

Tenterhooks of corona virus (COVID-19) on food and nutrition security, and economic status of agri-business farmers in Oyo state Nigeria

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ABSTRACT: The scourge of Corona virus (Covid-19) has created indelible crisis in the entire world's agricultural food system. A study was carried out to assess the impacts of Corona virus (Covid-19) on the food and nutritional security, and economic status of Agri-business farmers in Oyo State, Nigeria. The demographic study revealed that 85% of the farmers had tertiary education, while 51.4% of the farmers have over ten years' experiences in agri-business. The highest population of the participants can only afford to eat nutritious food once per day. The pandemic reduced people's capacity to access and utilize nutritious food regularly. Majority (98.6%) of the farmers affirmed that agricultural activities contribute to achieving Food and Nutrition security in Nigeria. During the Covid-19 pandemic, there was intensive lockdown with ban on the inter-and intra-state travels. About 66.2% farmers affirmed that Covid-19 pandemic negatively influenced their agribusiness while 62% farmers identified lack of fund to be the major constraint in agri-business at the time of pandemic. It follows that the Covid-19 pandemic negatively affected the livelihood of farmers in terms of food and nutrition security as well as economic and agricultural activities. Conclusively, the tenterhooks of Covid-19 caused panic, agribusiness-crisis, food insecurity, and economic downturn amongst farmers in Oyo state but care must be taken to avoid lockdown which threatens food supply.

Keywords: Corona-virus, nutrition, food security, farmer, agriculture

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INTRODUCTION

The out-break of Corona virus popularly called Covid-19 has many devastating effects on the agricultural activities economic and the nutritional status of Nigerian farmers in particular and the world at large. The dreadful Covid-19 world pandemic began in 2019 and resulted in immediate, and serious human health issues around the globe (Streimikiene *et al.*, 2022). The Covid-19 created many threats to sustainability of agricultural sector which is very sensitive due to food supply and security needs

(Streimikiene *et al.*, 2022). In the same wavelength, Collins and Ogundeji, (2022) reported that the virus wreaked havoc on the agricultural production system, which is the heart of the food chain (Pu and Zhong, 2020). The global spread of corona virus resulted in the greatest economic downturn since World War Two (Hanna *et al.*, 2020; Xu *et al.*, 2021). The epidemic's major impact on agricultural labor input was the restriction of labor mobility. Farmers were not permitted

to just go out and gather in any way except to purchase essentials. This resulted in a manpower scarcity and reduced mass production efficiency. The situation in Oyo State, Nigeria was not different from the case of China which was reported by Pu and Zhong (2020) where the authors cited an instance that due to a scarcity of migrant experts, producers from Sichuan, Hunan, and Hubei in the south-eastern coastal district which is the grain producing districts in China, farmers were unable to plant their crops in good time.

Subsequently, the pandemic has a ripple- or combined-effect with climate change on the livelihood, and health status of farmers and indeed on the generality of food production, quality and security. During the period of Covid-19, there was intensive lock-down, restriction of movement, complete ban on intra- and inter-state-transportation of goods and services, there was intense national food crisis in virtually all the states in Nigeria. The prices for food commodities were 5 times higher. There is no gain saying that the first wave of Covid-19 extremely destabilized the entire agricultural food system. Although, during the lockdown, movement of agricultural commodities were partially allowed in some states but farmers were apprehensive about their safety, and fate of their farm-produces. For instance, NCDC (2020a) reported that Nigeria recorded her first case of Covid-19 in February 2020 and by March 23, 2020, Federal schools in Nigeria were mandated to close as a result of the escalating spread of Covid-19 and by March 30, 2020, the commercial state hubs in Nigeria such as Lagos, Abuja; the capital city and Ogun state in Nigeria were placed under lock-down to contain the spread. Subsequently, the majority of the states in Nigeria joined the lockdown as soon as the directive was given by the Federal Government of Nigeria (NCDC, 2020b).

According to International Monetary Fund (2020), the Covid-19 crisis was reported to have a crippling effect on the global economy. Many of the farmers lack the fund to go into agricultural production as there was high cost of labor, farm-inputs, seeds, fertilizers and agro-chemicals and therefore agricultural production was on the decrease during the pandemic. There was huge decline in demand for eatery and commercial food services, labor restrains, handling and production capacity of food and other agricultural products that have influence on farmers output reduction (Brewin, 2020; Ceballos *et al.*, 2020; Cranfield, 2020; Poudel and Subedi, 2020). Quarantine measures reduced labor availability for such important farming activities like sowing of vegetable crops, picking fruits, harvesting of food crops etc. (Bochtis *et al.*, 2020; Adhikari *et al.*, 2021; Bisht *et al.*, 2020; Cortignani *et al.*, 2020). With the in-depth of economic crisis caused by the world pandemic, its impacts were even more serious on agricultural sector which orchestrated the debilitating effect on the health system. Furthermore, Abdelhedi and

Zouari, (2020) emphasized that agriculture is the most important sector that plays a vital role in human development and is critically tied to food and nutrition security. The axioms of choice of what to eat or not to eat bread is neither a matter of taste or greed nor a luxury; but it has been a necessity for centuries" (Abdelhedi and Zouari, 2020). To afford nutritious food is a global challenge to many households today. According to the Food and Agriculture Organization (FAO), the outbreak of Covid-19 was harmful in 2 prominent ways namely: food supply- and food-demand, and were directly related to food insecurity (FAO, 2020). The presence of Corona-virus disease has a negative impact on all the four pillars of food security which included but not limited to: availability of food, accessibility of food, utilization of food, and stability of food (Nechifor *et al.*, 2021; Laborde *et al.*, 2020; Munonye *et al.*, 2022). According to Genkin and Mikheev (2020), the report by the (FAO), World Trade Organization, and World Health Organization (WHO) noted the threat of a food catastrophe triggered by the current Corona-virus pandemic, with a risk of a global "food shortage". Generally speaking, according to the FAO (2020), the devastating impact of Covid-19 can directly be related to food insecurity. This concept can be better explained pictorially as displayed in (Plate1). To buttress the relationship and the impacts of Covid-19 on agricultural production and consumption, the FAO (2020) described the case in Plate1 with 2 scenarios (a) and (b). In a nutshell, the food structure demonstrated in Plate1 (a) simply implied that there were abundance in supply of food commodities and there high demand of same. That is the individual households had unlimited access to nutritious foods. The household-mothers were financially capable to purchase large quantities of foods for their families while in the pictorial illustration in Plate1(b) showed that, although there was reduction in supply of food commodities during Covid-19 pandemic but there was also low demand leading to meagre access to nutritious food. These are pointers to the reality on grounds and have formed the basis of this research investigation. However, many Nigerian-farmers seek funds from both commercial banks and co-operative societies. In view of the stringent conditions of high interest-rate and provision of collateral security faced by the Nigerian-farmers, the Federal Government of Nigeria through the Central Bank of Nigeria had introduced special intervention programmes to support agricultural production and promote the sales and consumption of locally produced goods, such intervention programmes included but not limited to Anchor Borrower Programme for rice, maize, soybean and wheat farmers as well as Agribusiness for small, and medium entrepreneurship investment scheme (AGSMEIS). Under these intervention programmes, the apex bank (CBN) had set up a subsidiary arm called Nigerian incentive based risk

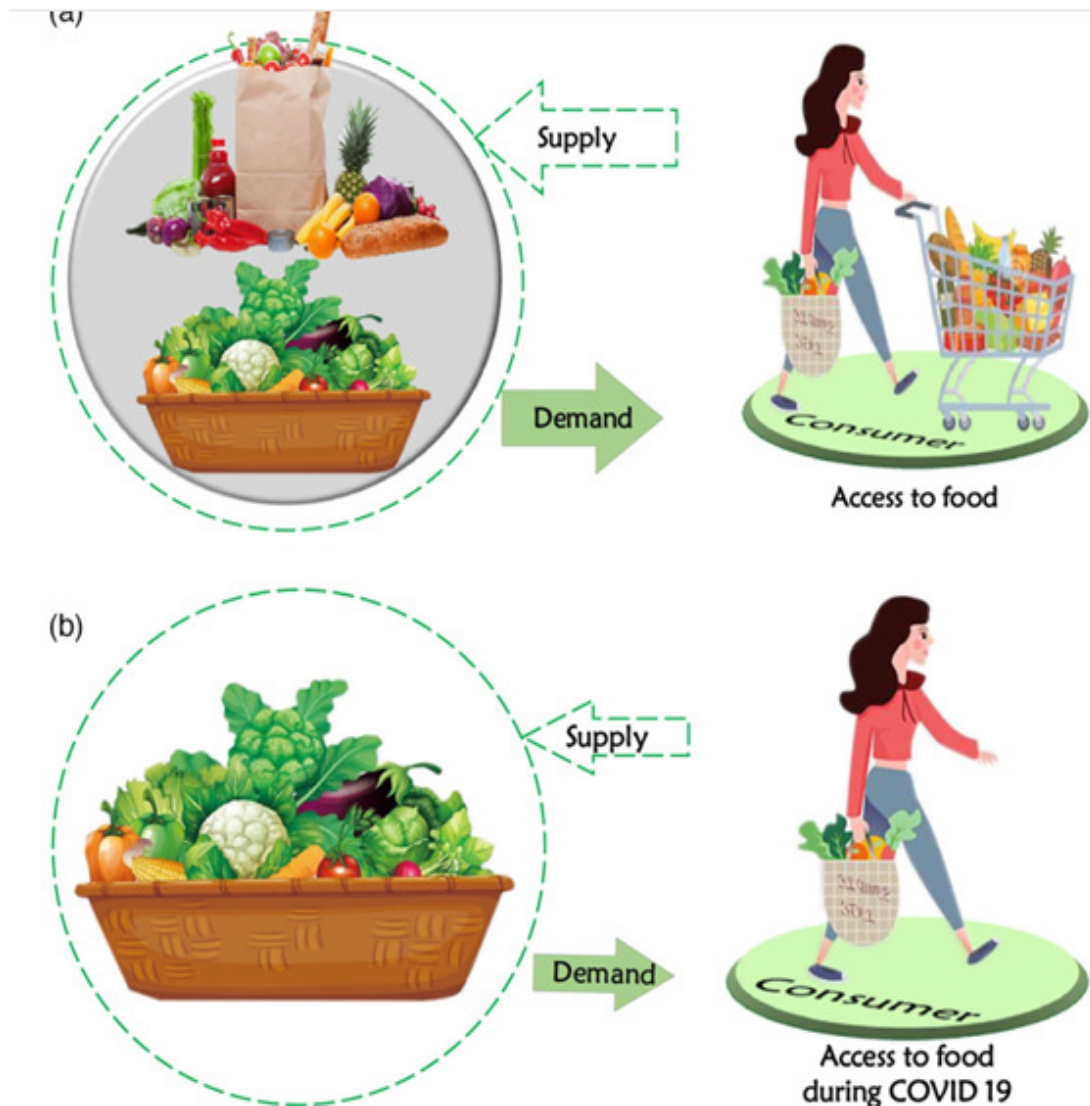


Plate1: Food structure before (a) and during (b) Covid-19 pandemic (Source: FAO, 2020).

sharing for Agricultural lending system (NIRSAL). The Nirsal micro-finance has the mandate for disbursement of loans to farmers at a single-digit interest rate. One of the conditions for accessing the AGSMEIS loan was the applicants (farmers) must undergo entrepreneurship training with the CBN-accredited Entrepreneurships Development Institute (EDI). Many farmers were unaware of the Federal Government's intervention programmes and as such had suffered set back in their agri-business as the results of Covid-19 pandemic and climate change. This research study evaluated the tenterhooks (impacts) of Covid-19 pandemic on agricultural food production system, economic status, food and nutrition security of agribusiness farmers in Oyo State, Nigeria as well as impact of AGSMEIS intervention support. The information provided herewith would serve as base-line survey to

successful adoption of future intervention support from government.

METHODOLOGY

In this research, structured questionnaires were administered to the farmers who were the agribusiness for small and medium entrepreneurship investment scheme (AGSMEIS) trainees from the thirty-three local government areas in Oyo State. Importantly, local interpretation of the contents of questionnaires was made to uneducated farmers by the Agricultural Extensionists. The content of the questionnaire and the responses of the respondents were pooled together and analyzed. Evaluation of the impacts of Covid-19 on the agribusiness

Table 1: Socio-demographic characteristics of the respondents.

Characteristics	Frequency	Percentage
Sex		
Male	57	80.3
Female	14	19.7
Total	71	100.0
Age		
10-20	0	0
21 -30	12	16.9
31-40	27	38.0
41-50	19	26.8
≥51	13	18.3
Total	71	100.0
Educational level		
Primary	2	2.8
Secondary	6	8.5
Tertiary	60	84.5
No response	3	4.2
Total	71	100.0
Number of years in business		
0 year(6-11months)	24	34.3
<1 year	3	2.9
1-10 years	36	51.4
>10 years	8	11.4
Total	71	100.0

for small and medium farmers in Oyo State was carried out.

Statistical analysis

Data obtained were subjected students'-Test using SPSS software

RESULTS AND DISCUSSION

Participants

The researchers made use of the agribusiness for small, and medium entrepreneurship investment scheme (AGSMEIS) training participants who came from the different local government areas of Oyo State. The results in (Table 1) showed the socio-demographic-profile of the farmers. The socio-demographic features were controlled by the following age, sex, educational status and number of years in agribusiness. Majority of the respondents were male farmers while about 19.7% were females. The highest age of agribusiness farmers lying between 31- 41 years representing both male and female's population. Most of the farmers had degree certificate from Tertiary Educational Institution compared with the few Secondary School certificate holders.

Agribusiness

Agribusiness is a combination of the word agriculture and

business. It is refers to commerce in farming and farming related activities. Agribusiness covers the production, processing and distribution of farm based-goods and services along the agricultural value –chain. The challenges of Agribusiness was been highlighted in (Table 2). Farmers observed that lack of fund was the major constraints facing Agribusiness. Farmers may lack inputs such as seeds, agro-chemicals, fertilizers, machineries, among others.

Food security

Food Security involves accessibility, affordability and utilization of nutritious foods at all time. Figure 1 showed farmers' access to nutritious meal per day. The daily earnings of some farmers was observed to be irregular and at a times less than one Dollar especially during planting season (i.e. raining season). Access to nutritious food is increasingly difficult for households who do not have regular source of income. The results of this study supported the published data by Ibukun and Adebayo (2021) which stated that 32% households were food secured during the post-planting season and has increased to 48% during the post-harvesting period, while 22% households were consistently food secured during both seasons, unlike the significant reduction in food security observed during the Covid-19 pandemic. Similarly, Ali and Shang (2021) reported that Covid-19 had significant effects on supply and household access to food, there reducing food consumption and leading to

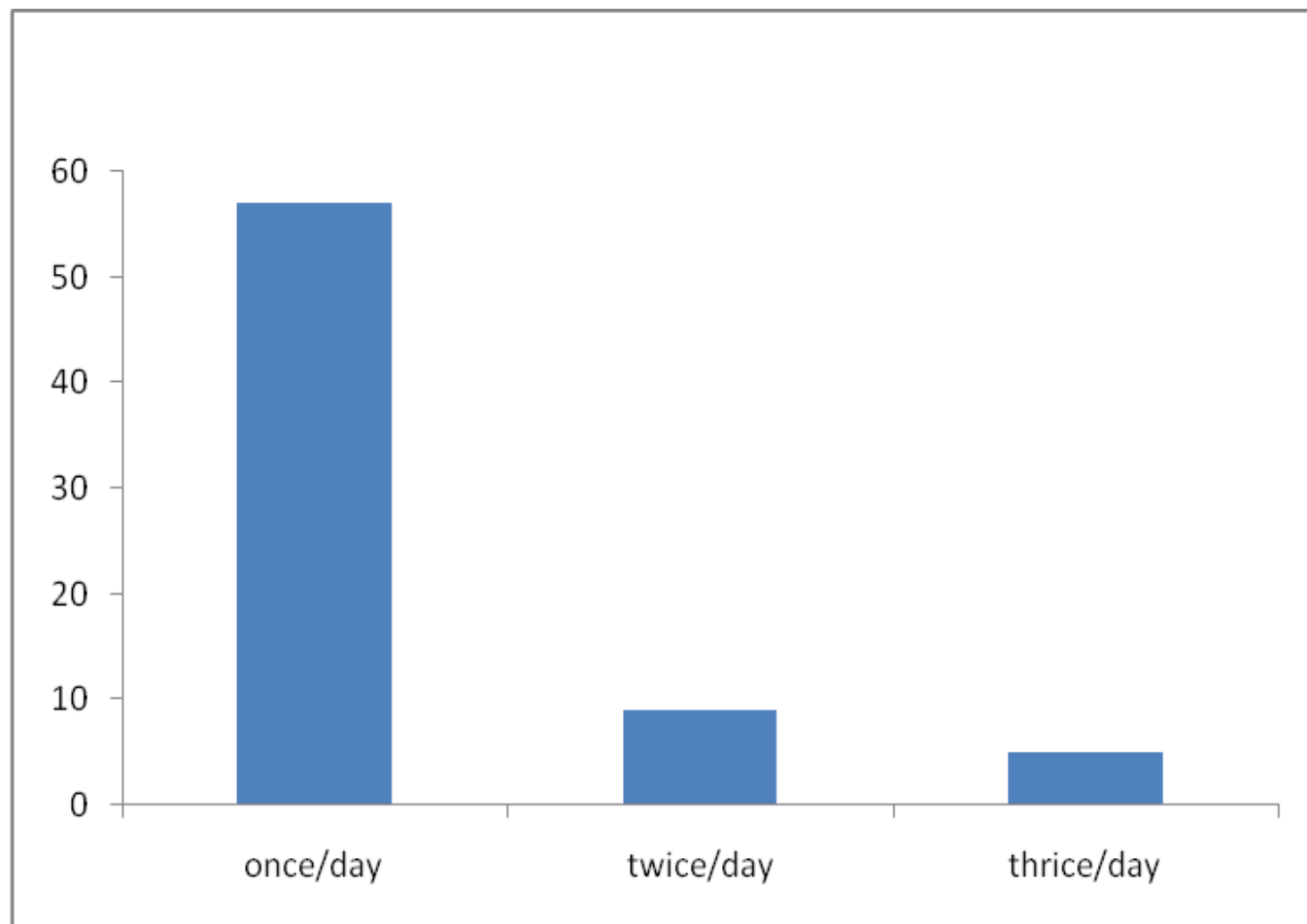


Figure 1: Percentage access to nutritious meal per day

Nutritional imbalances. The four pillars of food security were grossly compromised during Covid-19 pandemic. Furthermore, the results of this study vehemently supported the case in point described in Plate 1(b) by FAO (2020). Also, the observations of this study strongly supported FAO (2020), which stipulated that Covid-19 counter measures like lock-down in the country may hampered agricultural production in the country, resulting in economic decline and crisis (Bai, 2020). It is important to understand that certain precaution and control efforts compromise agricultural production (Singh *et al.*, 2021).

Challenges of agribusiness in time of Covid-19 pandemic

Farmers observed that lack of fund was the major constraints facing Agribusiness (Table 2). Farmers may lack inputs such as seeds, agro-chemicals, fertilizers, machineries, among others. The result of this study

supported the publication by Osabohien (2020) which examined and showed evident that farmers played significant role in accessing finance for the purchase of agricultural machinery and other farm implements to improve agricultural production. Also the study by Rahji and Fakayode (2009) stated that agriculture is a significant and positive predictor of economic growth of Nigeria; yet, its contribution is often limited by stringent credit conditions particularly for small-scale farmers which limit their access to credit. In another development, the study by Rahji and Fakayode (2009), agriculture is a significant and positive predictor of economic growth of Nigeria; yet, its contribution is often limited by stringent credit conditions particularly for small-scale farmers which limit their access to credit. Furthermore, Mallum (2016) noted that the role of credit in agricultural development is very paramount, and any shortcomings can affect a farmer's investment ability. Higher number of the respondents indicated that they need credit facilities in the form of loans. It is imperative for banks to waive off

Table 2: Constraints to agribusiness.

Questions	Frequency	Percentage
How did you hear about the training?		
Through friends or colleagues	43	60.6
Others	6	8.5
Online search	15	21.1
Relatives	5	7.0
Church/mosque	2	2.8
Total	71	100.0
What do you think is the major constraints to your agribusiness at this time?		
Herdsmen	3	4.2
Covid-19 Pandemic	5	7.0
Lack of fund	44	62.0
All of the above	17	23.9
No response	2	2.0
Total	71	100.0
To what extent has the constraints mentioned in (2) above affected your agribusiness?		
Slightly	3	4.2
Moderately	12	16.9
Greatly	51	71.8
Not at all	2	2.8
No response	3	4.2
Total	71	100.0
Why do you think that this training is useful for you?		
For knowledge/skills	15	21.1
For the loan	1	1.4
All of the above	54	76.1
No response	1	1.4
Total	71	100.0
At what capacity have you been producing?		
Micro/small scale	46	64.8
Medium scale	13	18.3
Large scale	4	5.6
No response	8	11.3
Total	71	100.0
Would your agricultural activities contribute to achieving food and nutrition security in Nigeria?		
Yes	70	98.6
No	1	1.4
Total	71	100.0
Does the Covid-19 Pandemic negatively affect your agribusiness?		
Yes	47	66.2
No	19	26.8
No response	5	7.0
Total	71	100.0
Lockdown and the ban on the inter-state travels have made agribusiness unsuccessful		
Yes	46	64.8
No	22	31.0
No response	3	4.2
Total	71	100.0
If there is an opportunity for post- training, would you like to attend		
Strongly like it	69	97.2
Strongly dislike it	1	1.4
Undecided	1	1.4
Total	71	100.0
Are you ready to scale up?		
Yes	68	95.8
No	0	0
No response	3	4.2
Total	71	100.0

conditions like provision of collateral before giving loans to agribusiness farmers. No doubt Covid-19 Pandemic has contributed significantly to the wide gap of food scarcity and insufficiency in Oyo State.

Conclusion

The tenterhooks of Covid-19 engender panic, agribusiness-crisis, food insecurity, and economic

downturn amongst farmers in Oyo state in particular, and Nigeria at large. Agribusiness-farmers affirmed that AGSMEIS' training was useful in promoting agribusiness activities. It follows that since the outbreak of Covid-19 pandemic until now agricultural production system and its business activities have been dwindling. Care must be taken to avoid measures that will not hinder agricultural production. Lockdown poses a great threat to the long – term food supply

Conflict of interest

The authors declared that there is no conflict

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