

## Review of the Sustainable Development Goals: How South Africa has performed in partnerships for the goals through Virtual Farming

The sustainable development goals are the seventeen goals with measurable targets and clear deadlines to better the lives of the world's poorest individuals. The SDGs were set up in 2015 by the United Nations General Assembly (UN-GA) and are intended to be achieved by 2030. The assembly was translated into a roadmap setting out seventeen time-bound and quantifiable objectives and measurable goals to be reached by 2030, known as the Sustainable Development Goals (SDGs). The 17 SDGs are no poverty, zero hunger, good health and well-being, quality education, gender equality, clean water and sanitation, affordable and clean energy, decent work and economic growth, industry, innovation and infrastructure, reduced inequality, sustainable cities and communities, responsible consumption and production, climate action, life below water, life on land, peace, justice, and strong institutions and partnerships for the goals.

This article will look at the seventeenth Sustainable Development Goal (SDG 17). This development goal is about partnerships for the goals. The seventeenth Sustainable Development Goal (SDG 17) is broken down into five categories: finance, technology, capacity building, trade and systemic issues. This article aims to review and analyse the significance, relevance and associated targets of SGD 17 for South Africa through Virtual Farms. Virtual farms are agricultural investment platforms that allow people to invest in Agriculture and earn money while getting a great return. Investors can get between 5%-110% return on their original investment made on virtual farms. The capital injected by the investors is then used to empower smallholder farmers to scale their farms fast into commercial sizes and thus enhancing their capacities to provide employment opportunities for unemployed youth in South Africa.

A detailed analysis of seven existing Virtual Farm platforms from South Africa will be selected for the study. The Pearson's correlation will be used to measure the strength and direction of association that exists between Virtual farms and youth participation in agriculture and a t-test (to look for differences in the outcomes of the different youth

groups involved in Virtual farms) to analyse the quantitative data. Then content analysis will be used to analyse the qualitative data.

Key Words: Sustainable Development Goals, SDG 17, Virtual Farms, South Africa

## Introduction

The South Africa's National Youth Policy and its National Youth Commission Act and its Integrated Youth Development Strategy (draft 1, 2) define youth as individuals aged between 14 to 35 years. In South Africa, the youth constitute more than a third of the population, making up 34.7% (STATS SA, 2020). Most are born and still live in rural areas where 60.5% of South African youth aged 14–24 years old live in low-income households. For youth aged 25–35, the percentage of those living in low-income households is 44% (National Youth Policy, 2020-2030). Rural youth continue to face challenges related to unemployment, underemployment and poverty. Despite the agricultural sector's ample potential to provide income-generating opportunities for rural youth, challenges related specifically to youth participation in agriculture (FAO, 2014).

The average age of a farmer in South Africa is 62 (Sihlobo, 2015; Ntombela, 2021). This implies that the agricultural sector is unattractive to young people in the country. Young people perceive agriculture as a profession of intense labour, not profitable and unable to support their livelihood. From the onset, farming or a career in agriculture is frowned upon as a poor man's business. There is a shortage of individuals who are successfully running agricultural businesses (Dube, 2012). But modern ICTs offer great potential to attract the youth to the sector as they provide up-to-date information and excellent marketing, training, and financing tools (IFAD, 2014; FAO, 2014). The advancements in the information and communication technologies (ICTs) provide an opportunity for developing countries to harness and utilize information and knowledge to improve productivity in various sectors including agriculture (Lwoga, Stilwell and Ngulube, 2011).

There is a very high drive towards industrialization to get Africa out of poverty, neglecting agriculture. African agriculture is mostly of hoe and machete, which makes it very energy and labour intensive. In Africa, parents always encourage their children to study to become doctors, accountants etc. From the onset, farming or a career in agriculture is frowned upon as a poor man's business. The issue of getting capital as banks want quick returns on the loans meant for agricultural projects that they have to give out to youth in farming, but instead, they lend out the money to non-agriculture sectors that would bring

in quicker and more lucrative returns. This often means many applications for these agricultural loans, especially from young farmers, are rejected. There is a shortage of individuals who are successfully running agricultural businesses (Dube, 2012). Also, youth complain that it takes a much longer time to achieve success in agriculture. Since most youths want money fast, very few are willing to take on a field like agriculture. However, participating in the agricultural sector can provide numerous benefits, including a partial shield against inflation risk, the prospect of cash flow, fixed asset value appreciation, and several types of optionality (Bifani, 2020).

Hence, Virtual Farms are a great and innovative platform to bring together young people, enhance their participation in agriculture, and play a role in the food sector (Sihlobo, 2019). Virtual farms are agricultural investment platforms that allow people to invest in Agriculture and earn money while getting a great return on their investments. Investors can get between 5%-110% return on their original investment made on virtual farms. The capital injected by the investors and knowledge and skills acquired by the partner farmers could increase youth participation in agriculture (LeFlore, 2018). On the other hand, Virtual Farms allow their investors to assist farmers in expanding their businesses, increasing their revenue, and creating jobs. Virtual Farms offer the opportunity to invest in a sustainable farm through buying an agricultural enterprise, watching it grow and reaping the rewards from careful management by experienced farmers (Shezi, 2021). They also provide an avenue through which knowledge, abilities and skills of partner farmers could be increased towards the attainment of food security. A virtual farmer is an investor who bought some shares in the form of animals from a farm

Rapid changes in technical knowledge and the need to avert the threat of food insecurity and poverty have brought changes in the agricultural sector in many developing countries (Fadipe et al., 2014). This calls for a rethink for effective engagement of the youth since they are in a sector of the population that possesses a higher drive for development (Paisley, 2014). This study envisages that youth participation in Virtual Farms could bring a turnaround in the global trend of food challenges and lack of youth participation in agriculture (Fadipe et al., 2014; Agboola and Emmanuel 2016; LeFlore, 2018). The youth

involvement through Virtual Farming would effectively pave the way towards achieving food security.

Existing international and national studies, such as Adekunle et al. (2009); Mbah, Amah, and Onwusika (2017); IFAD (2014); Irungu, Mbugua and Muia (2015); Adesina and Favour (2016); Lakwo and Wegner (2017); Njeru (2017) and Girei et al. (2017); Haruna, Asogwa, and Ezhim (2019) focused on the perception and participation of youth in agriculture. With the main focus on challenges and thereby recommending solutions and policies to enhance youth involvement in agriculture through agricultural education for sustainable food security, Information and Communication Technologies (ICTs) to attract youth into profitable agriculture. There has not been a scientific study specifically conducted on Virtual Farms and their role to enhance youth participation. Therefore, based on the problem statement this thesis will contribute to two main strands of literature: a) examining the stability and performance of Virtual Farms; b) generating knowledge on the opportunities and constraints of increasing the participation of youth in agriculture through Virtual Farms.

## **Research Objectives**

This study seeks to:

Find out the role of Virtual Farms on youth participation in agriculture in South Africa.

Specific objectives:

To examine the stability and performance of Virtual farms in South Africa;

To examine the level of youths' involvement in Virtual farms in the study area;

To analyze the role and the impact that Virtual Farms have on enhancing youth participation in agriculture in the study area.

## **Scope of the Study**

The research will be conducted in South Africa using seven financial service providers with a Virtual Farm platform. These platforms are chosen due to the availability and early

adoption of Virtual Farms. Seven existing financial service providers that host Virtual farm platforms from South Africa will be selected for the study. These platforms are selected due to their availability and credibility in South Africa, namely: Zeder Investent limited established in 2004, Futuregrowth's Agri fund in 2006, UFF Agri-investments in 2006, Livestock Wealth in 2015, SmartVest Capital trading as SV Capital in 2017 and Fed Group in 2018.

## Methodology

This study will use qualitative and quantitative methods. Seven Virtual farm platforms from South Africa will be selected for the study. The quantitative data will be acquired from the existing data of the Virtual farm platforms and the qualitative data will be collected through the semi-structured questionnaires and focus groups discussions (when the Virtual farm platforms host events both virtually and at the farms to which investors are also invited). Three platforms will be purposively selected from each of the two countries. A total of 6 CEOs and 300 young virtual farmers and partner farmers will be interviewed using semi-structured interviews, and the respondents ranged between 25 and 25 partner farmers and Virtual farmers will be interviewed from each Virtual farm platform. A total of 12 focus group sessions will be held virtually, and two focus group sessions will be held per platform. The focus group discussions and interviewed data will be studied and analysed.

Both quantitative (descriptive analysis) and qualitative approaches (content analysis) of data analysis will be used. SPSS and Atlas.ti software will be used to analyse the quantitative and qualitative data, respectively.

## Related research

AUTHOR	TOPIC	METHOD	FINDINS
Adekunle et al. (2009)	Constraints to youths' involvement in agricultural production in Kwara State, Nigeria	Chi-square	The major constraints hindering youth participation in agriculture were inadequate credit facility, lack of agricultural insurance, poor returns to agricultural investment, lack of basic farming knowledge

			and lack of access to tractors and other farm inputs.
Adesina and Favour (2016)	Determinants of participation of Youth-in-Agriculture programme in Ondo State, Nigeria	Descriptive and inferential statistical tools: Chi-square, Pearson Product Moment Correlation and Multiple Linear Regression	Farm size and years of participation mostly contributed to participation in YIAP. There was high participation in YIAP, youths have favourable attitude towards the programme and inadequate training facilities was the most severe constraint.
Cheteni (2016)	Youth participation in agriculture in the Nkonkobe district municipality, South Africa.	Binary logistic model	The variables; youth programmes, programme availability, and resources were statistically significant in explaining the factors that affect youth participation in agricultural activities.
Geza, Ngidi, Ojo, Adetoro, Slotow and Mabhaudhi (2021)	Youth Participation in Agriculture: A Scoping Review.	'matrix queries' and 'cross-tabulate functions' using QSR NVivo 12	Existing agricultural interventions are production-centric and provide low-income earnings and inadequate social protection. The youth have pessimistic perceptions about agriculture's capability of improving their living standards.
Njeru (2017)	Youth in agriculture; perceptions and challenges for enhanced participation in Kajiado North Sub-County, Kenya	T-test	The youth's negative perceptions of agriculture as a reason why many did not participate in the sector; where youth felt that there were no role models in agriculture and claimed that agriculture was not profitable.

The literature reviewed indicates that there are no studies that has quantified the role of Virtual farms and their enhancement on youth participation in agriculture, but the above similar studies have been used to construct the current studies' methodology.

Figure 1: related research

## Research Methods/Choice

In this research, both qualitative and quantitative research methods will be used to quantify the stability and performance of Virtual Farms in comparison to other investment options and to get an in- depth understanding of Virtual Farms and their role in the advancement of youth participation in agriculture, and also to understand the opportunities in South Africa. Since quantitative and qualitative approaches of data

analysis will be used for the study. The Pearson's correlation will be used to measure the strength and direction of association that exists between Virtual farms and youth participation in agriculture and a t-test (to look for differences in the outcomes of the different youth groups involved in Virtual farms) to analyse the quantitative data using. Then content analysis will be used to analyse the qualitative data.

## **Population and Sampling Methodology**

### **Target population**

The research findings will be derived from a randomly selected mixed population group of respondents involving youths who are founders and managers of Virtual Farm platforms, partner farmers and youths who invest in Virtual Farms in South Africa.

Seven existing Virtual farm platforms from South Africa will be selected for the study (namely, ZederInvestment limited in 2004, Futuregrowth's Agri fund in 2006, UFF Agri-investments in 2006, Livestock Wealth in 2015, SmartVest Capital trading as SV Capital in 2017, Fed Group in 2018 and BIT farming also in 2018). These platforms are selected due to their availability and credibility, and the researcher is aware that some of the platforms offer other investment options but will focus only on the Virtual Farm section/part.

### **Sampling techniques**

The adoption and use of non-probability sampling techniques such as purposive; and probability sampling technique such as stratified sampling are common and dominant sampling techniques in scientific and social science research. As such, this research will use both purposive and random sampling techniques to ensure that the sample is representative of the study population.

### **Data Collection Procedures and Methods**

Primary sources/data will be used (in-depth interviews) to collect information from the founders and managers of Virtual Farm platforms. Then open-ended questionnaires will

be administered face-to-face to all the study respondents. To administer the questionnaires, a research team will be employed (including the principal investigator and the two postgraduate students).

The research team will be formed to implement the field survey in each Virtual farming platform. The team will have three enumerators (including the principal investigator). The team will be assigned a vehicle to facilitate their movement from city to city. This approach will ensure that the work goes on simultaneously/concurrently across all the target platforms. The principle investigator will monitor the activities of all the enumerators and liaise with her supervisors to ensure that data quality is not compromised. Also, at the end of each day of enumeration, the principle investigator will go through the filled or completed questionnaires to ascertain if there are any data gaps, and these would be filled before the team leaves. Enumerators will be given mobile phone airtime to enable them to communicate with the principle investigator whenever they encounter any difficulty while administering the questionnaires. These are the steps to be taken as part of the strategy to control data quality during the field survey.

**Expected results:**

By generating knowledge on the opportunities and constraints of increasing the participation of youth in agriculture through Virtual Farms. Community engagement projects (collaborative work/partnerships with communities or community groups to address jointly identified issues).

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