Proceedings of the Annual Conference of the Agricultural Extension Society of Nigeria
Number: Twenty-Sixth Annual Conference
Theme: Redefining Agricultural Extension Practice to Cope with Emergencies
Date: 26-29, April 2021
Venue: Federal University of Agriculture, Abeokuta, Nigeria
ISSN: 1595 – 1421.http://aesonnigeria.org/ConfProc . **Email**: editorinchief@aesonnigeria.org

Enterprise Training Needs of Poultry Farmers During Covid-19 Pandemic in Enugu State, Nigeria

https://dx.doi.org/10.4314/jae.v26i1.16S

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Abstract

The study investigated the enterprise training needs of poultry farmers during COVID-19 Pandemic in Enugu State, Nigeria. Multistage sampling procedure was used to select one hundred and eight (108) respondents from the six agricultural zones in the State. Data were collected using semi-structured interview schedule and analyzed using Percentages and mean score. Findings indicated that (100.0%) of the respondents produced live chicken alone, 88% indicated that they never had any visits from extension agents before and during COVID_19 Pandemic. Also, results revealed that the cost of feeds increased by 88% during the Pandemic. In addition, the major constraints faced by the respondents during pandemic were; scarcity of trained labour ($\bar{x}$=3.76), theft ($\bar{x}$=3.63), rotting of eggs ($\bar{x}$=3.55) and shortage of feeds ($\bar{x}$=3.52). The study revealed that farmers needed trainings in the areas of flow of funds (98.1%) and feed formulations (73.1%) during COVID-19 Pandemic. Extension should therefore provide training for farmers on how to access fund during emergencies. Also, farmers should be trained on feed formulation so that they can be able to produce the feed they need during emergencies like COVID-19 Pandemic. Government should make available agricultural grants to farmers which will enable them bounce back especially during emergencies.

Keywords: COVID-19 Pandemic, emergencies, training needs, poultry production.

Introduction

Agriculture continues to be a major part of Nigeria's economy, contributing 22.35% to nominal (Food and Agricultural Organisation, (FAO), 2021). The livestock sub-sector accounted for 7.48% of the sector's total contribution in the same year (National Bureau of Statistics, 2018). Despite the size differential between livestock contribution to the economy, poultry was recognized as one of the most common agribusinesses in Nigeria, with the segment noted for its relatively high levels of commercialization (USDA 2014). Poultry production amounts up to 3, 000000 million tonnes of meat which, according to the Nigerian Investment Promotion Commision, (2019), is the second largest in chicken production after South Africa and the largest egg production in Africa amounting 650,000 million tonnes of eggs per year, with a standing population of 180 million birds. About 80 million chickens are raised in an extensive system, 60 million in a semi-intensive system and the remaining 40 million in an intensive system in Nigeria (African Sustainable Livestock, (ASL), 2018). But

the outbreak of COVID-19 pandemic affected the entire food system and exerted a symmetric but asynchronous shock on the global food system. It affected all elements of the food system, from primary supply, to processing, to trade as well as national and international logistics systems, to intermediate and final demand (FAO, 2020). Transportation costs of agricultural products to East Africa increased by a factor of three and shipping delayed due to fewer flights to the region. This hampered the ability to contain the disease outbreak which heightened the threat to food security (Schmidhuber, Pound and Qiao, 2020). It is also necessary to understand that agricultural production depends not only on intermediate inputs, but also on fixed capital such as "structures" and machinery **(**Sheng, Ding, and Huang (2019) and a disruption in the supply chain may not only affect the availability of intermediate inputs, but also disrupt access to fixed factors of production, such as spare parts for machines or replacements needed to maintain structures such as barns, stables or storage facilities. Hence, the need to examine various enterprise training needs of poultry farmers and challenges faced during the period of the COVID 19 pandemic.

Purpose of the study

The overall purpose of the study was to ascertain the enterprise training needs of poultry farmers during the COVID 19 pandemic in Enugu State, Nigeria. Specifically, the study seeks to:

1. describe the challenges farmers faced during the period of COVID 19,
2. ascertain enterprise training needs of poultry farmers' during COVID 19; and
3. compare challenges faced by these famers before and during COVID 19 pandemic;

Methodology

The study was carried out in Enugu State, Nigeria. Multistage sampling procedure was used in selecting respondents for the study. At the first stage, all the six agricultural zones in the State were selected. At the second stage, three blocks were selected, using simple random technique, six (6) zones giving a total of eighteen (18) blocks. The selected blocks were Agwu, Aninri and Orji river in Agwu zone, Enugu south, Nkanu west and Nkanu east in Agbani zone, Enugu north, Enugu east and Isi uzor in Enugu zone, Nsukka, Igbo etiti and Uzouwani in Nsukka zone, Igbo- Eze North, Igbo eze south and Udenu in Enugu-Ezike Zone and Ezeagu and Udi in Udi zone. At the third stage, two cells were also selected from each block using a simple random sampling technique to give a total of 34 cells. At the fourth stage three poultry farmers were selected from a list of farmers in each cell using a simple random sampling technique making it to be six (6) farmers in a particular cell. Thus, the total sample size for the study was one hundred and eight (108) respondents.

The socio-economic characteristics of the respondents were gathered which includes type of poultry production (egg, meat, live chicken, manure and others),

annual income (in naira) and extension contact. In order to obtain information on the challenges farmers faced during the period of COVID 19. Respondents were asked to indicate the challenges they encountered during the period of COVID 19 pandemic (objective 1). Respondents were asked to rate the challenges they faced during the period on a four-point Likert-type scale of "Great extent" (4), "Some extent" (3), "Little extent" (2) and "No extent" (1). The values attached to these were 4,3,2 and 1 respectively. The values were added to obtain 10 which were divided by 4 to obtain 2.5. Therefore, variables with mean score of 2.5 and above were regarded as challenges poultry farmers faced during COVID-19. The enterprise training needs of respondents during COVID 19 (objective 2) were achieved by listing possible training needs of poultry farmers and asking them to tick either Yes or No to indicate their training needs on poultry enterprise during COVID 19 such as feed formulation, flow of funds/grant, linkages with other poultry actors amongst others. One sample t-test was used to compare the cost of feed before and during COVID 19 Pandemic which is one of the challenges faced by farmers during COVI 19 Pandemic (objective 3).

Results and Discussion

Socio-economic characteristics

All (100%) respondents produced live chicken and manure and had farming as primary occupation. According to Poultry Association of Nigeria, (2019), demand for locally produced chicken has increased over the years and has in turn encouraged the revival of farms which have restocked and continued to raise their capacity.
Majority (88%) of the respondents had no visits from an extension agent before COVID19 and an increased proportion (98.1%) of the respondents were not visited by an extension agent during COVID 19 pandemic. According to Nwobodo, Agbo, Ohagwu and Igbokwe, (2019),72.7% of farmers in Enugu State never had any extension contact, which means that agricultural extension service providers are not living up to expectation in the area, and as a result, farmers had to find an alternative means of adjusting to the insufficient and inadequate extension visit.

Table 1: Socio-economic characteristics of poultry farmers

Socio-economic characteristics	Freq.	%
Poultry production		
Egg production	17	15.7
Meat	5	4.6
Live chicken	108	100.0
Manure	108	100.0
Total		
Extension agent visitation		
Yes	13	12.0
No of times extension agents visited		
None	95	88.0
1-5	10	9.3
6-10	2	1.8

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11-15	1	0.9
Number of extension agents visitation during COVID 19		
Yes	106	98.1

Challenges of Poultry Production During COVID 19

Table 2 shows that scarcity of trained labour (x̄=3.76), Theft (x̄ = 3.63), shortage of water (x̄ = 3.56), rotting of eggs at storage (x̄ = 3.55), Shortage of feed (x̄ = 3.52), . non-availability of veterinary services (x̄ = 3.49), lack of quality feeds (x̄ = 3.42), High cost of veterinary supervision (x̄ = 3.38), Inadequate access to inputs (x̄ = 3.35) amongst others were the challenges faced by respondents during COVID 19 pandemic. During the period of lockdown, the government permitted the continuance of farming activities, but hatchery operation and other activities associated with the supply and market value chains in poultry had the problem of inadequate labour due to the non-accessibility of adequate public transport and general fear of COVID-19 infection among the daily-wage labourers. According to the Food and Agriculture Organization (FAO) (2020), delivery failure of animals and animal products caused the overstocking or wasting of poultry products which was as a result of insufficient storage facilities, as in case of eggs, in large layer farms, and also cold-chain facilities led to forced disposal of the produce at a through-away price. Approximately 70% of the farmers interviewed expressed dissatisfaction with the price of feed, when questioned about the quality of feed, they were, however, satisfied though it was unclear to a majority of the farmers what “good quality” meant for them. Hence, the type of feed purchased is directly linked to the type of farmers desires and needs and most small- and medium-scale farmers prefer buying complete feed from distributors licensed to sell branded products that also do mixing for the clients, as well as from the Millers. Large-scale farmers on the other hand prefer buying concentrate and mixing the feed themselves. These challenges were ultimately expected to reduce the quality of feed, thus, reducing the productivity and profitability of poultry producers throughout the period, which in turn increased the prices of poultry products. According to Tsado, Ibrahim, Ajayi, Fatoki, and Momo, (2015), which stated that a successive increase in the cost of medication/vaccine and capital items leads to a successive increase in the value of poultry production. Showing that poultry farmers were faced with enormous challenges during COVID 19 pandemic which influenced their productivity and, consequentially, their income.

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Table 2: Challenges of poultry production during COVID 19

Challenges of poultry production during COVID 19	($\bar{x}$)	SD
Scarcity of trained labour	3.76	0.722
Theft	3.63	0.849
Shortage of water	3.56	0.835
Rotting of eggs at storage	3.55	0.954
Shortage of feed	3.52	0.962
Non-availability of veterinary services	3.49	0.837
Lack of quality feeds	3.42	0.929
Feed scarcity	3.41	0.948
High cost of veterinary supervisions	3.38	0.974
Inadequate access to inputs	3.35	1.008
Increase in processing fees of poultry products	3.25	1.145
Unavailability of transport services	3.25	1.095
Accumulation of poultry droppings	3.23	0.963
Failed vaccine accruing from fake drugs	3.21	1.136
Death of birds	3.05	1.088
Inadequate information about the virus	2.74	1.045
Continuous outages of electricity	2.13	0.996
Poor-patronization	1.99	0.767
Low extension contacts	1.55	1.131
Reduced income	1.50	0.891
High cost of transportation	1.36	0.779
Price fluctuation	1.28	0.695
High cost of medication	1.19	0.587
High cost of feed	1.09	0.444

nterprise Training Needs of Poultry Ffarmers

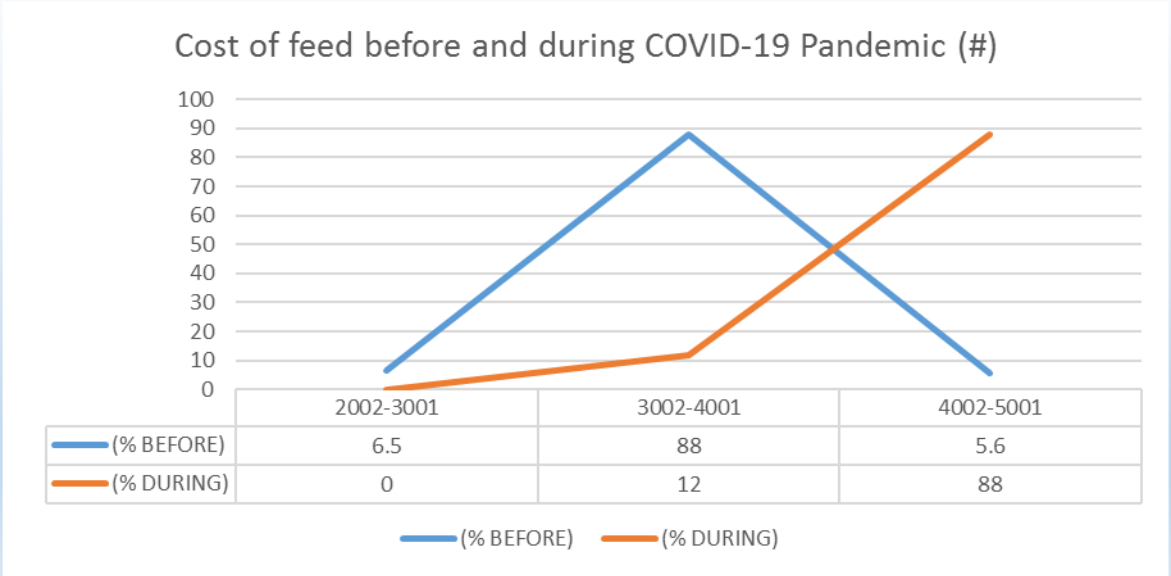
Table 3 shows that Flow of funds ($\bar{x}$=0.98), Feed formulation ($\bar{x}$ = 0.73) , Marketing ($\bar{x}$=0.70), Online sourcing of feed ($\bar{x}$=0.66), Enterprise diversification ($\bar{x}$=0.62), Linkages with other poultry actors ($\bar{x}$=0.58), Training on the use of ICT ($\bar{x}$=0.53), Online marketing ($\bar{x}$=0.46), the use of automatic egg collector ($\bar{x}$=0.43) were amongst the training needs of poultry farmers. Francois (2020) quoted Christophe Engel as saying "short and accurate monitoring of cash planning is essential in every business because when the market is difficult and changing, there is need to reinforce and respond quickly to the situation (Alawode, 2020). Nigeria as a country is import-dependent in the supply of feed ingredients and breeding materials, including parent stock and grand-parent stock. Hence, supply disruption significantly diminishes the steady production and important requirements for poultry enterprises. Schmidhuber, (2020), encouraged enterprise diversification which will add resilience to the agricultural trading system. Alawode, (2020), the implementation of social distancing made people limit activities outside their home, consequently, sales turnover decreased and consequently, small and medium business enterprises needed to change the mindset in running business by utilizing technology transformation. In fact, during the covid-19 condition, online business resulted in sustainability of business that can take place now and also in the future. According to Ezeibe, Okorji, Chah and Abude, (2014) in Kshash and Oda, (2019), training significantly improves poultry production practices through better adaptation of new techniques.

Table 3: Enterprise training needs of poultry farmers

Enterprise training needs of poultry farmers	(%)	($\bar{x}$)
Flow of funds	98.1	0.98
Feed formulation	73.1	0.73
Marketing	70.4	0.70
Online sourcing of feed	65.7	0.66
Enterprise diversification	62.0	0.62
Linkages with other poultry actors	58.3	0.58
Training on the use of ICT	52.8	0.53
Online marketing	45.8	0.46
The use of automatic egg collector	42.6	0.43
Training on brooding	38.9	0.39
The use of manure drying system	30.6	0.31
Sourcing of buyers online	28.7	0.29
Advertising	26.9	0.27
Online advertisements	26.9	0.27
The use of incubator	25.9	0.26
Sourcing of marketers online	25.8	0.26
Storage	21.3	0.21
Sourcing of extension officers online	17.6	0.18

Threshing of feather	13.0	0.13

Figure 1 shows that the average cost of feed before COVID 19 was #3700 and was #4500 during COVID 19 pandemic. The implication of drastic increments of price of the feed during Covid 19 shows the rates at which there will be an increase in the prices of poultry products like live chicken, egg and poultry droppings. According to Aladejebi, Fakayode, Oronti and Sani, (2019), the price of feed price was discovered to be the factor which has the highest negative impact on the profitability of poultry farming. Feed price has a great impact on profitability because feed price varies according to the brand, purchased amount, the distance between the farm and the market and the dealer. According to Adeoye, (2017), due to the economic recession in Nigeria, the following problems were discovered to have arisen for poultry egg farmers, Poultry farmers grappled with skyrocketing cost of inputs, adulteration of raw materials and high cost of feed. Therefore, effects of the situation were closure of farms, downsizing of production, high cost of products like maize and soybeans, hike in prices and scarcity of raw materials, especially maize, and the situation translated into increasing abysmal returns for poultry farmers.



Conclusion and recommendation

Farmers during the pandemic faced a lot of challenges which led to loss in enterprise capital. Farmers also acknowledge the need to have training on enterprise

diversification, feed formulation, online sourcing of buyers and feed to help increase their efficiencies, especially during emergencies. The study recommends that extension agents should train farmers on feed formulation so that they can be able to produce the feed they need during emergencies like COVID 19. The federal and state government should employ more extension workers to educate more farmers about the need to have agricultural insurance to safeguard their investments since agriculture is a risky business. The Government should make available agricultural grants to farmers which will enable them to bounce back, especially during emergencies.

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