

Full Length Research Paper

Exploring the determinants of attraction of college students to agriculture in Mezam division of Northwest Cameroon

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In Sub-Saharan Africa (SSA), agriculture continues to play a fundamental role in the economic portfolio of rural households. Generally, youths in rural Africa have little aspiration for careers in the agricultural sector and instead migrate to urban areas to seek employment and better living conditions. In Cameroon, the majority of migrants are youths between 18 and 35, who end up facing serious problems of unemployment and underemployment when they arrive at their urban destinations. The government is turning to agriculture as a source of employment for youth; however, there is scant literature on the determinants of the attraction of youths, especially college students, to the sector. This exploratory study sought to identify these determinants and to investigate strategies for making agriculture appealing to students for future career development. The overarching factors attracting college students to agriculture in the study area include the availability of arable land and easy access to it, access to start-up financing, the introduction of adapted mechanization and relevant information and communication technologies, increased productivity leading to higher returns on investment in agriculture, education and training, and positive messaging about agriculture targeting youth. The paper recommends profound land tenure reforms, the provision of adapted financial services, establishment of farm mechanization pools, the inclusion of agriculture in college curricula, and positive communication strategies to rebrand agriculture.

Key words: Agriculture, attraction, careers, college students, determinants.

INTRODUCTION

Agriculture in Sub-Saharan Africa (SSA) plays a pivotal role not only in the economies of most countries in the region but also in their food security and sovereignty, as well as in the employment of their populations, which continue to grow at an estimated 2.7% per year (OECD/FAO, 2016). Davis et al. (2017) concluded that an estimated 92% of rural households in SSA countries are engaged in agriculture on their own account, indicating

that agriculture continues to play a fundamental role in the economic portfolio of rural households in Africa. Furthermore, Davis et al. (2017) reveal that approximately 8 out of 10 rural households depend to some extent on agriculture. According to Maïga et al. (2015), the population of African countries is the youngest in the world, with about 65% of the continent's total population below the age of 35, and approximately 10 million youth

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entering the labor market annually, often confronted by serious problems of unemployment or underemployment (Filmer and Fox, 2014). The UN (2018) states that the proportion of the world population living in towns and cities increased from about 30% in 1950 to 47% in 2000 and then to 54% in 2015. It is projected that this figure will rise to about 66% by 2050, with most of this urban growth occurring in Africa and Asia (UN, 2018). Similarly, the proportion of the African population residing in urban areas rose from 14.3% in 1950 to 33.5% in 2000 and then to 41.5% in 2015. This figure is projected to grow to 58.9% in 2050. Trends of urbanization in SSA countries follow the same patterns as the global and African figures. The World Bank (2021) estimates indicate that the proportion of the population of SSA living in towns and cities grew from 11.1% in 1950 to 31.4% in 2000, reaching 38.8% in 2015 and expected to rise to 58.1% in 2050.

This rapid urban growth at the global level, and especially in Africa, is fueled, on one hand, by the migration of people from rural to urban areas within countries, and on the other hand, by the immigration of people from other countries and regions. Contrary to popular narratives suggesting a massive exodus of African populations to North America and Europe, Flahaux and De Haas (2016) suggest that Africa has the lowest rate of migration out of the continent compared to other regions of the world. According to Kamdem (2017), about 53% of migrants in Africa are from within the region. Chanie (2020) maintains that internal migration within individual African states is far more significant in terms of the numbers of people involved than migration out of the continent. In the view of Selod and Shilpi (2021), internal migration is mainly a response to differential labor market opportunities across space, with higher incomes in urban areas acting as an important pull factor for rural dwellers. Besides the higher incomes expected by rural people when they migrate to urban areas, Shilpi et al. (2014) point out that migrants attach importance to the availability of infrastructure and services, such as access to electricity, tarred roads, educational opportunities, and social amenities in cities, including health care facilities, recreation and entertainment facilities. Income shocks due to natural disasters, climatic shocks, violent conflicts, and most especially rural unemployment and poverty, are key push factors for rural youths to decide to migrate to urban areas (Kuhnt, 2019).

Estimates from the UN (2018) reveal that in Cameroon, the proportion of the population living in urban areas was about 9.3% in 1950. This proportion rose to 42.6% in 2000, then to 54.6% in 2015, and is projected to rise to 73.1% in 2050.

Based on these statistics and those provided by the World Bank (2021), it can be estimated that the urban population in Cameroon is increasing at an average rate of about 0.7% per year. Conversely, the proportion of

people, especially youths, living in rural areas is decreasing rapidly due to the phenomenon of rural-urban migration. Meva'a Abomo et al. (2013) reported that internal migration in Cameroon is one of the main drivers of urban development, characterized largely by a vibrant informal sector that employs a considerable proportion of arriving migrants, offering them the opportunity to earn some income (Mussa, 2018). However, when the expectations of the migrants are not met and returning to their communities of origin becomes problematic, they may find themselves in conditions of extreme vulnerability, which may lead them to engage in high-risk activities such as drug abuse and crime. Meva'a Abomo et al. (2013) point out that due to the unsanitary conditions under which they live; vulnerable migrants are also exposed to a variety of health risks. Capazario et al. (2020) report that the majority of rural-to-urban migrants in Cameroon are generally youths aged between 18 to 35 seeking employment and better living conditions outside their villages of origin. The National Institute of Statistics (2015), reporting on the Fourth Household Survey, revealed that in Cameroon, 23.8% of young people aged 17 to 35 are unemployed, especially in urban areas where unemployment rates were estimated at 46%. Additionally, approximately 11% of Cameroonian youth aged 15 to 29 years are unemployed, particularly in rural areas, where youth unemployment is estimated at about 37.3%, leading to youth exodus to urban areas and an increasing decline of economic conditions in rural areas. Sosale and Majgaard (2016) reported that between 2001 and 2010, the population of Cameroon grew by about 2.3% per year, with an accompanying workforce increase of some 2.8% per year. However, employment rates declined, leading to the expansion of the informal sector in the country.

Underemployment (both visible and invisible) among youths in Cameroon is another serious problem affecting approximately 94% of young people aged 15 to 19 years and 84% of those between 20 and 24 years (Avom et al., 2021).

The government of Cameroon is progressively turning to agriculture as a source of employment for the country's teeming youth population. However, available literature (Boateng and Löwe, 2018; Njeru et al., 2015; Noorani, 2015) suggests that youth aspiration for work in the agricultural sector is low and declines continuously. Sosale and Majgaard (2016) revealed that youth aspirations for work in agriculture in Cameroon decrease as their level of education increases. According to them, some 71% of Cameroonians who are farmers or agricultural workers are those who have no education, who dropped out of primary school or at least completed only primary education, while an estimated 35% of them have completed lower or upper secondary school. Under the influence of the push-pull factors connected to rural and urban life, many youths who are in these educational categories refuse to build a future in agriculture and tend

to either engage in non-farm activities that are perceived as better alternatives, or move out to towns to seek their fortunes generally in the informal sector. By contrast, youths with tertiary education (post-secondary) shun the agricultural sector and prefer the formal public sector, which is perceived as providing job security and offering better salaries. This explains why only about 4% of those engaged in agriculture have gone through tertiary education (National Institute of Statistics, 2011). Obayelu and Fadele (2019), Sanginga et al. (2015), and FAO (2013) argue that in the majority of SSA countries, the agricultural sector has experienced in recent years a shortage of qualified graduates to address skill gaps, transform the sector, and increase its performance. However, the majority of the youths who read agriculture and related disciplines in higher institutions of learning do not readily choose a career in primary agricultural production and transformation, but rather prefer off-farm jobs in the sector, such as consultancy, marketing, teaching, administration, or extension and advisory services (Sosale and Majgaard, 2016). This leads to a concentration of graduates in the service provision sub-sector, stiff competition for the few available jobs, and increasing rates of underemployment and unemployment of agriculture graduates who incidentally are looked up to for increased productivity, production, and revolutionization of agriculture in the country. Mkong et al. (2021) contend that good preparation of students in agriculture at the junior and senior secondary levels prior to their transitioning to tertiary education would predispose them not only to choose to study agriculture and related disciplines but also to engage and take up diverse occupations in the sector. With regards to the completion and transition rates at the primary and secondary levels, UNESCO (2023) estimates average completion rates at the primary, lower, and upper secondary school levels in Cameroon over the period from 2010 to 2020 at about 73, 40, and 17%, respectively. The World Bank (2021) places pupil transition rates from primary to lower secondary school at about 54%, with a gross enrolment rate in upper secondary school of 36%. These figures suggest that the majority of young people who enroll in primary school in Cameroon do not end up attaining the tertiary level where specific courses in agriculture and related subjects are offered. Though the initiation of youths into agriculture at the primary and especially secondary levels could be a strategy to bring in more of them into the sector, there is scant literature on the attractiveness of agriculture to secondary school students and their aspirations to enter and subsequently build careers in the domain. The aim of this paper is to explore the determinants of attraction of secondary and high school students to agriculture in Mezam Division of Northwest Cameroon, in order to inform policy to take the necessary steps to reverse the declining interest of Cameroonian youth in agriculture and its various value chains and to attract more of them to the sector.

MATERIALS AND METHODS

The study site

The study was a cross-sectional study, and was carried out from March to June 2023. The Northwest region of Cameroon covers part of the western highland plateau zone of the country, where the major occupation of the population is agriculture (Engwali et al., 2019). The region comprises 7 administrative units referred to as Divisions which include Boyo, Bui, Donga-Mantung, Menchum, Momo, Ngoketunja and Mezam Division. Mezam Division on its part is constituted of 7 sub-administrative units (Sub-divisions) including Bamenda I, Bamenda II, Bamenda III, Bafut, Bali, Santa and Tubah (Atamja and Yoo, 2021) (Figure 1).

Research design, sampling strategy and approach

The research design used for this study is exploratory and draws on qualitative data, which, according to Creswell and Creswell (2018), is descriptive and contextual in nature. This study is underpinned by the epistemological paradigm of interpretivist philosophy, which is rooted in the assumption that access to reality happens through social constructions such as language, consciousness, shared meanings, and instruments (Byrne, 2022). The study sought an in-depth understanding of the determinants of attraction of first and second-cycle college youths to agriculture with the prospects of entering and developing careers in the sector subsequently. The target population of the study included the final year (form five) students in secondary schools (first cycle), the upper sixth students in high schools (second cycle), and teachers at both levels. The available population of the study constituted students and teachers who could be accessed without any major security problems and who were willing to participate in the study given the backdrop of the ongoing socio-political crisis in that part of the country. Government colleges lay private, and faith-based institutions that were operating normally were included in the study. Sampling of the respondents was done at the sub-divisional, college, and individual participant levels. In each of the seven sub-divisions, purposive sampling was employed in selecting the colleges based on the criteria of easy access, security, and willingness of the school administrations, students, and teachers to participate in the study. A total of seven institutions at each level (secondary and high school) were selected at a ratio of one college and one high school per sub-division. In both secondary and high schools, a semi-structured questionnaire comprising twelve open-ended and three close-ended questions was piloted first. This led the researcher to retain an average of eight students per institution for interviews and eight others for focus group discussions in accordance with Tümen and Ahmed (2021), who recommend seven to nine participants as the ideal size for such discussions. Proportionate random sampling based on the class list was used to ensure equal inclusion of male and female students. Secondary and high school teachers selected using the convenience sampling approach was engaged in focus group discussions. A piloting of the discussion guide indicated that saturation was attained at between five to seven participants, so an average of 6 teachers per institution was selected for the study.

Data collection

Prior to administration, the questionnaires were piloted and refined where necessary. The consent of principals was sought, who then assigned the class masters of the classes concerned to facilitate the conduct of the study. Following the administration of questionnaires, focus group discussions lasting 45 min to 1 h were held with the 8 students who had earlier been retained to participate

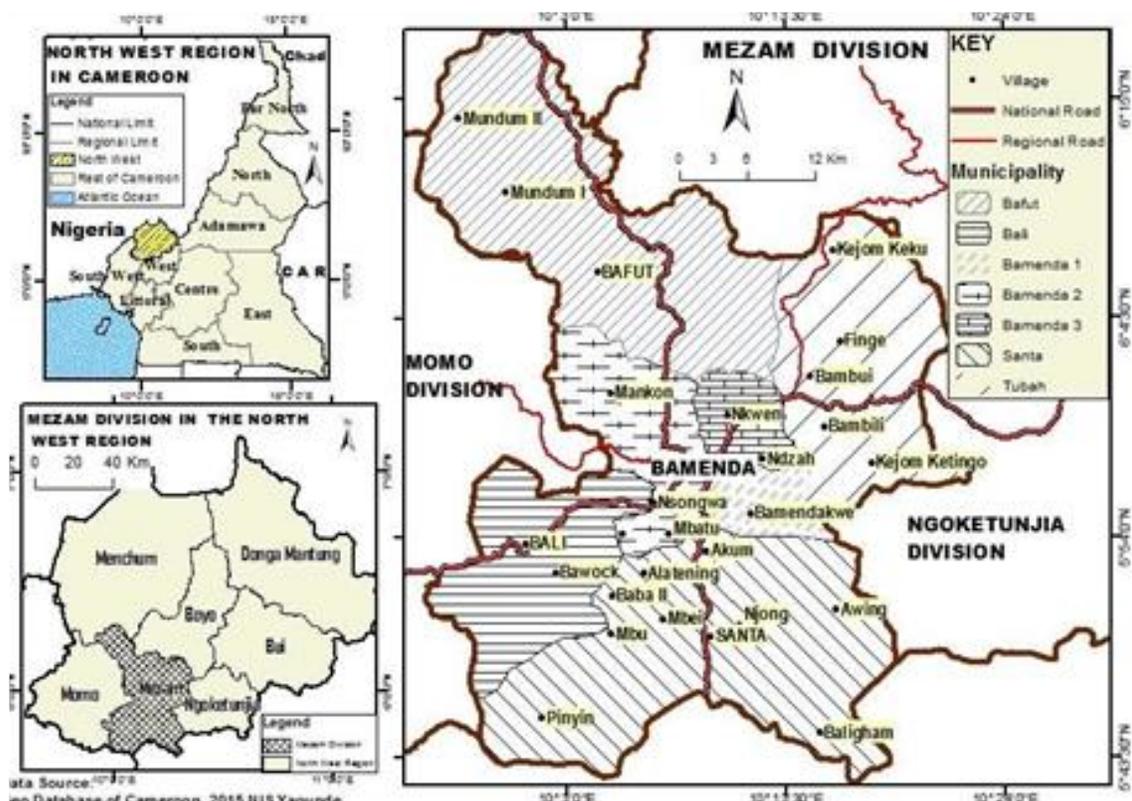


Figure 1. Location of Mezam Division in the Northwest Region of Cameroon showing its 6 major administrative subunits (sub-divisions).
Source: Mbanga (2015).

in that phase of the study. This was closely followed by 30 to 45 min of group discussions with the teachers to provide triangulation for data collected from the students.

Data analysis

The six-step thematic analysis approach proposed by Creswell and Creswell (2018) and Byrne (2022) was followed to analyze the collected data. The N-Vivo software was used for the analysis. The researcher read through all the returned questionnaires to become familiarized with the data. This also provided an initial understanding of the meanings behind the participants' responses. The data collected during the focus group discussions was then transcribed into an MS-Word file and verified against the field notes. This was followed by coding, where sections of text in the questionnaires and transcribed focus group discussions were highlighted, and phrases or sentences related to the study's subject were identified. These sections of text were entered into the N-Vivo software, and codes were generated. The initial codes were carefully examined, and emerging patterns were identified. Groups of similar codes were combined to create the most appropriate themes. The themes generated were carefully reviewed and compared with the initial data, resulting in some themes being combined, split, discarded, or new ones created. The themes were then named using succinct and easily understandable names for each of them. Throughout the entire process, the inductive method was used, allowing the data to yield the themes rather than drawing from predetermined themes or existing codebooks.

RESULTS AND DISCUSSION

The findings of this study are centred on participant responses and the themes that emerged in relation to the determinants of attraction of students to agriculture. These determinants are presented in the priority order indicated by the students and the views of their teachers included, even if these latter did not have the same prioritisation of the determinants as their students.

Determinants of attraction of college students to agriculture

Theme 1: Availability and accessibility to land

In the student's perception, agriculture in general, and farming in particular cannot be practised without land, hence, the availability of land that is arable and fertile is the primary determinant for youth attraction and engagement in agriculture. The students further pointed out that available land should be accessible. As one student maintained:

"Access to land for most young people in Cameroon is by inheritance. When you cannot access land this way, you

will have to buy it. For a young person who wants to start a farm, this option of land acquisition can be very challenging, given their lack of financial resources”.

The teachers also indicated that land is an important factor of production in agriculture; however, access to land, especially for women and girls, can be overwhelming. In societies where land acquisition is primarily through inheritance, women have very little chance of accessing land if inheritance is patriarchal. Facilitating access to land can therefore be a powerful means of attracting young people, especially girls, to agriculture. Bezu and Holden (2014), Martinson et al. (2019), and Obisesan (2021) confirm these findings, pointing out that in many African countries, youth in general, and rural youth in particular, do not enter or are even moving out of agriculture due to the lack of access to land. This is because land is the basic resource for farming and setting up a farm-based agricultural business. Therefore, challenges in securing land pose a great barrier to the engagement of youth in agriculture and agribusiness. The youth often do not possess formal land titles; hence, starting an agricultural production activity is very challenging. Martinson et al. (2019) further pointed out that in most parts of SSA; a young person’s access to family land is often rare when their parents are alive. Most often, they must wait to inherit the land, and when they do, it is often small and fragmented as the heir is expected to share it with other siblings. In some cases, access to the land is so seriously disputed that its cultivation becomes very challenging. It is even more challenging in the case of young females who, because of unfavorable cultural and gender norms, are virtually excluded from access to secure land. Often, women can only have access to land through a male relative. In the face of such insurmountable challenges, young people generally avoid taking up agriculture as a career.

Theme 2: Finances for start-up and working capital

According to the students, starting a farm can be an expensive venture; therefore, ready access to financial resources to initiate various activities is critical and the second most important factor. The availability of initial start-up capital would be a very strong incentive and captivating ingredient in the attraction of young people to agriculture, as starting a farm requires high investments in equipment, materials, and buildings. However, young people generally do not have the financial resources necessary to pay for such investments. In most cases, they may have to turn to their families for financial assistance, which may not be easy to obtain considering that people generally look down on farming and would be reluctant to provide the finances needed to venture into that sector. The students pointed out that although agricultural credit is generally presented as a source of

financing, it is very risky to take a loan when starting a farm because of the uncertainty linked to the production objectives fixed. This is because the risks involved in agriculture are so high that a beginner could lose all their investments if something went wrong. These risks include, but are not limited to, climatic factors such as low rainfall, prolonged sunshine, as well as attacks by insects, animals, and diseases, which can lead to total crop loss or loss of the animals reared. As a high school student put it:

“It is very risky and a real danger to ask a young person to start a farm project with a loan. You do not know how your farm operations will turn out, how much you will produce, at what price you will sell your farm produce. Yet the banker will expect that you pay the loan in full and in addition to that, you are also expected to pay interests on the loan, which in some cases are very high. It does not work; it can be suicide for a beginner”.

The students indicated that access to finance to ensure operations once they have started, could also be a determining incentive for entry into agriculture. They strongly argued that credit is not the right source even for such working capital. To them, assistance through grants from the government, non-governmental organisations and other funding agencies could be better sources of funds for investment. On their part, secondary and high school teachers in the study pointed out that the start-up phase of a farm like any other enterprise, is very delicate and requires substantial amounts of capital for purchasing of land, tools and equipment, the construction of farm buildings, the coverage of initial operations and provision for reserves to cater for any problems that may arise before the farm starts to generate any income which could then be reinvested into the farm. In their opinion, when this capital is available, youths will be more attracted to enter agriculture. However, as one teacher pointed out;

“the conditions for access to the funds must be easy and flexible enough to give the young people incentive to accept to take the risk.

The findings of the study resonate with those of Akosah-Twumasi et al. (2018), who identified lack of finances due to inadequate access to credit facilities as one of the major impediments to youth entry and participation in agriculture. They are also in line with the findings of Udemezue (2019), who concluded that the entry of most young people into agriculture is constrained by their lack of access to funding for agricultural purposes as they do not possess collateral acceptable to banks and other financial institutions for access to agricultural loans. Filmer and Fox (2014) also support these findings, as they argue that youth financial inclusion is often a complex and interwoven challenge, and lack of access to

finance is one of many challenges preventing youth participation in agriculture. Demirguc-Kunt et al. (2015) further confirm the findings of this study, as they reported that youth access to financial services is an important determinant for their involvement in agriculture; however, such access is mostly through initiatives led by semi-formal NGOs, Community-based organizations (CBOs) such as village savings and loan associations, self-help groups, and informal private financial service providers including moneylenders, traders, family, friends, agro-processing companies, and input suppliers.

Theme 3: Mechanisation and technology introduction

Most of the secondary and high school students expressed the view that youths including college students would be attracted to agriculture if mechanisation was introduced to reduce the drudgery linked to farm work. In their opinion, machines do more and better work in a shorter time, than the farmers would do by themselves. A student remarked:

“I like machines, if there are machines like tractors that I can use to work on the farm, and then I will be happy to work every day”.

The teachers supported the students' views on mechanisation as they maintained that generally, people assimilate agriculture to farming involving the use of crude tools to clear the land, till it, plant the crops, maintain them, harvest and store them somewhere safe. Since all these operations are labour intensive, youths see agriculture as a tedious occupation and are not interested in getting involved. According to them, the introduction of machines would bring about a significant change in the situation. A teacher declared:

“The problem that farmers face is that they do not have the appropriate equipment; if they can access this equipment then farming would become less tedious, and farmers would be able to produce more and earn more money. This would radically change the image that young people have of agriculture and attract them more to it.”

In addition, most of the students and teachers are of the opinion that the introduction of modern Information and Communication Technologies (ICTs) would lift the face of agriculture and make it attractive to young people. These findings are consistent with those of Daum et al. (2022), who reported that mechanization and digitalization of agriculture can induce African youths to enter and operate significant transformation of the sector. Though they argue that past state-led mechanization programs had failed in many countries, they opine that mechanization should not be limited to tractor use but be extended to animal traction, especially in the case of

smallholdings. Aker (2019) confirms the study findings in relation to participant views on the introduction of ICTs, indicating that digital technology has been used to provide information to farmers about techniques, prices, financial services, and a range of other services. However, Daum et al. (2022) expressed fears that digital technologies in agriculture may mainly benefit only large and wealthy farmers, partly because of the low levels of digital literacy among smallholder farmers. However, students' high level of digital literacy and their readiness to learn predispose them to draw substantial benefits from such technologies if they were introduced in agriculture.

Theme 4: High and steady income flows

Many of the students in the study expressed the view that a key factor of attraction of youths to agriculture would be the prospects of high earnings from the activity resulting from the sales of their farm produce. According to them, if youths see that young people have started up farm enterprises which generate good and steady income flows, they will start to rethink their perception of agriculture and get more attracted to it. To emphasise this viewpoint, a secondary school student declared, *“The money factor is very important”*. While in support, a high school student affirmed as follows:

“Farming is characterised by low earnings due to poorly organised markets, leading therefore to low prices for the farm products. In addition, some farmers experience high financial losses due to high losses during transportation because of the poor state of farm-to-market roads. Such a situation cannot encourage youths like us to enter agriculture”.

The teachers offered a supporting view to that of their students as they were also of the opinion that one of the key factors in attracting youths to agriculture is its potential to generate considerable amounts of income to reflect how profitable and remunerative the activity can be. If youths are seen to be succeeding in agriculture and making substantial incomes from the activity, then that would attract their peers and motivate them to develop interest and accept to take up careers in agriculture. The FAO (2013) lends support to these findings as it affirms that agriculture is not seen by young people as a viable income source, and often they view agriculture as employment only of the last resort, and considering becoming a farmer would be like condemning oneself to subsistence and poverty. This is because income flows from agriculture in general, and farming in particular, are very small compared to income derived from most off-farm activities. The findings of Bezu and Holden (2014) are also in agreement with the study findings as they revealed that youths who have low levels of education

resort to agriculture as a means of earning an income, which is generally lower than for other occupations, as they do not meet the requirements for employment in those professions that offer good wages. It is therefore evident that the preference of youth to participate in unskilled off-farm employment rather than to engage in agriculture is driven in part by the poor performance of the agricultural sector in terms of the productivity of land and labor or the income generated for the work supplied. Young people therefore choose unskilled off-farm wage employment because of lack of land and viable options and opportunities in agriculture.

Theme 5: Human capital development

The responses provided by participants, which led to the emergence of the theme "human capital development" as a factor of attraction of college students, and youths in general, to agriculture, were grouped under three sub-themes including early exposure, sensitization, and education and training.

Early exposure

Most of the secondary and high school students expressed the opinion that early exposure of pupils and students through the introduction of agricultural education in primary school and college curricula would attract many youths to the domain. They argued that teaching agriculture at an early stage would help students better understand the subject and hence develop more interest in it. As such, they would be more predisposed to enter and develop careers in agriculture later in their lives. The teachers echoed this point of view advanced by the students as most of them indicated that early exposure will:

“give the students a better understanding of the subject”; “make it easier for students to study and practise what they have learnt”; “lead the students to understand that agriculture is not just farming but includes a lot of different career options and numerous opportunities”...

Some teachers further pointed out that agriculture courses can be taught in primary schools and colleges through garden or agriculture clubs. These findings align with those of Geza et al. (2021), who concluded that youths who are already involved in agriculture through participation or exposure to training programs are more likely to have future aspirations related to agriculture than those who are not. Similarly, Magagula and Tsvakirai (2020) found that exposure of young people to agricultural studies at school influences their intention to participate in agricultural entrepreneurship. This highlights the importance of promoting agricultural education at the

primary, secondary, and tertiary levels as part of an overall strategy to increase awareness, incite career choice, and hence increase youth participation in agriculture.

Sensitisation

Most of the students declared that there is not enough sensitization and awareness creation among college youths on the different career opportunities that exist in the agricultural sector, which may explain why most of them think that agriculture is nothing but farming. They expressed the view that it is important for school and other youths to be sensitized, informed, and encouraged to enter agriculture and to develop careers in the sector. In their opinion, such sensitization and awareness creation could be achieved through information talks to pupils and students on the advantages and disadvantages of agriculture, and the different areas of agriculture in which youths can find or create jobs. In addition, study trips and visits to successful farms, as well as the organization of agricultural festivals in schools, could be a way of creating awareness among youths and attracting them to agriculture. One of the students said:

“It is very important to sensitize and educate young people in schools so that they know the characteristics, advantages and disadvantages of agriculture in order to be sure they know what they are doing, when they decide to enter or not to enter into the field of agriculture”.

The teachers, on their part, also advanced the view that creating awareness among the school youths, with a major focus on primary school pupils and junior secondary students, will enable the educational system to "catch them early."

These findings relate to those of Minde et al. (2015), who found that changes are occurring in the education systems of many developing countries in response to the need to avert the threat of food insecurity and poverty. To them, the situation calls for a rethinking of the effective engagement of youths in the agricultural sector. This will be facilitated if they are adequately sensitized and are aware of the roles they can play in the transformation of the agri-food systems in their countries. They also argued that the knowledge and skills acquired by the youth could be useful in raising awareness among other members of society on better ways of conserving natural resources by adopting farming practices that are socially and environmentally friendly.

Education and training

The students generally expressed the opinion that providing specific and properly tailored training to youths

would be a strong factor of attraction to agriculture. They proposed that agricultural training centers, schools, and colleges should be created or properly equipped where they already exist to enable them to provide well-adapted training to youths. Some students thought that specialized Agricultural High Schools (in the light of the Lycées Agricoles) should be created and made operational across the country as a way of bringing youths to agriculture and giving them specialized skills while they are in college. When they acquire the requisite skills, they will likely perform better, build a good image, and attract more youths to the field. The students argued that scholarships should be provided for interested youths to take specialized training courses abroad in innovative areas so that when they settle down to their agricultural operations and succeed, they would be models for other youths to follow. In this regard, a high school student contended that:

“With the recent developments, in the next 10 to 15 years to come, agriculture and the study of agriculture will be in a boom. As a commercial student, I see agriculture as a good business in which young people should invest. Today, foodstuffs have become very expensive; in my opinion, it is because very few people are practising agriculture. Prices of food items are rising because a small population is producing food for a large and increasing population. Our education system has to do something about this situation. Agriculture should be made a popular and why not compulsory subject in colleges and high schools”.

According to the teachers, farmers are very energetic people but lack advanced skills and knowledge to improve on their production potential and to reap substantial benefits from agriculture. This gives the general impression that agriculture is not a profitable activity. Training and upskilling are important to help farmers improve their productivity and production, and the income they earn. To bolster this point, a teacher said:

“If farmers are trained in modern agricultural techniques and are encouraged to work in groups, they will achieve a lot of positive results. Such positive results will be observed by youths who will be more encouraged to follow the examples of the successful farmers”.

Most of the teachers further hold that agriculture should be included in the curricula of primary, secondary, and high schools. Presently, agriculture is not taught in secondary schools, though in some of them it is embedded in some other subjects like geography, where teachers touch on subjects like soil types and their conservation, peasant farming, commercial agriculture, animal rearing, and pisciculture. In their teaching of biology and genetics, the teachers bring up issues

pertaining to plant genetics, genetic engineering, and other problems linked to genetically modified organisms and their place in natural ecosystems. Physics teachers teach mechanics and machines and sometimes link them up with agriculture and their possible uses in the domain. Similarly, economics teachers talk of agriculture and its role in human and national economic development. This indirect referencing by secondary school teachers to agriculture while teaching other main subjects does not place the agricultural sector at the center stage and therefore does not develop in the students a questioning mindset about agriculture and the various opportunities that it offers in food production, security, food self-sufficiency, employment, income generation, and wealth creation at the individual, household, and national levels. In some cases, issues related to agriculture are handled only during manual labor, and the specifics that are touched on include horticulture (flower planting in tires), work in a small garden, plantain plantation, poultry farming, among others. As it is not clear what connotation is given by the college authorities to manual labor, it is equally not clear how students perceive the activity and the impact that it has on their perception of agriculture and subsequent attraction or repulsion by it.

These findings follow those of Geza et al. (2021) who suggest that building the capacity of young people is essential in ensuring their participation in agriculture. They noted that for youths to effectively contribute to agriculture, investment must be made to develop their capacity by investing in human capital, including education, soft skills, vocational training, and skills development. They further opine that there is a link between the level of education attained and youth participation in agriculture. Bezu and Holden (2014) also support the view that education and training are important as education improves youths' access to information about opportunities outside of their immediate surroundings, thus raising their expectations and encouraging them to explore these opportunities. The study findings further agree with those of Magagula and Tsvakirai (2020) who revealed that agricultural education and training have a positive influence on youths' intentions to take up and participate in agricultural entrepreneurship. The results of their work further show that youths who had studied agriculture at the secondary level or higher were twice more likely to venture into agricultural entrepreneurship than their counterparts who had not. Abdullah et al. (2013) also found that individuals often feel more equipped to enter this area of business when they have an advanced knowledge of agriculture through the education they would have received. Mcmillan and Harttgen (2014) note that only about 2% of African university graduates specialize in agriculture; while nearly 80% of the young people aged 25 to 34 who work in agriculture has only a primary school education or less, including 40% with no education at all. From their perspective, this suggests that the inclusion of agricultural

subjects and activities in schools and colleges could spark an interest in young people and expose them to various career opportunities in agriculture at a young age. To further strengthen this position, Schwebel et al. (2019) concluded that policies in most SSA countries fail to respond to human capital shortcomings, which result from poor-quality education and a lack of employable skills. They suggest that policy focus should seek to upgrade the skills of young people to ensure their participation in agriculture, the promotion of food security, and the reduction of poverty in rural, peri-urban, and urban areas.

Theme 6: Rebranding of agriculture

Many of the students and their teachers felt that there is a lot of negative talk about agriculture in various spheres of life in the country. When people talk about agriculture in administrative, education, and professional circles, it is in very negative terms. Such negative messaging only serves to discourage and repel young people from agriculture. They argue that a strong determinant of attraction of school youths is positive communication that gives them the motivation and interest they need to enter and build careers in agriculture. In the words of a student and a teacher respectively:

“Positive messages on agriculture with facts and interesting stories could be a strong way of encouraging youths to enter and build careers in the field”.

“It is necessary to communicate aggressively about agriculture like preparing and sharing YouTube videos and short motivating messages on the social media. The youths see what is happening in other countries and contexts, so why not take advantage of these new communication technologies to give a new brand to agriculture here in Cameroon?”.

Leavy and Hossain (2014) support these findings by suggesting that one of the ways of reversing youth disinterest in agriculture is to change their perception of farming from an activity for old people characterized by drudgery to farming as a business and young farmers as entrepreneurs. If farming is rebranded and presented as a business opportunity, then young people are much more likely to accept taking up agriculture as a profession. Similarly, Irungu et al. (2015) found that until recently in Kenya, many youths saw farming as an unskilled and unrewarding profession, suitable only for the retired or the uneducated. However, following determined and well-targeted communication using adapted technologies (radio, SMS, and social media) and gadgets that youth love using (smart handsets, iPads, tablets, etc.), the number of youths developing interest in agriculture increased remarkably. The implications here are that a rebranding of agriculture to suit the youths' interests,

perceptions, ambitions, aspirations, and needs will attract them to the activity.

CONCLUSION AND POLICY RECOMMENDATIONS

In this paper, the determinants of attraction of secondary and high school students to agriculture as perceived by them and their teachers were explored. It emerges from the study that the most critical determinants in relation to the attraction, onboarding, and retention of youth in agriculture in Cameroon are the availability of arable land and easy access to it, access to startup financing, the introduction of adapted mechanization, the use of relevant information and communication technologies, increased returns on investment in agriculture resulting from improvements in its productivity, education and training of youth, and targeted and positive messaging about agriculture. Huge potentials exist to engage youths in the diverse value chains in the country's agriculture; however, to harness these potentials, the government and other stakeholders will have to employ strategies that address the perceptions, aspirations, expectations, needs, and constraints that the youth face. In this view, this paper recommends that the following strategies be developed and implemented.

Policies on access to land should be reviewed with specific emphasis placed on access to agricultural land so that young people can take advantage of the situation to enter and develop activities in agriculture. On the other hand, the government should develop schemes or programs aimed specifically at financing the entry of youths into agriculture. Conditions for access to the funds provided through such mechanisms should be easy, flexible, and inclusive enough to attract all interested youths to enter and develop careers along the value chains in agriculture. Centres for the provision of adapted farm mechanization services should be created and empowered to become operational. If such mechanization pools are strategically localized, they can provide useful services to both new entrant young farmers and practicing farmers, especially regarding some tedious farm operations such as land clearing, tillage, and other farm maintenance operations. It is important for the Ministry of Basic Education to clarify the aspects of agriculture that are integrated into the primary school curriculum in the country and to specify the pedagogic approaches and tools to be used in the delivery of the course on agricultural practices. In addition, the capacities of teachers should be built in the area of agricultural education and training so that they can play their role in encouraging and exposing young people to agriculture in the school environment, facilitating their engagement in the activity. Furthermore, agriculture should be included in the curricula of secondary schools, considering that the teaching of the subject at that level can play a very important motivational role in attracting students to

agriculture.

A strategy should be put in place to communicate positively about agriculture, aiming to rebrand it and draw the attention of youths to the sector. In this regard, events should be organized during which successful young farmers talk to their peers to encourage them to enter the profession. Digitalizing this communication around agriculture with links to what is happening in other Sub-Saharan African countries could add advantage to the strategy. Furthermore, student counselors should present agriculture to students as a sector in which rewarding jobs can be created, starting from activities upstream to production, primary production, transformation, marketing of farm products, and advisory and financial service provision.

The major limitations of the study were the difficulty of safe movement from one locality to another and the non-functioning of some colleges, which impeded the collection of data from those areas. This is a direct consequence of the socio-political crisis that the Northwest region of Cameroon, including the study area, has been experiencing over the last six to seven years. Despite these limitations, the study has contributed to a better understanding of the determinants of attraction of secondary and high school students to agriculture in Mezam Division of Northwest Cameroon. Based on the findings of the study, the government can make informed decisions and build well-thought-out strategies to bring more youths into agriculture. Further research should be carried out in the nine other regions of the country to confirm the findings of this study or to identify other contributory factors of youth attraction to agriculture, which may be specific to the different agro-ecological zones of the country.

CONFLICT OF INTERESTS

The author has not declared any conflict of interests.

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