

Table 5. Construct reliability metrics for agri-preneurship scale

	Alpha	ρ_C	AVE	ρ_A
AGRI-PRE	0.792	0.897	0.711	0.996

Cronbach's alpha ($\alpha = 0.792$) measures the internal consistency of the items used to construct the agri-preneurship scale. It evaluates how closely related the items are as a group, with values above 0.70 generally considered acceptable. This suggests that the items on the scale measure the same underlying concept with a reasonable degree of reliability (Bougie & Sekaran, 2020; Pallant, 2020).

Composite reliability ($\rho_C = 0.897$) offers a more precise estimation of internal consistency compared to alpha, especially when using structural equation modelling. It assesses the reliability of the construct by evaluating the proportion of variance accounted for by the latent variable, including measurement error, concerning the total variance. Values above 0.70 reflect strong reliability.

Average Variance Extracted ($AVE = 0.711$) evaluates the amount of variance captured by the latent construct in comparison to the variance due to measurement error. An AVE value above 0.50 indicates that the construct explains more than half of the variance in its indicators, which is a strong sign of convergent validity, that is, the items are effectively measuring the same concept.

Construct reliability ($\rho_A = 0.996$) is another measure of internal consistency that estimates the proportion of actual score variance relative to total observed variance. A ρ_A value close to 1.0 indicates that nearly all of the variance in the responses is due to the construct being measured, rather than to random error.

Overall, the agri-preneurship construct in this study meets all conventional criteria for reliability and validity. The high values across all four measures confirm that the questionnaire items consistently reflect the concept of youth agri-preneurship and can be confidently used to interpret the study's findings.

4.4. Indicator loadings

Loadings indicate the strength of association between each item and the underlying construct. Table 6 presents standardised loadings, showing the strength of association between each item and the overall construct.

Table 6: Indicator reliability for agri-preneurship items (loadings¹)

Agri-preneurship		
B1	There is a need for youth to be involved in agri-preneurship	0.985
B2	Youth agri-preneurship ventures create employment	0.566
B3	Youth agri-preneurship ventures reduce poverty	0.985
B4	Youth agri-preneurship ventures offset inequality	0.032
B5	Youth agri-preneurship ventures contribute to the country's GDP	0.985
B2 and B4 have not been considered for tests of significance because they have a Cronbach's Alpha of less than 0.70		

The loadings¹ values indicate how well each indicator loads onto its respective latent variable. In general, the loadings¹ values in this table are relatively high, which indicates that the indicators are reliable measures of their respective latent variables.

4.5. Hypothesis testing

Table 7 summarises the statistical results for each tested hypothesis regarding agri-preneurship outcomes.

Table 7. Hypothesis test results on agri-preneurship impact

	Agri-preneurship	Original estimates	T Star.	2.5% C1	97.5% C1	Decision	Remark
H₀ B1	There is a need for youth to be involved in agri-preneurship	0.992	2.083	-0.824	0.996	Reject Ho	Significant
H₀ B3	Youth agri-preneurship ventures reduce poverty	0.992	2.083	-0.824	0.996	Reject Ho	Significant
H₀ B5	Youth agri-preneurship ventures contribute to the country's GDP	0.992	2.083	-0.824	0.996	Reject Ho	Significant

For each hypothesis (H₀), the table provides the following information:

- **H₀:** The null hypothesis being tested states that a particular factor is not required for the success of the youth entrepreneurship.
- **Coefficient:** The estimated coefficient for the factor being tested.
- **t-value:** The t-value obtained from the hypothesis test.
- **Standard error:** The standard error associated with the coefficient.
- **p-value:** The p-value obtained from the hypothesis test.
- **Decision:** Whether to reject or fail to reject the null hypothesis based on the p-value.
- **Significance:** Indicates whether the factor is found to be significant for the success of the youth agri-preneurship.

Statistical analysis was conducted using significance testing, where the researcher posed a null hypothesis and attempted to reject it (Borenstein, 2021). In this case, some null hypotheses (H05, H06, H07) are rejected based on the obtained p-values, indicating that all the factors tested are found to be significant for the success of youth agri-preneurship.

Table 7 presents several hypotheses related to the impact of youth agri-preneurship on poverty, inequality, and unemployment. These hypotheses were tested using statistical analysis, providing estimates, t-statistics, and confidence intervals.

The hypotheses (H05, H06, H07) focus on the impact of youth agri-preneurship on poverty, inequality, and unemployment. The estimates suggest varying degrees of positive associations. The t-statistics and confidence intervals indicate that only some estimates are statistically significant, while others fail to reach significance. These findings suggest statistically significant perceptions that youth agri-preneurship contributes to poverty reduction and economic growth, and that youth involvement is essential (Borenstein, 2021).

5. Discussions

The questionnaire used in this study consisted of a demographic section followed by two additional sections. The discussions that follow are for the second part of the two sections.

- B1 = There is a need for youth to be involved in agri-preneurship
- B3 = Youth agri-preneurship ventures reduce poverty
- B5 = Youth agri-preneurship ventures contribute to the country's GDP

Therefore, findings from the questionnaire indicate that, on average, most youth (70%) agree that there is a need for youth to be involved in agri-preneurship, 80% of youth agree that youth agri-preneurship ventures reduce poverty, and 90% of youth agree that youth agri-preneurship ventures contribute to the country's GDP.

The responses indicate a recognition of the importance of youth involvement in agri-preneurship. Most respondents believe that youth agri-preneurship ventures have a positive impact on employment, poverty reduction, offsetting inequality, and contributing to the country's GDP. The descriptive statistics above provide the average perception of the degree to which each item is considered important.

The hypotheses (B05, B06, B07) focus on the impact of youth agri-preneurship on poverty, inequality, and unemployment. The estimates suggest varying degrees of positive associations. The t-statistics and confidence intervals indicate that only some estimates are statistically significant, while others fail to reach significance.

To test hypotheses, the t-statistics and confidence intervals indicate that only B2 and B4 have not been considered for tests of significance because they have a Cronbach's Alpha of less than 0.70. B2 and B4 failed to reach significance, while other estimates are statistically significant. This implies that agri-preneurship significantly contributes to alleviating the triple challenges (poverty, inequality, and unemployment) faced by youth in Nqabane. Therefore, the null hypothesis that agri-preneurship does not significantly contribute to alleviating the triple challenges (poverty, inequality, and unemployment) faced by youth in Nqabane is rejected, and the alternative hypothesis that agri-preneurship significantly contributes to alleviating the triple challenges (poverty, inequality, and unemployment) faced by youth in Nqabane is accepted.

Agri-preneurship has the potential to play a transformative role in addressing unemployment, particularly in rural areas like Nqabane Location in South Africa, where traditional job opportunities are scarce. This entrepreneurship combines agriculture and entrepreneurial practices, emphasising innovation, creativity, and sustainable methods in farming, food production, and other agri-business activities. Youth in rural areas have a unique opportunity to shape their communities and the nation's economy through agri-preneurship, which can help them find and create jobs.

Agriculture remains a cornerstone of the South African economy, particularly in rural areas where farming has been a way of life for generations. Nevertheless, considering contemporary issues such as urbanisation, climate change, and economic inequality, it is imperative to rethink agriculture as an exciting and lucrative commercial opportunity, rather than a means of subsistence. Agri-preneurship encourages innovation by introducing new farming techniques, mechanisation, agro-processing, and digital tools and technologies to optimise production and efficiency. Diversifying agricultural products and services is another benefit since it opens up new local and international markets for rural producers.

Entrepreneurship is crucial in every sector of the economy, as it stimulates productivity, innovation, and competitiveness (Bamford & Bruton, 2019). Blundel et al. (2021), Dhaliwal (2022), and Sagar et al. (2023) argued that entrepreneurship directly drives economic development by harnessing creativity and human capital. In South Africa, where the unemployment rate remains critically high, especially among young people, entrepreneurial initiatives within the agricultural sector can create much-needed jobs while contributing to food security and sustainable development.

Rezaei-Moghaddam and Izadi (2019), Arafat et al. (2020), and Nagadeepa et al. (2023) stated that entrepreneurship is a fundamental aspect of economic policy and national development. Creating new businesses contributes to job creation and enhances economic resilience and sustainability by enabling the private sector to adapt to changing market conditions. This becomes particularly vital for rural economies, as entrepreneurship can provide a mechanism for overcoming economic marginalisation by integrating local producers into broader economic activities.

Govuzela and Mafini (2019) noted that the role of entrepreneurship in job creation goes beyond simply offering employment; it also builds capacities and fosters skills development. In rural South Africa, agri-preneurship can empower young people to gain expertise in farm management, finance, marketing, and technological innovation. Young people in rural areas may help their communities' economies grow and thrive in the long run by filling in these skill gaps so they can launch successful, scalable enterprises. Agriculture also plays a key role in addressing global challenges such as poverty, inequality, and food security, which are central to the United Nations' Sustainable Development Goals (SDGs), particularly the goal of achieving zero hunger. As noted by Nagadeepa et al. (2023), the growth and development of the agricultural sector are essential for

combating these issues, and agri-preneurship can serve as a vehicle for promoting sustainable agricultural practices, enhancing productivity, and ensuring food security for all. Greater economic inclusion and resilience in the face of challenges like drought, soil degradation, and market volatility can be achieved when rural entrepreneurs embrace innovative techniques and participate in value-added activities like agro-processing. This will improve the agricultural value chain.

Ultimately, as emphasised by Mulibana and Tshikovhi (2024), the advancement of agri-preneurship must consider not just economic prospects but also the social and cognitive factors that influence entrepreneurial conduct. Business success requires an entrepreneurial spirit, which may be fostered with the help of resources like education, social networks, mentorship, and financial backing from the government. Thus, rural youth in South Africa must have access to the education, tools, and networks they need to succeed as entrepreneurs as part of any programme or policy that encourages agri-preneurship.

In summary, agri-preneurship serves as an effective tool for mitigating unemployment and fostering economic development in South Africa, particularly in rural regions such as Nqabane Location. Agri-preneurship may significantly contribute to the nation's long-term socio-economic development by promoting innovation, creating job opportunities, and tackling critical issues associated with poverty and food security. To realise its full potential, it is imperative to invest in the education and training of rural youth, ensure access to resources and support, and establish a conducive climate for entrepreneurship to flourish in the agricultural sector.

6. Limitations

This study provided useful insights into youth agri-preneurship in Nqabane, a rural area in the Eastern Cape Province, South Africa, but there are some limitations.

- First, the sample size was limited to 100 rural youth in Nqabane, which may not represent the broader population. Future studies could include a larger, more diverse group of people. This could make it possible for the study's results to be generalised to a larger population.
- Second, this was a cross-sectional study in which data were collected over a short period of time. A study of a longer period could have provided more insights into the study.
- Third, this study used questionnaires to collect data. Future studies could use a mixed methods approach to gain both qualitative and quantitative data.

Even with these limitations, this study adds valuable insights and sets the stage for future research.

7. Recommendations

The study recommends promoting agri-preneurship by implementing targeted training programmes for young people, including workshops on sustainable farming practices, business management, marketing, and financial literacy. Partnering with local governments, NGOs, and educational institutions is crucial for providing resources and support, empowering youth for successful agricultural careers.

To support young agripreneurs and promote innovation in agriculture, microfinance initiatives and low-interest loans should be established. These loans will help them access capital for business start-ups or expansions. Also, advocating for grant programmes aimed at sustainability and innovation-centric initiatives might facilitate the development of a new cohort of environmentally aware agricultural entrepreneurs.

To foster youth agripreneurs' growth, this study recommends *that* the Mbhashe Local Municipality establish platforms that enable direct market access, such as local farmers' markets, trade fairs, and online marketplaces. Regular networking events with experienced farmers and business leaders are also crucial for knowledge exchange, mentorship, and collaboration, fostering long-term relationships and supporting the next generation of agricultural innovators.

The study recommends that policymakers create policies that encourage youth participation in agriculture, such as tax incentives and sustainable farming subsidies. It also recommends integrating agricultural entrepreneurship into national youth employment strategies to combat youth unemployment and create more opportunities for young people.

In future, this study recommends promoting agripreneurship among youth by implementing awareness campaigns and incorporating agriculture and entrepreneurship education into school curricula. These campaigns should highlight the benefits of agriculture as a career path, featuring local success stories, and inspire others to explore this field. This dual approach will help cultivate a new wave of innovative agricultural entrepreneurs.

To boost youth agripreneurs' success, it is recommended to establish support groups that promote collaboration, resource sharing, and problem-solving. These groups should also encourage partnerships with established businesses, facilitating knowledge transfer and innovation, and ultimately empowering future agricultural leaders. Also, these groups must visit rural areas mostly.

The study suggests regular monitoring and evaluation of agripreneurship programmes to assess their impact on poverty, inequality, and unemployment. Data collection will inform programme refinements, tailored to youth needs. Tracking the success of young agripreneurs will guide future initiatives, enhancing programme effectiveness and community impact.

8. Conclusion

In conclusion, this study examined the role of agripreneurship in addressing the triple challenges of poverty, inequality, and unemployment among the youth in Nqabane, Mbhashe Local Municipality. Through quantitative research methods, the findings underscored the significant impact of youth involvement in agriculture to alleviate these socio-economic challenges. Most respondents agreed that agripreneurship can provide sustainable solutions, contributing to job creation, poverty reduction, and economic growth. The study's analysis rejected the null hypothesis that agripreneurship does not significantly contribute to alleviating the triple challenges (poverty, inequality, and unemployment) faced by youth in Nqabane. Thus, it was concluded that agripreneurship significantly contributes to addressing these issues. Based on the results, several practical recommendations were made, including promoting agripreneurship through targeted training programmes, financial support systems, market access, policy development, and awareness campaigns. The study also suggested that future research could explore agripreneurship in other areas and

adopt a mixed-methods approach for a more comprehensive understanding of the subject. Overall, this study emphasises the potential of agri-preneurship to empower disadvantaged youth, fostering economic and social transformation in rural communities.

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