

COVID-19 SAFETY PRACTICES INFORMATION USE AMONG LEAFY VEGETABLE FARMERS IN EDO STATE, NIGERIA

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ABSTRACT

When there are disruptions in the social system generally, there is a potential disruption to the food system. Importantly, different food are likely to be affected differently. This study examined the COVID-19 safety practices information use among leafy vegetable farmers in Edo state, Nigeria. Data on respondents' socio-economic characteristics, awareness of Covid-19 safety practices, information sources available, accessible and preference, COVID-19 safety practices information use and challenges on COVID-19 safety practices information were collected from randomly selected 102 leafy vegetables farmers. Data were analyzed using frequency counts, percentage, mean and binary logistic regression model. Findings reveal that most of the farmers were above 50 years of age (56.3%), married (65.6%) and 44.8% had primary education. Farmers are awareness of safety practices like covering of the mouth when coughing and sneezing (Mean=3.38) and cleaning and disinfecting of environment (Mean=3.18). Family and Friends (95%) served as the major source of information for the farmers, while fear of getting vaccinated ($M=4.20$) and too many contradicting information on Covid-19 ($M=4.07$) were the major challenge faced by farmers. However, Household size ($r=2.12$, $p=0.05$) was significantly related to farmers' information use. In conclusion, Extension organisations as well as other media agencies that have responsibility for agricultural information dissemination should focus on these key areas to ensure the respondents stay healthy as the disease is deadly thus securing continuous leafy vegetables production and supply necessary for balanced food diet.

Keywords: Information use, Covid-19 safety practices, Leafy vegetable farmers

INTRODUCTION

At the beginning of 2020, 135 million people around the world were already facing extreme hunger. As of 1 March 2021, more than 114million cases were been confirmed, with more than 2.53 million deaths attributed to COVID-19. Meanwhile, 4,590 cases were been reported in Edo state, Nigeria, with 4,166 recovery cases and 177 death (NCDC), making it one of the deadliest pandemics in history. The COVID-19 pandemic, also known as the coronavirus pandemic, is an ongoing pandemic of coronavirus disease 2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus. It was first identified in December

2019 in Wuhan, China. The virus spreads mainly when an infected person is in close contact with another person. Small droplets and aerosols containing the virus can spread from an infected person's nose and mouth as they breathe, cough, sneeze, sing, or speak (WHO 2020).

Four months into the COVID-19 pandemic, the UN Food and Agriculture organization (FAO 2020) stresses that perishable foods such as dairy, meat, fruits and vegetable cannot be easily transported and stored, hence are more vulnerable to food system disruption. The produce of leafy vegetable farmers in particular

is likely to be among the most disrupted due to the fall in sales for these farmer causing a big threat to food security. According to USDA-ERS [2020](#), vegetable farming is one of the sectors with the most at stake in light of COVID-19's threats to the farmer due to it labour intensive nature with the crowded conditions in the market and exposure of leafy vegetable under which buyers and sellers operate, exacerbating the virus's rapid spread. Such conditions have led to significant and ongoing outbreaks in some of the country's largest fruit- and vegetable-producing regions.

However, several studies on Covid-19 have been carried out, Henry R. 2020 worked on innovations in agricultural and food supply in response to the COVID-19 pandemic, Ali, I. Alharbi 2020, worked on Disease management treatment and social impact while Morton J. 2020 conducted a study on the susceptibility and vulnerability of agricultural value chains to COVID-19. Only few studies have provide a comprehensive review and analysis on the COVID-19 information use and safety practices by leafy vegetable farmers and none has a focus in Egor Local Government Areas of Edo State, Nigeria. In view of this problems this study was conducted to determine COVID-19 safety practices information use among leafy vegetable farmers in Egor Local Government Area of Edo state, Nigeria by addressing the following research objectives;

- I. described the socio-economic characteristics of vegetable farmers in the study area
- ii. ascertained respondents' awareness of COVID-19 safety information
- iii. examined COVID-19 safety practices information use the study area.
- iv. determine the challenges that militate against the use of COVID-19 safety information among respondents

Hypothesis of the study are as follows;

1. There is no significant relationship between

the socio-economic characteristics of vegetable farmers and their information use.

METHODOLOGY

This study was carried out in Edo State which is an agricultural state with a total land area of 17,802km² and an estimated population of over three million people. It is bound in the North by Kogi State, in the south by Delta State, in the West by Ondo State, and in the East by Kogi and Anambra States. The economy of Edo State revolves around agriculture. The major cash crops produced are rubber, cocoa and palm produce. In addition, the State produces such crops as yams, cassava, maize, rice, plantains, guinea-corn, and assorted types of fruits and vegetable which include *Amaranthus hybridus* (spinach), *Vernonia amygdalina* (bitter leaves), *Celosia argentea* (shoko), *Talinum Triangulare* (water leaves), pumpkin (ugwu) among others.

The state has eighteen (18) local government areas and Egor is a [Local Government Area](#) in Edo State. Its headquarter is in the town of Uselu, Egor is one of the LGAs that are part of the larger metropolitan area of Benin City. It has an area of 93 km² and a population of 339,899 at the 2006 census (NPC, 2006). The population for the study comprised leafy vegetable farmers in Egor Local Government Areas of Edo State, Nigeria. The respondents were selected from the population using multi-stage sampling procedure. The first stage involved the purposive selection of all the communities in Egor Local Government because of their intense leafy vegetable farming. In the second stage, a list of 202 farmers were generated from all the communities in the LGA. Finally, a proportionate simple random sampling was used to select 60% of the farmers to give a total of 102 respondents for the study. The list of community selected, population and 60% were tabulated in Table 1. However only 96 were found useful. Data were analyzed using simple frequency counts, percentages, mean and binary logistic regression.

Table 1: Community, population and sample size

Community	Population	60% of the population (Sample size)
Oghokhugbo	17	10
Iguikpe	16	10
Evwotubu	15	9
Urelu	34	20
Egor	22	13
Uwelu	15	9
Olomuza	9	5
Ovaisuyi	14	8
Okhoro	20	12
Urunmwon	10	6
Total	182	102

Source: Field survey; 2021

RESULTS AND DISCUSSION

Socio economic characteristics

Table 2 shows that 40% of the respondents were 50 years of age and above. This implies that the respondents are middle aged and can adopt the covid-19 safety practices information. This study confirms Emokaro and Enokeran, (2015) findings that the age range of Leafy vegetable farmers are between 41-50. Majority (65.6%) of

the respondents were married and had household size of between 6 to 10 persons. Also, higher proportion of the farmers (44.8%) had primary education while 39.6% had secondary education and 15.6 had tertiary education. This shows that leafy vegetable farmers in the study area had at least basic education to understand the usefulness of COVID-19 safety practices information. This therefore, contradicts Omotayo (2005) who posited that farmers are illiterate.

Table 2: Distribution of respondents based on their socioeconomic characteristics

	Freq., n = 96	%	Mean
Age (in years)			
<= 30	5	5.2	50.9
31 – 40	14	14.6	
41 – 50	23	24	
51 and above	54	56.3	
Marital Status			
Single	19	19.8	
Married	63	65.6	
Widowed	3	3.1	
Divorce	7	7.3	
Separated	4	4.2	

Household size			
<= 5	36	37.5	6.5
6 – 10	52	54.2	
11 and above	8	8.3	
Education			
Primary education	43	44.8	15.1
Secondary education	38	39.6	
Tertiary education	15	15.6	
Years of farming experience			
<= 10	47	49.0	15.1
11 – 20	29	30.2	
21 and above	20	20.8	

Source: Field survey; 2021

Awareness of Covid-19 safety practices information by respondents

Table 3 shows that of all the COVID-19 safety practices listed, respondents are awareness of safety practices like covering of the mouth when coughing and sneezing (Mean=3.38), cleaning and disinfecting of environment (Mean=3.18) and avoiding poorly ventilated places

(Mean=3.06). However results from the finding also shows that respondents are not aware of practices like staying 6 feet away from others (Mean=2.34) and monitoring of daily health (Mean=2.21). This implies that leafy vegetable farmers in the study area needs more sensitization on the information of all the COVID-19 safety practices.

Table 3: Distribution of respondents ' awareness of Covid 19 safety practices

Practices	Awareness		Practiced		Extent	
	Freq.	%	Freq.	%	Mean	Std. Dev
Proper wearing of face mask	94	97.9	83	86.5	3.07*	1.20
Stay 6feet away from others(social distancing)	90	93.8	72	75	2.34	1.16
Avoid crowd	95	99	72	75	2.59	1.15
Avoid poorly ventilated place	91	94.8	90	93.8	3.06*	0.93
Wash your hands often with soap and water	96	100	84	87.5	2.83	1.12

Wash your hands often with soap and water	96	100	84	87.5	2.83	1.12
Use a hand sanitizer with at least 60% alcohol	95	99	79	82.3	2.61	1.13
Covering coughs and sneezes	94	97.9	84	87.5	3.38*	1.01
Cleaning up and disinfecting environment	93	96.9	94	97.9	3.18*	0.95
Monitor your daily health	88	91.7	82	85.4	2.21	1.06
Keep track of your symptoms	92	95.8	88	91.7	2.78	1.01
Isolate yourself in suspected case of COVID-19	91	94.8	86	89.6	2.80	1.03

Source: Field Survey, 2021.

*Mean > 3.0 = High extent

Information sources available, accessible and preferred by respondents

Information in Table 4 shows that information were available from friends and family (99%), farmers association (95.8%), radio(93.7%), television (81.3%), extension agents (76%), news papers (65.6%) and state ministry of agriculture (56.3%). Although farmers had available and accessible information from

multiple sources but their most preferred source was from friends and family (Mean=3.98). This results confirms the findings of Banmeke and Olowu (2005) that the rise in farmers preferring fellow farmers as a first hand source of information may be due to the apparent ineffectiveness in public extension service in developing countries and that fellow farmers have better practice and experience.

Table 4: Distribution of respondents' information sources, availability, accessibility and preference

	Available		Accessible		Preference	
	Freq.	%	Mean	Std. Dev	Mean	Std. Dev
Extension agents	73	76	3.05	1.09	2.93	1.17
Broadcast from Radio	89	92.7	3.18	0.98	3.40	0.97
Broadcast from television	78	81.3	3.00	1.07	3.22	1.05
News papers	63	65.6	2.38	1.19	2.48	1.20
Friends and Family	92	95.8	4.05	0.67	3.98	0.92
State Min. of Agric.	54	56.3	2.52	1.26	2.32	1.14
Internet	49	51	2.13	1.14	2.15	1.24
Farmers association	95	99	3.76	0.71	3.77	0.69
Journal	42	43.8	1.94	1.05	1.99	1.12
Healthcare provider	70	72.9	2.58	1.02	2.65	1.11
Herb hawkers	65	67.7	2.88	1.14	2.74	1.14
Pharmacist/chemist	64	66.7	2.59	1.09	2.41	1.05
Town criers	24	25	1.96	1.10	1.87	0.96
Government Accredited Health Agency (NCDC)	70	72.9	2.38	1.08	2.47	1.13
Non-Organizational Organization	59	61.5	2.36	1.07	2.45	1.15
Academic Researchers	80	83.3	2.53	0.98	2.53	1.00

Source: Field Survey, 2021.

*Mean > 2.0 = High access and preference

Leafy vegetable farmers use of COVID-19 Safety information

Information in Table 5 shows that Covid-19 information was mostly used by respondents to educate family members/friends about current news on COVID-19 (Mean=3.37) and educate family members and friends to keep safe distance from

persons showing symptoms (Mean=3.22), to abide by government policies on covid-19 (Mean=3.11) and to stop the spread of Covid-19 by observing the precautionary measure (Mean=3.01). This therefore shows that leafy vegetable farmers are making effort to stop the spread of the covid-19 virus.

Table 5: Distribution of COVID-19 Information use of leafy vegetable farmers in Egor LGA, Edo state, Nigeria

COVID-19 Information use	Mean	Std. Dev
To take quality health decision	2.91	0.88
To stop the spread of Covid-19 by observing the precautionary measure	3.01	0.89
To educate family members/friends about current news on COVID-19	3.37	0.98
To keep a safe distance from persons that show symptoms of COVID-19	3.22	0.80
To abide by government policies on COVID-19	3.11	0.92
To know the progress of the COVID-19 vaccines experimentation	2.92	0.91
To understand how to seek medical help in the pandemic era	2.98	0.91
To educate my kinsmen on preventive measurement from covid-19	2.72	1.09
To help call lines to report suspected cases of covid-19	2.57	1.05
To know the statistics on active cases, discharge ones as well as fatalities brought about by covid-19	2.48	1.07

Source: Field Survey, 2021.

*Mean > 3.0 = High use

COVID-19 Constraints faced by leafy vegetable farmers

The result in Table 6 shows that leafy vegetable farmers faces challenges in almost all the areas listed except in areas like too many fake news about Covid-19 (Mean=2.99), high cost of data subscription (Mean=2.92) and government policies on Covid-19 are not publicized (Mean=2.83). Meanwhile, major challenge respondents' encounter on COVID-19 includes information accessibility (Mean=4.07), Too

many contradicting information on COVID-19 (Mean=4.07), insufficient power supply to charge phones and watch television (Mean=4.00), communications /language barrier (Mean=3.24), Non available information material on COVID-19 (Mean=3.24). This therefore implies that all information on Covid-19 should be made available and accessible to respondents through the necessary channel in a language they will understand.

Table 6: Distribution of COVID-19 Constraints Faced By Leafy Vegetable Farmers

Constraints	Mean	Std. Dev
Fear of getting vaccinated	4.20	0.92
Too many fake news about COVID-19	2.99	0.98
Non available information material on COVID-19	3.24	0.82
Too many contradicting information on COVID-19	4.07	0.78
Communication/language barrier	3.24	1.03
Insufficient power supply to charge phones and watch television	4.00	0.75
High level of illiteracy	3.10	1.15
High cost of Data subscription	2.92	1.21
Information overloads on COVID-19 pandemic	3.15	0.97
Government policies on COVID-19 are not publicized	2.83	1.11
Information on COVID-19 are very cumbersome	3.43	0.88
Keeping abreast with statistics of COVID-19 since it changes everyday	3.03	1.02

Source: Field Survey, 2021.

*Mean > 3.0 = Serious

Relationship between the socio-economic characteristics of farmers and information use.

The result in Table 7 using multiple regression model shows that among the socio economic characteristics of farmers, household size ($t = -2.12$) was significant at $p(0.05)$. This therefore

implies that as household size increases, leafy vegetable farmers information use also increases. This could be attributed to the fact that as the family increases in number of persons, the need for ensuring healthy living among family is paramount hence more use of the COVID-19 safety information practices.

Table 6: Multiple regression results for relationship between the socio-economic characteristics of leafy vegetable farmers and their information use

	B	Std. Error	Beta	t	Sig
(Constant)	26.68	3.34		7.99**	0.00
Age	0.13	0.08	0.28	1.76	0.08
Household size	-0.51	0.24	-0.29	-2.12*	0.04
Years of farming	-0.05	0.09	-0.08	-0.56	0.58
Farm size	0.50	0.46	0.14	1.11	0.27
Income (Monthly ₦)	1.52	1.43	-0.08	-0.69	0.50

Source: Field Survey, 2021.

$R = 0.298$; $R\text{-squared} = 0.089$

*Significance at 0.05 level

**significance at 0.01 level

CONCLUSIONS AND RECOMMENDATION

This study concludes that informal source (friends) serves as the main source of information to leafy vegetable farmers. Among other constraints poor infrastructure, electricity, too many Covid-19 contradicting information,

high level of illiteracy and high cost of data subscriptions) was seen as a constraint encountered by respondents. It is therefore recommended that deliberate attempts should be made by extension organisations and other media outlet to serve the information sources to vegetable farmers in the study area.



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