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Research Report

How to Enhance Youth Engagement in Productive Employment, Farming and Agribusiness in Africa:

A Youth Perspective

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About FARA

The Forum for Agricultural Research in Africa (FARA) is the apex continental organisation responsible for coordinating and advocating for agricultural research-for-development. (AR4D). It serves as the entry point for agricultural research initiatives designed to have a continental reach or a sub-continental reach spanning more than one sub-region.
FARA serves as the technical arm of the African Union Commission (AUC) on matters concerning agricultural science, technology and innovation. FARA has provided a continental forum for stakeholders in AR4D to shape the vision and agenda for the sub-sector and to mobilise themselves to respond to key continent-wide development frameworks, notably the Comprehensive Africa Agriculture Development Programme (CAADP).
FARA's vision is to "Reduced poverty in Africa as a result of sustainable broad-based agricultural growth and improved livelihoods, particularly of smallholder and pastoral enterprises" its mission is the "Creation of broad-based improvements in agricultural productivity, competitiveness and markets by strengthening the capacity for agricultural innovation at the continental-level"; its Value Proposition is the "Strengthening Africa's capacity for innovation and transformation by visioning its strategic direction, integrating its capacities for change and creating an enabling policy environment for implementation". FARA's strategic direction is derived from and aligned to the Science Agenda for Agriculture in Africa (S3A), which is in turn designed to support the realization of the CAADP vision.

Disclaimer

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Abstract

Agribusiness is one of the most promising sectors in sub-Saharan Africa with potential for youth employment generation. The objective of this study is to analyze the success and failure factors of agripreneurs, to identify the main constraints that hinder the motivation of youths to invest and participate in the agricultural sector. The study was conducted using data from 270 young agripreneurs located in rural areas, engaged in agricultural production or other activity of sales or processing of agricultural products. The results showed that formal education, total annual household income, innovation of agripreneurs, accounting skills and practices, and gender (male) were the most important factors that promoted the success of agripreneurs. In addition, the prioritization of constraints highlighted access to financial credit as the main difficulty, followed by the supply of raw materials. The study also showed that aid policies are mainly related to access to financial credit and training in agriculture. In addition, 33% of the agripreneurs surveyed were in agribusiness to support themselves. Moreover, 26% of agripreneurs made it their main activity by inheritance or support from parents. Finally, 18% of the youths surveyed were involved in agricultural activities for lack of alternatives. These results suggested that we should consider offering adequate training to youths and integrated internship programs.

Key words: Agripreneurs, success, youth, credit, entrepreneurship

Introduction

Background and Rationale for the Study

Employment and unemployment are issues of concern to all countries in the world and in particular to developing countries. With a projected 9 billion people in the world by 2050, 14% of whom will be young people (15-24 years old) mainly in developing countries in Africa and Asia, employment and unemployment challenges are likely to be exacerbated if policy measures are not taken to facilitate youth employability (UN DESA, 2011). For example, according to the International Youth Foundation (2014), over the next few years, more than 300 million young people in Africa will be looking for jobs, two-third of whom will live in rural areas. Given the importance of employment, the United Nations (UN) has rightly made access to decent work for all one of its priorities in the Sustainable Development Goals (UNICEF, 2015).

In Benin, the issue of employment is at the center of the government's concerns and is reflected in strategy documents such as "Benin 2025 Alafia" and the "National Development Plan 2018-2025". Employment is therefore at the heart of the strategy for the sustainable and inclusive transformation of the Beninese economy (NDP 2018-2025). However, unemployment and underemployment are still prevalent among all segments of the population, but mainly among youth, women, and people living in rural areas. Indeed, unemployment is one of the most important problems in Benin and is cited as the main reason that causes Beninese to leave their country (Afrobarometer, 2019). Data from the Afrobarometer survey in 2017 indicated that 38% of the Beninese population was unemployed with a higher likelihood of being employed in urban areas compared to rural areas (Gninafon, 2019). Yet according to Yami et al. (2019), rural youth engagement in agribusiness has become an important strategy for job creation in Africa. Agriculture has considerable potential to provide gainful employment opportunities for large numbers of youth if supported by increased investment and supportive legal and policy frameworks (Koira, 2014). In Benin, agriculture provides about 75% of export earnings and 15% of government revenue. The agricultural sector employs about 70% of the working population

and contributes nearly 23% to Gross Domestic Product (GDP) (INSAE, 2017). However, the agricultural sector has not yet reached its full potential due to various constraints that undermine its growth and the low attractiveness it enjoys among the youth segment (MAEP, 2017). Compared to the adult population, certain obstacles prevent young people from taking advantage of the potential that exist in the Beninese agricultural sector. These barriers are related to both skills and qualifications, including skills mismatches, and access to resources, primarily land and financial resources. However, it is noted that most research and policy debates on youth employment have focused on the formal sector of waged employment in the urban context and, with few exceptions, have rarely considered the informal sector and agriculture. Yet, agricultural entrepreneurship has become an essential part of the strategies used by governments and organizations in the fight against youth unemployment and underemployment.

This study attempted to fill some of these gaps. It will contribute to the growing literature on youth employment and to the broader literature on labor markets in developing countries.

Research questions

Given this contrast between youth unemployment and underemployment rates and the potential of the agricultural sector, the question arises as to how to enhance the engagement of youth in productive employment in agriculture and agribusiness in Africa?

The specific research questions that guided the analysis were:

i. What were the success factors for youth in agriculture and agribusiness?
ii. What were the main challenges and barriers to youth entry into agriculture and agribusiness?
iii. Which policy interventions were the most relevant in supporting youth in agriculture and agribusiness?

Research objectives

The aim of this research was to better understand the challenges and opportunities of youth employment in rural Africa. It examined some aspects of youth employment and, more broadly, youth livelihoods.

Specifically, this involved:

- SO1: Identifying success factors for youth in agriculture and non-farm agribusiness,
- SO2: analyzing the main barriers to entry or challenges faced by youth in this sector,
- SO3: indicating which policy interventions could be considered most relevant to encourage young people to engage in agriculture and agribusiness as a business activity, and to boost the productivity of young farmers and agripreneurs.

Concepts and Theoretical Framework

Clarification of concepts
Successful entrepreneurship

The concept of successful entrepreneurship has a multidimensional definition. Indeed, entrepreneurial success has long been equated with the financial and economic performance of the firm including efficiency, growth, profits, liquidity, market share (Murphy et al., 1996), earnings, firm size (de Wit et et al., 2000: Fried and Tauer, 2015; Masuo et al., 2001) growth in the number of employees (Sullivan and Meek, 2012), and the introduction of new products or product quality. However, according to Sarasvathy et al. (2013), success should not be limited to economic/financial aspects. Other authors have therefore defined success through entrepreneurs' subjective perceptions of their successes rather than objective measures (Matsuda and Matsuo, 2014). Thus, in terms of subjective measures, we have customer satisfaction, personal development, personal fulfillment etc. Subjective entrepreneurial success is therefore the individual's personal understanding and evaluation of important criteria in terms of entrepreneurial achievement and success (Wach et al., 2016). In the same vein, Paige et al. (2002) defined success in terms of intrinsic criteria that include freedom, independence, control over one's future, being one's own boss; and extrinsic criteria that include return on investment, and personal income and wealth.

Entrepreneur

According to (Hébert and Link, 1989), the entrepreneur has several roles. The most important role is the innovator (Schumpeter, 1934). The second is the one who perceives profit opportunities (Kirzner, 1997). The third is the role of assuming the risk associated with uncertainty (Schumpeter, 1934). An entrepreneur is therefore someone who has the ability to see opportunities, then seek funding and other resources needed to take advantage of those opportunities, and take risks in order to achieve individual well-being and the value added to the community. Othman and Nasrudin (2010) described the entrepreneur as a person who purchases inputs for the production of goods to be sold.

Entrepreneurship

Pearce and Robinson (2009) revealed that entrepreneurship is a process of combining ideas and creative innovation with the management and organizational skills necessary to direct the appropriate human and financial resources and operations to meet identified needs and create wealth. Joseph Schumpeter defined entrepreneurship as "an innovative process in which an individual or group of individuals creates something new: a new product (goods or services); a new market (previously untapped); a new source of raw materials; a new way of doing things" (Buame, 2009).

Agripreneurship

Agripreneurship is a relatively new concept,

not much in the literature, which is derived from agriculture and entrepreneurship. It denotes an individual's ability to recognize a viable business opportunity in or related to the agricultural industry, gather resources, establish and successfully manage the resulting agribusiness (Otache, 2017). It has been described by the Global Forum for Rural Advisory Services (GFRAS) as "the adaptive and dynamic process of business development in the agricultural sector that adds innovation and value, accelerates value creation and provides sustainable systems that support equitable social impact (Ferris et al., 2017)".

Youth

For major international organizations such as the United Nations and international labor organizations, the age of youth is set between 15 and 24 years (Bosompem et al., 2011). However, the African Union considers people between the ages of 15 and 35 to be young people. Even among SSA countries, the age range varies from 15 - 30 in Kenya; and 18 - 35 in Nigeria; and 15 - 40 in Mali (FGN, 2009; Filmer and Fox, 2014). Delineation is often determined by the end use of the measure (Proctor and Lucchesi, 2012). The African Union's Ten-Year Plan of Action for Youth Development and Promotion 2009-2018 defines (i) 15-17 years as young minors; (ii) 18-24 years as young people of legal age and finally 25-35 years as young adults. Benin being a member of the AU and ECOWAS defines a young person as a person between the ages of 15 and 35.

Theoretical Framework
Theories of entrepreneurial success

The success of entrepreneurship is linked to the growth of the company or the creation of a company. According to Van Gelderen et al. (2005), the growth of start-up approaches comes from Gartner's (1985) idea based on the characteristics of the entrepreneur in the success of his/her business. Many theories of success have been proposed by different researchers that are related to business development and success.

According to Simpeh (2011), theories of business success range from economics, psychology, sociology, anthropology, opportunity and resource. The development of these theories has received much attention among many specialists in the fields of entrepreneurship (Perez and Canino, 2009; Simpeh, 2011).

Economic theories of entrepreneurship developed by classical economists have provided explanations for how economic factors and variables stimulate entrepreneurial behavior of individuals in an economic/

market system (Simpeh, 2011). According to Raimi (2015) the intellectual enrichment of entrepreneurship presents entrepreneurs from two (2) behavioral perspectives. The first is that entrepreneurs understand the needs that lead them to create opportunities, which add value to society. Secondly, entrepreneurs, through their involvement in value creation, mobilize and motivate people to work towards the achievement of innovative projects. Also, from the perspective of economic entrepreneurship theory, it is suggested by Schumpeter and Backhaus (2003) that economic conditions may be one of the factors influencing the development of entrepreneurial behavior. To the psychological theory, the characteristics of entrepreneurs can determine the success of their businesses (Gartner, 1985). In the sociological domain, the value of the social context may be the main factor affecting firm growth (Reynolds, 1992).

Other theories of entrepreneurship are anthropological theory, opportunity theory, and resource theory. Based on anthropological theory, Hofstede (1991) argues that cultural effects will influence the success of entrepreneurs. According to Drucker's (1985) perspective, the opportunity-based theory is also an appropriate theory related to success. This type of theory is limited to opportunities that change in technology, customer preferences, etc. The final theory suggested by Simpeh (2011) is the resource-based theory. This theory is the most popular among these six (6) theories. This is because the theory exploits the advantages of resources for the development of enterprises. These resources can be tangible (e.g. human, financial, etc.) or intangible (e.g. training, reputation, goodwill, etc.) (Barney, 1991). As summarized, these theories are the appropriate theories that explain the growth of the company. It can be used to identify business success factors for this study. In this study, the economic theory of entrepreneurship will be used.

Materials and Methods

Study area and sampling

Study area

The study was conducted in seventeen (17) communes located in the seven (7) Agricultural Development Hubs (PDA) of Benin. The selection of data collection areas was based on the distribution of the study targets throughout the country. The target population of the study were youth aged 15 to 35 years (as defined by the National Institute of Statistics and Economic Analysis (INSAE), engaged in agro-industrial activities, such as agriculture (crop or animal production), fish farming, aquaculture or fishing, processing of agricultural products and marketing or transportation of foodstuffs. In the rest of the report, we refer to them as agripreneurs. Based on this information, data from the EmiCov (2015) modular integrated household living conditions survey of the National Institute of Statistics and Economic Analysis (INSAE) employment module were used to determine the proportions of youth in activities (agriculture, processing etc.) according to an administrative division. These data were grouped by agricultural development hubs (PDA) to determine the proportions of the study target by hub.

Sampling

Sampling was a crucial step in the study, as it determined the validity of the results. The requirement that the sample be representative imposed rigor in the choice of research units. The sample size considered parameters such as: the total population size of the target population (15–35-year-old), the margin of error, level of reliability, and non-response rate. Thus, the required sample size of beneficiaries was determined by applying the following formula:

Y_n was assumed to be the number of local manufacturers of ADH_n , with n = {4,5,7}.
number of sampled local manufacturers in the ADH_n = 50 x Y_n / ΣY_n

Where P is the proportion of people in this study selection criteria, U_(1- /2)^2=1.96, value of the normal random variable for a risk equals to 0.05. The expected margin of error d for any parameter to be estimated from the survey is 5%. Table 1 shows the distribution of the sample size by cluster.

Table 1. Distribution of respondents by commune

Hubs	Communes	Number of respondents
1	Karimama	7
	Malanville	7
2	Bembereke	16
	Kalale	16
	Sinende	17
3	Cobly	10
	Matéri	10
	Natitingou	10
4	Djougou	30
	Tchaourou	30

5	Djidja	30
	Klouékanmè	17
	Ouinhi	17
	Zagnanado	18
6	Adja ouere	6
	Ketou	6
	Pobe	7
7	Allada	16
	Total	**270**

Source: Data collection, February 2021

Study respondents were randomly selected from the lists of agriprenuers within the target age range in the selected communes. The list of respondents was obtained from the available lists of the different projects and structures (Agencies Territoriales de Développement Agricole) that worked closely with farmers, processors, traders etc.

Methods of Data Collection and Analysis
Methods of data collection

The questionnaires targeted young agricultural entrepreneurs. A total of 270 actors, including 70 women were interviewed for this study. The quantitative survey was conducted from February 12 to February 27, 2021. Data were collected at the individual level using structured questionnaires via the Survey CTO application. Several types of data were collected through the administered questionnaire. These included data on: socio-economic characteristics, economic activities, crop production, quantities of agricultural inputs and materials purchased, input costs, success and failure factors, and aspirations.

To conduct these surveys, ten (10) interviewers were recruited and trained for three (3) days on the application of the questionnaires and the data collection methodology.

Method of data analysis
Descriptive statistics

The descriptive analysis (frequencies, means, minimum, maximum and standard deviations) made it possible to characterize the sample studied and to analyze the respondents' activities. For this study, different statistical tests such as the Student's t-test, and the Chi-square test were used to test the differences in characteristics between more successful and less successful agripreneurs. Kendall's test was used to prioritize the constraints/obstacles, the solutions developed by the more successful agripreneurs and the support they received from the Government, NGOs or other projects.

Method of calculating the annual profit

In order to distinguish and explain the success factors of the agripreneurs, two (2) categories were constituted in order to make objective comparisons according to a criterion. As an objective criterion, the "annual profit of the economic activity" was retained, since it was influenced by both the marketing capacity of the agripreneur and his capacity to produce efficiently at lower cost. The method of calculating the annual profit is presented as follows:

Annual profit = Annual turnover – Annual production cost (1)

Determinants of success factors in agripreneurship

In order to identify the determinants of youth success in agri-entrepreneurship, a multiple linear regression analysis was used. Indeed, the relationship between farm financial performance and its covariates was estimated using multiple regression (Asche et al., 2018; Adewuyi et al., 2010; Bloom and Reenen, 2010; Dartt et al., 1999; Gloy and LaDue, 2003; Mariyono, 2018). Thus, multiple linear regression measures the influence of each determinant on success, while controlling the other identified determinants.

The determinants identified from the survey are classified in a framework that distinguishes the different resources from which the start-up entrepreneur can draw. These are human capital, financial capital and social capital. In addition, the entrepreneur's strategies for keeping up with the pace of business and some control variables are identified.

In this study, profit was used as the measure of success. The following equation were estimated using **ordinary least squares (OLS).**

Let π_i be the profit of respondent i, and x_ij the values of respondent's determinants j.

ln□□π_i □=α+∑_(j=1)^j▒β_j x_ij+ε_i where _i N (0, ^2)

We specified the logarithm of profit as the dependent variable rather than profit itself to improve

the residual normality. Because according to de Wit et al. (2000) changes in determinants influence relative rather than absolute profit.

The data set was checked for multicollinearity using simple correlation and variance inflation factor (VIF). The estimated results of the OLS models was checked for heteroscedasticity and model misspecification using the Breusch-Pagan and Ramsey test, respectively.

Justification of the variables included in the model and the expected signs

Age of a farmer: The age of the entrepreneur can be considered as a measure of experience of the world. Several studies (Reynolds et al., 2000; Kristiansen et al., 2003) found a significant relationship between the age of the entrepreneur and business success. We therefore expected a positive impact of the age of the agricultural entrepreneur on the success in entrepreneurship.

Gender: Gender is a binary variable (1 for men and 2 for women). Ager (2015) conducted a study in Malawi which revealed that gender affected an agripreneur's ability to succeed in business. This was also the case in Ghana. Women agripreneurs lacked necessary resources compared to men Women-led agricultural enterprises had smaller land tenure and less access to other factors of production such as credit (FAO, 2011). This was despite the fact that they all faced the same challenges as men who had an advantage over them. Therefore, gender had a significant influence on the choice of livelihoods among young farmers.

Level of formal education: Deakins et al. (2005) described education as the key to developing entrepreneurship in any field. Ohene (2013) submitted that relatively educated youth could easily adopt improved agricultural technologies. This may be the basis for their success in agricultural entrepreneurship. Kamitewoko (2013) also concluded in his study that education positively influences entrepreneurial success and that it also provides the entrepreneur with the opportunity to increase income, ensure business survival and achieve success.

Farm income: Farm income was included in the estimates and it was expected to be positive as it was the main driver for most farmers to engage in farming or other economic activities. Indeed, the level of business income influenced the ability of agripreneurs to succeed. The inability of the agripreneur to finance the operation would result in a lack of business success. The level of income as discussed by can be a source of motivation and a means for an agripreneur to increase capacity or even improve productivity. If the numbers make sense, the agripreneur will be able to grow and, in some cases, diversify using the income they have.

Family support: Support from family and friends are important factors in business success (Benzing et al., 2009). Being influenced by independent family members can be a critical success factor. For this purpose, a variable was constructed which had the value 1 if the founder of the company declared a considerable influence of independent family members and 0 if this is not

the case. This variable was expected to be positive.

Short training in agriculture and agri-food: Training in agriculture and agri-food is an important factor in the success of agripreneurs. Indeed, according to Magagula and Tsvakirai (2020) when youth are educated in agriculture at the secondary and tertiary levels, they are more likely to participate in agri-entrepreneurship. In fact, agricultural education provides the skills needed for agricultural entrepreneurship (Hormiga et al., 2011). We therefore expected this variable to be positive.

Apprenticeships/internships in the field of agriculture: Apprenticeship/internship in agriculture was included in the estimate and it was expected to be positive. We believed that internships should contribute to the success of agripreneurs. This was confirmed by Hurst et al. (2014), who stated that these internships were one of the best ways to gain work experiences, refine professional development skills, and prepare for their careers. Furthermore, skills lead to entrepreneurial success.

Accounting skills: Accounting skill introduced in the model was expected to have a positive sign. Agricultural accounting business management is essential for farmers to succeed (Yaaghubi et al., 2009; Sharafat, 2016). Sharma (2012) submitted that sound and up-to-date accounting records and procedures were essential to provide reliable guidance to farmers thus helping them to modify the management plan of their businesses. Accounting skills were expected to have a positive effect on the success of agripreneurs.

Agripreneur who has received funding from a government project: This is one of the main variables that ensure the commercial success of SMEs (Zin and Ibrahim, 2020; Benzing et al., 2009; Butler, 2008). Project or government assistance or funding was included in the estimate and it was expected to have a positive impact. Indeed, the facilitation of access to credit or financial assistance received from these structures allows for a solid financial basis for the choice of one or more livelihood options. The lack of credit facilities hinders the farmer's plans and activities and puts him/her in a difficult situation. Akudugu (2012) also indicated that lack of or inadequate access to credit is a crucial mobilizing factor against farmers in financing their agricultural operations and it is one of the major underlying factors of low agricultural productivity in Ghana.

Agripreneur having introduced innovative methods in the last twelve (12) months: Technology has a close relationship with the improvement of the production process. The lack of new technologies and equipment is an obstacle to the development of SMEs. A company that uses the latest technology tends to capture more customers than its competitors (Swierczek and Ha, 2007; Cartsson, 2008). The success of rural entrepreneurs is causally related to innovation. This variable was expected to have a positive sign.

Agripreneur with a short-term production objective (one year or less): According to Johnson and Morehart (2006), exploitations that prepare and follow a business plan and production goals are more successful. Indeed, a written plan facilitates access to credit. Mishra et al. (2009) opined

that it is possible that having clear goals and budgeting helps farmers control their spending and make more informed investment decisions. We expected this variable to also have a positive sign.

Table 2. Signs of the variables introduced in the model

Description	Type of variable	Expected sign
Dependent variable		
Agripreneur's profit	ln CFAF	–
Independent variables		
Log of the agripreneur's age	ln years	+
Gender of the agripreneur	1=Male 2=Female	+/–
Level of formal education (Primary completed)	1= Yes 0=No	+
Log of total annual household income	ln CFAF	+
Short-term training in agriculture and agribusiness	1= Yes 0=No	+
Apprenticeships/internships in agriculture and agribusiness	1= Yes 0=No	+
Agripreneur with a short-term production objective (one year or less)	1= Yes 0=No	+
Agripreneur having introduced innovative methods in the last 12 months	1= Yes 0=No	+
Agripreneur who has received funding from a government project	1= Yes 0=No	+
Accounting and accounting practices	1= Yes 0=No	+
Agripreneur with family support (unpaid work)	1= Yes 0=No	+
Producer of agricultural products or animal husbandry	1= Yes 0=No	+
Food Processor or Trader	1= Yes 0=No	+

Results and Discussions

Agripreneur Descriptions Demographic and Socio-Economic Characteristics

Table 3 presents the demographic and socio-economic characteristics of young agricultural entrepreneurs. The average age of young agripreneurs was 30 years with 36.90% having experience in agribusiness and agricultural entrepreneurship. In addition, the average year of experience was 4 years. A total of 74.17% of young agricultural entrepreneurs were men while 25.83% were women. At the household level, the average monthly income was estimated at CFA 114,717 or $203,08 USD which was higher than the average income in Benin in 2020 (105 $ USD). Also, the level of formal education was relatively low, with 19.56% of young agricultural entrepreneurs having received no formal education. Of those with formal education, 7.0% had university education and 0.3% had post-graduate education. Secondary school was the highest level of education achieved by the majority (44.28%) of youths. However, 7.38% of youth were unable to complete primary school. Regarding migration experiences, 41.70% of youth had migrated from rural areas compared to 39.38% with no migration experience. In fact, 15.87% migrated from the cities, 1.85% from the capital city and 1.11% from other countries. The overall financial situation of 60.52% of young agricultural entrepreneurs was around the village average. Also, 28.78% of young people's households were of modest means, while 0.37% of young people's households had a well-to-do financial situation. On the other hand, 10.33% of the households of these young people had a fairly poor financial situation. Regarding wealth inherited from their parents, 47.04% of young agricultural entrepreneurs inherited wealth from their parents against 52.96% who received no inheritances from their parents. For the creation of their agricultural enterprise, 46.13% of the young people received formal training in the field of agriculture while 22.88% went through apprenticeships in the field of agriculture. However, informal apprenticeships or internships were taken by 27.68% of young agricultural entrepreneurs while 46.45% did not take any informal apprenticeships or internships.

Table 3. Demographic and socio-economic characteristics of young agricultural entrepreneurs

Characteristics	Average	Standard deviation
Quantitative variables		
Age (years)	30.67	3.83
Years of work experience (Years)	4.63	3.34
Monthly household income (CFA Franc)	114,717	99,932.51
Quantitative variables		
Factors	**Modality**	**Frequency (%)**
Gender	Man	74.17

Characteristics	Average	Standard deviation
Formal education	Primary (uncompleted)	7.38
	Primary (completed)	14.39
	Secondary / High School	44.28
	Vocational	7.01
	University	7.01
	Post-university	0.37
	None	19.56
Previous work experience	Yes	36.90
	No	63.10
Migration experience	From Rural area	41.70
	From Towns	15.87
	From Capital city	1.85
	From other countries	1.11
	None	39.48
Wealth (overall household wealth position) [self-reported]	Good	0.37
	Modest	28.78
	Around the village average	60.52
	Fairly poor	10.33
Wealth inherited from parents	Yes	47.04
	No	52.96
Formal education/formal training in agriculture	Yes	46.13
	No	53.87

Characteristics	Average	Standard deviation
Apprenticeships / internships in the field of agriculture	Apprentice-ship / formal internship	22.88
	Apprentice-ship / informal internship	27.68
	None	49.45
Worked on a family farm/agribusiness before	Yes	73.43
	No	26.57

Source: Data collection, February 2021

Comparative Analysis of Households by Agripreneur Category

Table 4 presents the descriptive characteristics of agripreneurs' households. The majority of young agripreneurs lived in rural areas. A total of 81% of less successful agripreneurs were located in rural areas while 19% were in urban areas. Similarly, 75% of successful agripreneurs were in rural areas compared to 25% in urban areas. The comparison tests showed no significant difference between the two categories. The table also shows that the majority of agripreneurs were not owners of farmlands. About 72% of less successful agripreneurs did not work on their own land compared to 28%who did. Also, 78% of successful agripreneurs did not work on their own land compared to 22% of those who did. No significant difference was observed between the two categories. The results showed that among agripreneurs with dependents (children), 84% of the less successful had children compared to 76% of those who were successful. The tests showed a significant difference at the threshold of 5%. It was found that 17% of the less successful planned to move to another city or country, compared to 21% of the successful, and statistical tests showed a significant difference at the threshold of 5%. In addition, we find that 14% of the less successful agripreneurs had literate mothers, compared to 30% of the more successful agripreneurs. A significant difference was also observed at the threshold of 1%. The same was true for agripreneurs whose mothers were involved in agricultural activities. The proportion of those who were less successful was significantly higher than those who were successful, the proportions were 17% and 9%, respectively. The average age of agripreneurs was significantly higher for less successful agripreneurs, averaging 31 years while the successful ones had an average age of 30 years.

Table 4. Characteristics of agripreneurial households

Characteristics		Agripreneurs		X^2
		Less successful	Successful	
Area of residence (%)	Rural	108 (81.20)	103(74.64)	1.6935
	Urban	25 (18.80)	35(25.36)	
Work on your own land (%)	No	96 (72.18)	108(78.26)	1.3454
	Yes	37 (27.82)	30(21.74)	
Runs a large or small business for himself (%)	No	54 (40.60)	54(39.13)	0.0611
	Yes	79 (59.40)	84(60.87)	
Sex (%)	Woman	36 (27.07)	34(24.64)	0.2087
	Man	97 (72.93)	104(75.36)	
Marital status (%)	Married	117 (87.97)	115(83.33)	1.1818
	Single	16 (12.03)	23(16.67)	
Has a child (%)	No	20 (15.04)	32(23.19)	2.9017**
	Yes	113 (84.96)	103(76.81)	
Plans to move to another city or country (%)	No	111 (83.46)	109(78.99)	0.887**
Literate father (%)	No	87 (65.41)	83(60.14)	0.8041
	Yes	46 (34.59)	55(39.86)	
Father skilled workers in agriculture, fishing and forestry (%)	No	84 (63.16)	86(62.32)	0.0204
	Yes	49 (36.84)	52(37.68)	
Literate mother (%)	No	114 (85.71)	97(70.29)	9.3473***
	Yes	19 (14.29)	41(29.71)	
Mother skilled in agriculture, fishing and forestry (%)	No	111 (83.46)	126(91.30)	3.7996**
	Yes	22 (16.54)	12(8.70)	

Characteristics		Agripreneurs		X^2
		Less successful	Successful	
Household with good or fairly good financial situation (%)	No	95 (71.43)	97(70.29)	0.0425
	Yes	38 (28.57)	41(29.71)	
Household with financial situation around the national average (%)	No	56 (42.11)	51(36.96)	0.7514
	Yes	77 (57.89)	87(63.04)	
	Quantitative variables			Test
Age (Std. Err.)		31.21 (0.301)	30.15(0.351)	2.303**
Number of children (Std. Err.)		3 (0.117)	3(0.142)	0.3416
Household size		5.99 (0.00)	6.76 (0.00)	1.9277**
Number of persons in the household earning an income		2.172 (0.00)	2.637(0.00)	2.2194***

Source : Data collection (February 2021).

Potential Success Factors

The factors which had significant differences between those who were more successful and those who were less successful were the factors favoring the success of agripreneurs. These success factors for agripreneurs are: formal education; short-term training in agriculture and agribusiness; apprenticeships/internships in agriculture and agribusiness with an employer as part of your training; and available land acreage. The results in Table 5 show that 83.33% of successful agripreneurs had formal education compared to 62.41% of the less successful agripreneurs. The results showed that there was a significant relationship between formal education and agripreneurial success at the threshold of 1%. Thus, we can deduce that the more educated the agripreneurs were, the more successful they were in their businesses. Regarding short-term training in agriculture and agribusiness, 56.72% of successful agripreneurs received at least one short-term training in agriculture and agribusiness compared to 37.93% of the less successful ones. There was a significant relationship at the threshold of 5%. Short-term training courses allowed the successful agripreneur to acquire technical knowledge in terms of agricultural production, agribusiness and entrepreneurship. Apprenticeship/internship in agriculture and agribusiness with an employer positively influenced agripreneurs. Among the respondents, 59.42% of successful agripreneurs had undergone internships before starting their businesses. The proportion was lower for less successful agripreneurs (41.35%). There was a significant relationship at the threshold

of 1% between internships and success. In addition, successful agripreneurs had, on average, more land available than less successful agripreneurs. On average, the area available to successful agripreneurs was 6.12 hectares compared to 3.83 hectares for less successful agripreneurs. This observed difference was statistically significant at the threshold of 1%. The latter often had difficulties in expanding their activities.

Table 5. Potential success factors for agripreneurs

Factors		Agripreneurs		Statistical test
		Less successful	Successful	
Formal education (%)	No	50(37.59)	23(16.67)	13.0193***
	Yes	83(62.41)	115(83.33)	
Formal education/training in agriculture and agribusiness (%)	No	75(56.39)	71(51.45)	0.3273
	Yes	58(43.61)	67(48.55)	
Professional training in agriculture and agribusiness (%)	No	30(51.72)	36(53.73)	0.1709
	Yes	28(48.28)	31(46.27)	
Short-term training in agriculture and agribusiness (%)	No	36(62.07)	29(43.28)	5.1369**
	Yes	22(37.93)	38(56.72)	
Apprenticeships/internships in agriculture and agribusiness with an employer as part of your training (%)	No	78(58.65)	56(40.58)	6.1891***
	Yes	55(41.35)	82(59.42)	
Considers technical skills to be important (%)	No	14(10.53)	14(10.14))	0.0106
	Yes	119(89.47)	124(89.86)	
Considers that managerial skills are important (%)	No	105(78.95))	115(83.33)	0.8528
	Yes	28(21.05)	23(16.67)	

Factors		Agripreneurs		Statistical test
		Less successful	Successful	
Considers that accounting is important (%)	No	116(87.22)	125(90.58)	0.2445
	Yes	17(12.78)	13(9.42)	
Considers marketing skills to be important (%)	No	96(72.18)	101(73.19)	0.1291
	Yes	37(27.82)	37(26.81)	
Considers digital skills to be important (%)	No	132(99.25)	137(99.28)	2.0906
	Yes	1(0.75)	1(0.72)	
	No	102(76.69)	86(62.32)	5.3015
Considers that interpersonal skills are important (%)	Yes	31(23.31)	52(37.68)	
Membership in a major professional association (%)	No	65(49.24)	61(44.20)	0.2225
	Yes	67(50.76)	77(55.80)	
		Quantitative variables		
Available acreage (hectare)		3.83	6.12	3.3184***

Source : Data collection (February 2021).

Analysis of The Determinants of Success in Agri-Entrepreneurship

The results of the linear regression model of factors affecting youth's likelihood of success in agribusiness are summarized in Table 6. In addition, the table includes the variance inflation factor (VIF) which is a measure of the amount of multicollinearity in a set of regression variables. The average VIF obtained was 1.17, which implied that there was no correlation. Since no factor correlated with another, there was no multicollinearity between the variables. The Breusch-Pagan test was used to test the null hypothesis of heteroscedasticity. The Breusch-Pagan test showed that the probability value of the chi-square analysis was greater than 0.05. Therefore, the null hypothesis of homoscedasticity was accepted. The model was significant at 1% (p=0.0). The value of the Adjusted R^2 was 0.4452, which implied that the variables included in the model explained 44.52% of the success in agripreneurship.

The estimation results showed that the coefficients of eight out of thirteen variables included in the model were significantly different from zero at a critical level of at least 10%. This indicated that the inclusion of these variables in the model was properly justified to explain success in agricultural entrepreneurship. Moreover, all the significant variables had the expected signs. The results indicated that the factors that most influenced success in agricultural entrepreneurship were "Total annual household income", "Agripreneurial innovation" and "Food processor or trader" activity type. The coefficients of these variables were positive and significant at 1%. This suggested that high annual income agripreneurs were more successful than those with low annual income. The result for income was consistent with the findings of Mchgehee and Kim (2004). According to its authors, income can be a source of motivation and a means for an agripreneur to increase his/her capacity or even improve his/her productivity. Moreover, the success of agripreneurs depends on their ability to innovate and whether they are food processors or traders. This is consistent with studies by Swierczek and Ha (2007) and Cartsson (2008). The factors "Short-term production target" and "Level of formal education (completed primary)" were significant at 5%. This implied that agripreneurs with a short-term production goal earned more in terms of profit than agripreneurs with a long-term production goal (more than one year) and that the level of formal education (completed primary school) positively influenced their profits. This was consistent with the findings of Deakins et al. (2005) that the key to developing entrepreneurship in any field is education. Ohene (2013) posited that relatively educated youth easily adopt improved agricultural technologies, which could be the basis for their success in agricultural entrepreneurship. The success of agripreneurs is also influenced by "accounting and accounting practices" and also by the "gender" of the agripreneur. This study also found that male agripreneurs had a higher probability of success than female agripreneurs. With regard to accounting skills, they are essential for farmers to succeed (Yaaghubi et al., 2009; Sharafat, 2016).

Table 6. Determinants of success in agripreneurship

Variables	Coefficients (St error)	VIF
Log of the agripreneur's age	-1.018 (0.728)	1.11
Gender of the agripreneur	0.427* (0.232)	1.18
Short-term training in agriculture and agribusiness	0.139 (0.228)	1.13
Log of total annual household income	0.387 *** (0.110)	1.13
Agripreneur with a short-term production objective (one year or less)	0.529 ** (0.235)	1.15
Agripreneur having introduced innovative methods in the last 12 months	1.002 *** (0.334)	1.21

Variables	Coefficients (St error)	VIF
Agripreneur who has received funding from a government project	0.912 (0.861)	1.16
Level of formal education (Primary completed)	0.497 ** (0.283)	1.15
Apprenticeships/internships in agriculture and agribusiness	0.007 (0.127)	1.17
Accounting and accounting practices	0.352 * (0.211)	1.22
Agripreneur with family support (unpaid work)	0.394 (0.500)	1.02
Producer of agricultural products or animal husbandry	0.440 *(0.261)	1.37
Food Processor or Trader	0.618*** (0.213)	1.22
Constant	1.536 (2.958)	
Number of observations	207	
F (13, 193) *** R=0.6114 R^2 Ajusted=0,4452		

Source : Data collection (February 2021)

Constraints and Obstacles Encountered by Agripreneurs Constraints and Obstacles Encountered by Agripreneurs When Creating their Businesses

Table 7 presents the prioritization of constraints and obstacles encountered by successful and less successful agripreneurs in establishing their businesses. The results in the table show that Kendall's concordance test performed had a significant W value at the p <0.01 threshold at the level of the different actors. Thus, the hierarchy made was statistically concordant at the level of all the actors. The main constraint encountered was a financial difficulty, which was followed by the difficulty of supplying raw materials and then of selling the products or lack of customers.

Table 7. Constraints/obstacles encountered when creating the enterprise

Constraints	To the creation of an enterprise			
	Less successful agripreneurs		Successful agripreneurs	
	Score	Rank	Score	Rank
Financial difficulties	1.32	1st	2.11	1st
Supply of raw materials	1.40	2nd	2.40	2nd
Sale of products lack of customers	1.50	3rd	2.49	3rd
Sale of products too much competition	2.00	4th	3.04	5th
Lack of machinery or equipment	2.10	5th	2.88	4th
Taxes	2.32	6th	3.42	6th
Organization, management problems	2.40	7th	3.81	7th
Lack of suitable space	2.44	8th	3.84	8th
Land shortage	2.49	9th	4.01	9th
Too much control	3.76	10th	4.15	10th
N	**133**		**138**	
W of Kendall	**263**		**103**	
Chi-square (9)	**52.795*** **		**175.193*** **	

Source: Data collection (February 2021)

Current Constraints and Obstacles Faced by Agripreneurs

Table 8 presents the prioritization of current constraints and barriers faced by successful and less successful agripreneurs. The Kendall's concordance test performed had a significant W value at the p <0.01 threshold at the level of the different actors. The main constraint encountered was financial difficulty. This was followed by the difficulty of supplying raw materials, which could to poor business planning and management. Off-season supplies are particularly difficult to maintain in rainfed agriculture systems (Dannson et al., 2004). Lack of machinery or equipment for less successful farmers and an increase in taxes for successful farmers were also significant.

Table 8. Current constraints/obstacles faced by agripreneurs

Constraints	Current			
	Less successful agripreneurs		Successful agripreneurs	
	Score	Rank	Score	Rank
Financial difficulties	6.15	1st	6.53	1st
Financial difficulties	6.15	1st	6.53	1st
Lack of machinery or equipment	6.23	3rd	7.04	5th
Sale of products lack of customers	6.80	4th	7.20	6th
Sale of products too much competition	7.11	5th	6.74	4th
Taxes	7.18	6th	6.55	3rd
Organization, management problems	7.70	7th	7.47	7th
Land shortage	8.05	8th	7.99	9th
Lack of suitable space	8.09	9th	7.49	8th
Too much control	8.14	10ème	8.12	10th
N	**133**		**138**	
W of Kendall	**312**		**295**	
Chi-square (9)	**1487.158*** **		**1404.411*** **	

Source: Data collection (February 2021)

Solutions Developed by Agripreneurs

The solutions developed by successful agripreneurs are presented in Table 9. The results showed that to resolve constraints or to reduce the impact of financial difficulties, successful agripreneurs had to resort to practical solutions. The first solution developed was personal savings to finance their activities. This savings, which consisted setting aside the profits from their businesses which could be reinvested in the business. Savings offers are quite developed, especially with Micro Finance Institutions (MFIs) and Decentralized Financial Services (SFD) of close proximity and utilizing monthly tontine systems. The second most cited solution by agripreneurs was good management. Young agripreneurs were aware of the risks of their activities, and therefore disposed towards rigorous management of their activity, keeping regular accounts, and ensuring the profitability of the enterprise. The third solution developed was personal involvement in the activities. It was observed that the majority of successful young people were involved in their income-generating activities, whether it be farming, processing or trading. Indeed, young people were usually present at all activities to avoid problems of mismanagement.

Table 11. Demand, equipment certification, and record keeping

Solutions developed	Score	Rank
Personal savings	2.01	1st
Good management	2.14	2nd
Personal involvement in activities	2.99	3rd
Research/Client retention	3.12	4th
Respect of the technical itinerary of production	3.15	5th
Support and advice from ATDA/NGO agents	3.45	6th
Exchange with other producers/processors	4.00	7th
Training/internship	4.12	8th
Hands-on training with other producers/processors	4.45	9th
Financed by my parents	4.45	10th
Informal lending	4.45	11th
Joining a cooperative	5.50	12th
Support/counseling from parents	5.66	13th
Purchase of equipment	5.80	14th

Solutions developed	Score	Rank
Formal loan	6.20	15th
Search for raw materials outside the village	6.20	16th
Parent support/counseling	8.12	17th
N	130	
W of Kendall	0.518	
Chi-square (16)	452.02***	

Source: Data collection, February 2021

Assistance and Support Received by Successful Agripreneurs from the State/NGO/Project

Kendall's test was used to classify the different supports received by successful agripreneurs from the government/NGO/PROJECT. These results are presented in Table 10. The first three (3) supports received by the agripreneurs from the State/NGO/Project were access to credit, technical training and training in organizational and financial management. Among these projects that supported youth entrepreneurship were: the EJASA project, which was an innovative project for the creation of jobs for young people in the agricultural sector (the sectors targeted by this project were marketing, gardening, soybeans, poultry and small ruminants). The NGO, DEDRAS also initiated several schemes for the professional integration of rural youth in agriculture, in order to contribute to the improvement of the rate of employment and integration of young people trained in agricultural trades. These schemes were based on behavior change communication activities, incubator approaches and facilitation of funding for business development. This was also the case for the Agricultural Development and Market Access Support Project (PADAAM) which targeted young people and professional organizations in order to strengthen food security and increase the income of rural populations. The Fonds National de Promotion de l'Entreprise et de l'Emploi des Jeunes (FNPEEJ), the Fonds National de Développement Agricole (FNDA), and the Agence Nationale pour l'Emploi (ANPE) are structures set up by the Government of Benin to provide youth with entrepreneurial training and work experience. The data showed that 54% of respondents believed that projects/programs to support young agripreneurs that facilitate success existed.

Kendall's test was used to classify the different supports received by successful agripreneurs from the government/ NGO/PROJECT.

Table 10. Support Received by Successful Agripreneurs

Type of support received	Score	Rank
Access to loans	1.25	1st
Technical training	3.22	2nd
Training in organizational and financial management	3.56	3rd
Access to market information	3.99	4th
Access to modern machinery	4.50	5th
Assistance in obtaining supplies	5.75	6th
Access to large corporate orders	5.8	7th
Problems/links with the government	5.83	8th
Access to land	6.02	9th
Disputes with competitors	6.42	10th
Interaction with employees	7.02	11th
Others	8.32	12th
N	**132**	
W of Kendall	**0.243**	
Chi-square (11)	**225.4**	

Source: Data collection (February 2021)

Perceptions and Aspirations

There are several reasons why young people venture into the agricultural sector. Descriptive statistics showed that the main reason for choosing agriculture or agribusiness was the quest for financial independence (32.59% of agribusiness respondents) (Figure 1). This finding was consistent with Yusoff et al. (2016) who believed that engaging in agricultural entrepreneurship showed an individual's willingness to become independent and earn a living by running an agribusiness. Moreover, 26.30% of the young people interviewed were involved in this sector because it was an activity that their parents left behind and that they had practiced since same their youth. Hammond et al. (2007) submitted that the entrepreneurial family easily conditions or inspires children through their success or difficulties. submitted that youth whose parents were farmers were more likely to farm than those whose parents were not farmers. In addition, it was found that 17.78% of the youth surveyed were involved in agricultural activities because they considered it the only thing they could do. Only 10% of youth surveyed believed that agribusiness generated more income, 4.4% believed that agricultural activities provided more stable income than other activities. Finally, 0.74% were in agricultural entrepreneurship by passion. Agricultural entrepreneurship had become the means for them to earn an income. This was the main driver for most farmers to engage in agriculture.

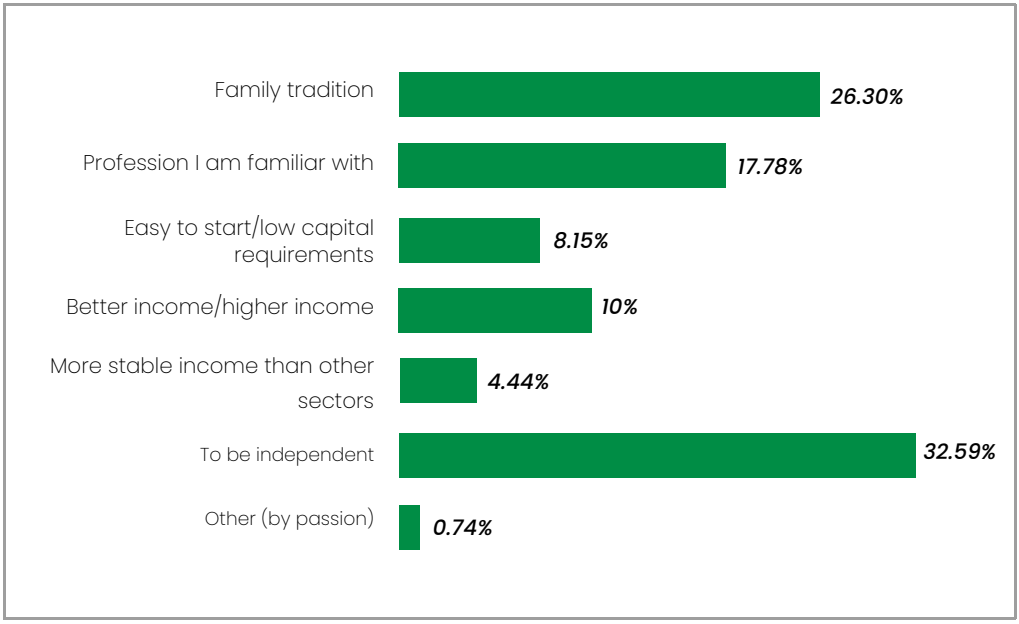

Figure 1. Main reasons for choosing business activities

The results showed that 39.26% of agripreneurs were in the sector because it met their business expectations (Figure 2). Also, 39.60% of the entrepreneurs were in the sector by choice. This was due in part to the various reforms in the sector, which included facilitating access to financing, the availability of professional training in the field and awareness of entrepreneurship. In the recent past, a career in agriculture was generally met with skeptical and negative reactions as it was considered a non-competitive field of work involving high risks and unstable returns (Abiddin and Irsyad, 2012; Man, 2012). However, thanks to reforms in the field, this negative perception is gradually giving way to confidence among young people.

It should also be noted that 15.93% of entrepreneurs were in the agricultural field because their parents wanted them to be. These entrepreneurs were not really convinced that this activity would allow them to be independent.

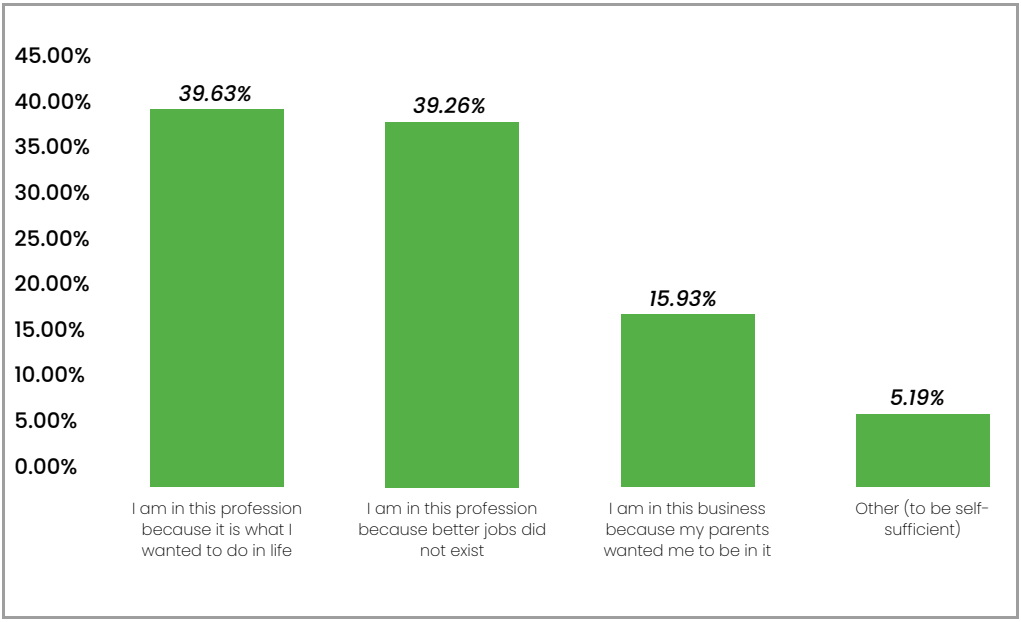

Figure 2. Profile of agripreneurs

Many young people have turned to agriculture because of a lack of employment opportunities in their initial field/course of study. Thus, agriculture and agribusiness have become more attractive activities for young people and their parents.

Indeed, agriculture is recognized as a catalyst for wealth creation and employment opportunities. This explained the fact that nearly 95% of the agripreneurs in our sample would like to continue in this sector for their income and food sources (Figure 3). Nevertheless, agripreneurs desire agricultural mechanization and; more technical and financial support.

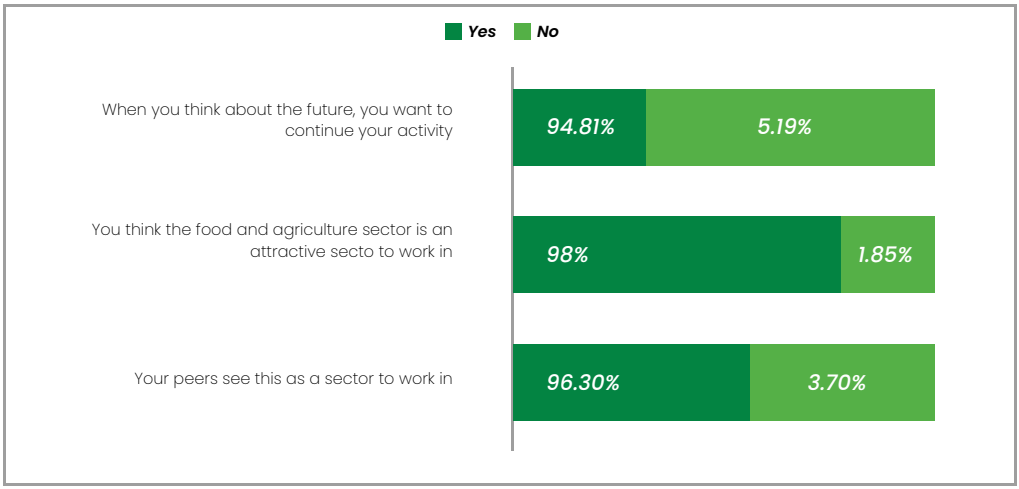

Figure 3. Other perceptions of agripreneurs

Conclusion and Implications

The results of the study emphasized the importance of gaining work experience and apprenticeship training before entering agribusiness. The success of agricultural enterprises depended on sufficient managerial capacity, access to a market for increased income, and the level of formal education. Research on agricultural entrepreneurship maintains a strong focus on entrepreneurial skills and behavior, although this issue is being examined more in developing countries in recent years. Since agricultural entrepreneurs appear to have fewer entrepreneurial skills than in other sectors, there were concerns about improving these skills, particularly through the implementation of entrepreneurship programs. These programs should target youth with the necessary skills who aspire to succeed through entrepreneurship. Entrepreneurship education and training has been shown to have a positive influence on the success of agripreneurs. However, efforts in training should be made in the various sub-sectors (food processing, financial management, marketing management and innovation) because the sector is highly competitive. One of the future perspectives is to be able to propose innovative training programs, adapted to the aspirations and needs of young people in order to create sustainable activities full of development potential. The available training courses are still too theoretical and without any permanent support.

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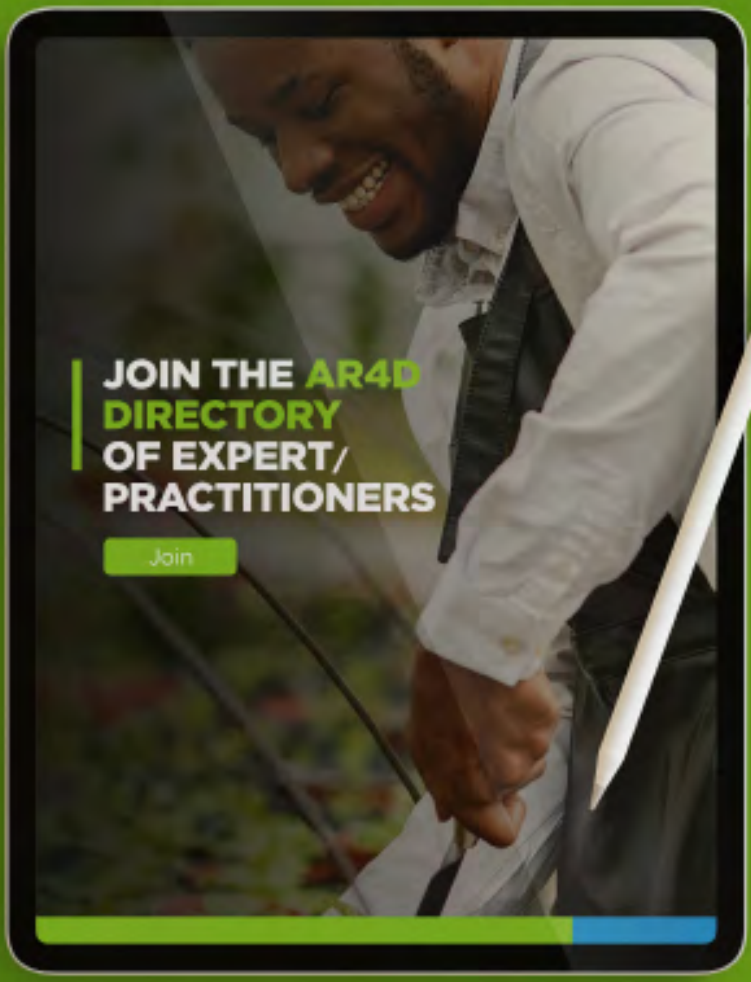

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