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Prospects and Challenges of Small Scale Animal Feed Production: A Case Study of Gwagwalada and Kuje Area Councils, Abuja, Nigeria

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Abstract

The livestock sub-sector plays significant roles in human and economic development of Nigeria through animal protein, employment generation, rural livelihood sustenance and overall economic growth. Feed remained a key factor in animal production as it constitutes over 60% of production cost in monogastric animal production, hence the need for the present study. An inventory survey of small scale animal feed production was carried out in Gwagwalada and Kuje area councils of the Federal Capital Territory, Abuja, Nigeria. Structured questionnaires were distributed to animal feed producers to collect relevant data on animal feed production. Twenty five out of the forty questionnaires were returned. The study specifically investigated the socio-economic characteristic of the feed producers, feed ingredients utilized, processing activities carried out and problems militating against feed production in the study areas among others. Data collected were subjected to descriptive analysis. The study revealed that 80% of the feed producers were males. The age of the respondents was within the age bracket of 31-40 years, about 48% received tertiary education and as regard production capacity, 28% claimed they produce over 500kg of feed per day. The results also revealed that majority (80%) of the respondents owned the enterprise while 20% claimed to be managers of the enterprise. Problems faced by feed producers in the study areas include lack of capital, irregular supply of electricity and unavailability of feed ingredients. The study recommended that the government should find solution to the constraints facing animal feed producers towards securing loans especially problem associated with collateral and interest rate, feed producers should establish cooperative groups from which members could acquire loans at very low interest rates, government through the agricultural development program should monitor feed processing activities in the study areas to prevent wrong formulation of feeds and to avoid risk posed to livestock, government should provide new roads and repair existing ones, existing agricultural development and financing institutions like the Bank of Agriculture (BOA) formally Nigeria Agricultural Cooperative and Rural Development Bank (NACRBD), Bank of Industry, Small and Medium Enterprise Development Agency of Nigeria (SMEDAN) as well as commercial and microfinance banks should be encourage and monitored with a view to make full implementation of government policies regarding agricultural development.



1. Introduction

The role of livestock in human development is enormous; protein from livestock is needed for physical and intellectual development as well as for developing immunity against disease [1]. Livestock production is also an instrument to socio-economic change to improve income and quality of life. In Nigeria livestock provide about 36.5% of total protein intake [2], [3] recommended that an individual takes 35grams per caput of animal protein per day for sustainable growth and development.

Nigeria is still below the recommended requirement by the world health organization (W.H.O) [4]. However the animal consumption in Nigeria is less than 8g per person per day, which is far lower than the FAO minimum recommendation [5]. The level of domestic livestock production still fall short of demand for example in 1997 demand for beef was 554,000 tonnes while it was 627,000 tonnes in 1998 but the domestic supply were 376,000 and 391,000 tonnes in 1997 and 1998 respectively [6].

Livestock play a vital role in economic development particularly as societies evolve from subsistence agriculture into cash based economy. Globally, animal product such as meat, milk, egg and fibre constitute about 40 percent of the total volume of agricultural output [7]. The contribution of livestock to the world's food supply, family nutrition, incomes, employment, soil fertility, livelihoods, transport and sustainable agricultural production continues to be a subject of significant review and debate [8], [9]; [10], [11], [12], [13], [14] and [15]. Furthermore, estimates show that globally, livestock provide animal traction to almost a quarter of the total area under crop production [16]. Livestock also provide a safety net in times of need in the form of liquid assets and a strategy of diversification for food production [17].

An adequate supply of livestock feed is very crucial to the livelihood of millions of people across the developing worlds and not just for small holders, but also for pastoralists and the large number of landless communities who depend mainly on common land grazing [18]. In Africa and other developing countries feed and feeding comprises 70-75% of total production cost [19]. With the present trend of rising feedstuff prices and global inflation, livestock production is increasingly constrained by feed scarcity and high cost of feeds [20] Shortage of feed and forage are especially acute during dry season. Much attention has been devoted to feed problems and solutions and optimal feeding practice [21]. According to the author there has been relatively little systematic consideration of the constraints small scale enterprise face, the feeding strategies coping mechanism they use and the way scientific knowledge and indigenous technical knowledge can be combined to help the farmers improve livestock productivity and livelihood.

Livestock is one of the fastest-growing sectors in agriculture, presenting potential opportunities for economic growth and poverty reduction in rural areas. Current estimates [22] are that 766 million poor people (< US\$ 2per day) keep livestock. Livestock sector growth could directly benefit these, and others who are less immediately linked to the livestock sector [23]. It is a core animal production component. Any animal business is dependable on availability of adequate feed at reasonable and affordable price. Animal feed production enterprise is indispensable in both intensive and extensive animal production. This enterprise is one of the most overlooked and yet one of the most required aspect of animal production enterprise. It is sad to find out that Nigerians who have gone into animal farming are now importing animals and their by-products into Nigeria. Given the right atmosphere and encouragement it is our opinion that animal feed production will boost animal farming at intensive and extensive levels.

Small and medium enterprise (SME's) make significant contribution globally, SMEs are increasingly recognized as the principal catalysts for achieving equitable and sustainable industrial diversification and dispersal and in most countries SMEs account for well over half of the total share of employment, sales and value added [24].

The Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) was established by the SMEDAN Act of 2003 to promote the development of micro, small and medium enterprises [MSME] sector of the Nigeria Economy. The Agency positions itself as a One-Stop Shop for MSME Development. Micro Enterprises are included in the clientele of the Agency since they form the bedrock for SME's. The vision of the organization is to establish a structured and efficient micro, small and medium enterprises sector that will enhance sustainable economic development of Nigeria. While its mission is to facilitate the access of micro, small and medium entrepreneurs and investors to all resources required for their development.

Poverty, due to lack of access to income earning opportunities and lack of capacity to take advantage of the opportunities, is a social malaise that is threatening global prosperity in general and national economic growth and development in particular. A well developed MSMEs sector has proven to be one of the most veritable channels to combat poverty. The establishment of SMEDAN is therefore justified by the need to trigger the development of Nigeria's MSMEs in a structured and efficient manner through:

- a) Stimulating, Monitoring and Coordinating the development of the MSMEs sector,
- b) Initiating and articulating policy ideas for micro, small and medium enterprises growth and development,
- c) Promoting and facilitating development programmes, instruments and support services to accelerate the development and modernization of MSME operation.
- d) Serving as vanguard for rural industrialization, poverty reduction, job creation and enhance sustainable livelihoods.
- e) Linking SMEs to internal and external sources of finance, appropriate technology, and technical skills as well as to large enterprises.

- f) Promoting information and providing access to industrial infrastructure such as layouts, incubators, industrial parks.
- g) Intermediating between MSMEs and the Government. SMEDAN is the voice of the MSMEs.
- h) Working in concert with other institutions in both public and private sectors to create a good enabling environment of businesses in general, and MSME activities in particular [25].

Small and medium enterprise are critical to the development of any economy as they poses great potentials for employment generation, improvement of local technology, output diversification, development of indigenous entrepreneurship and forward integration with large scale industries. In Nigeria there has been gross under performance of the SMEs subsector and this has undermined its contribution to economic growth and development. According to the report the key issue affecting the SMEs in the country can be grouped into four namely:

- i. Unfriendly business environment
- ii. Poor funding
- iii. Low managerial skills
- iv. Lack of access to modern technology [26].

Among these, shortage of finance occupies a very central position. Globally commercial banks which remain the biggest source of funds to SMEs have in most cases shield away because of perceived risk and uncertainties. In Nigeria, the fragile economic environment and absence of requisite infrastructure has rendered SMEs practice costly and inefficient thereby worsening their credit competitiveness.

To improve access to finance by SMEs, the Central Bank of Nigeria (CBN) approved the investment of the sum of #500 billion debenture stock to be issued by the bank of industry (BOI) with effect from May 2010. In the first instance the sum of #300 billion will be applied to power projects and #200 billion to the refinancing and restructuring of banks existing loan portfolio to Nigeria SMEs/ manufacturing sector. So far, the guidelines for the #200 billion re-financing and re-structuring of banks, loans to the manufacturing sector has been issued by the bank.

According to the report, the objectives of the #200 billion re-financing and re-structuring of banks loans to the manufacturing sector are to:

- a) Fast track the development of the SMEs and manufacturing sector of the Nigerian economy and
- b) Improve the financial position of the deposit money banks among others.

Complimentary to the above, the bank has also established a #200billion small and medium enterprise credit guarantee scheme (SMECGS) for promoting access to credit by SMEs in Nigeria. The scheme is to be wholly financed by the CBN; objectives of the SMECGS are to:

- a) Provide guarantee for credit from banks to SMEs and manufacturers.
- b) Increase the access of promoter of SMEs and manufacturers to credit.
- c) Set the pace for industrialization of the Nigerian

economy.

The overall goal of these initiatives are to increase output, generate employment, diversify the revenue base, increase foreign exchange earnings and provide inputs for the industrial sector on a sustainable basis.

Bank of Agriculture is Nigeria premier agricultural and rural development finance institution, 100% owned by the federal government of Nigeria. The ownership structure is central bank of Nigeria (CBN) 40% and the federal ministry of finance incorporated 60%, bank of agriculture limited is supervised by the federal ministry of agriculture [27], the bank was incorporated as Nigeria agricultural bank (NAB) in 1973 and in 1978 was renamed Nigerian Agricultural and Co-operative bank (NACB). Subsequently in 2000, it was merged with the People bank of Nigeria (PBN) and took over the risk asset of Family Economic Advancement Programme (FEAP) to become Nigerian Agricultural Co-operative and Rural Development Bank Limited (NACRBD). A plan to reposition the bank into an effective and sustainable national agricultural and rural development finance institution in 2010 led to a further name changed to Bank of Agriculture limited(BOA).

In view of the above, it is imperative to identify the existing small and medium enterprises of animal feed production, their potential and problems militating against their optimal production in Gwagwalada and Kuje area councils of the Federal Capital Territory (FCT) so as to create awareness and proffer solutions where necessary.

2. Materials and Methods

Study area

The research was carried out at Gwagwalada and Kuje area Council of the Federal Capital Territory. Gwagwalada is located in the Federal Capital Territory (F.C.T), Nigeria; its geographical coordinates are $8^{0}56'$ 29" North, $7^{0}5'$ 31" East. It covers a total land mass of 65sq.km an area of 1,043 km² and a population of 157,770 at the 2006 national census [28]. The weather is generally warm between November and April which ushers in rain. The rainy season is unimodal with its peak mostly in august. The critical temperature period is between January and April (36-42^oC). Rainfall with about 60% in July, august and September has humidity of 66%.

Kuje is located in the Federal Capital Territory (F.C.T), Nigeria; its geographical coordinates are $8^{0}53'47$ "North, $7^{0}14'$ 35"East. It covers a total land mass of 635sq mi (1,644km²) and a population of 97,367 at the 2006 national census, [28]. The major activities of the indigenes of Gwagwalada and Kuje area Councils are farming and common crops grown are melon, yam, sorghum, cassava, garden egg and sweet potatoes to mention a few, while livestock operations include poultry, village chickens, cattle rearing and fishing. Small ruminants such as sheep and goat are also reared.

Data collection

In gathering data for this research, primary and secondary data were used. However, data from both sources were

merged to generate enough information needed for this research work.

Primary data: Questionnaires were used to get first hand information from the selected SMEs. In addition, oral interviews were conducted to supplement data obtained from the respondents. The purpose of this oral interview was to reduce the rigidity associated with the designed questionnaire and give the respondents more opportunity to supply useful information.

Secondary data: Secondary data is information collected by the researchers through consulting documents and publications. Data were collected from textbooks, newspapers, internet, relevant research projects, journals and report from organizations that are relevant to this study.

A total number of forty questionnaires were sent out to the respondents and twenty-five questionnaires were returned back for analysis.

Method of data analysis

Data analysis was done with the use of descriptive statistics such as percentages, frequency distribution, tabulation and charts. The descriptive statistics was used to analyze variables like the socio-economic characteristics of the respondents, constraints to animal feed production and the impact of animal feed production on the livelihood of farmers and their household among others.

3. Results and Discussion

The socio economic characteristics considered include age, sex, level of education attained, and position of the respondents. Majorities (40%) of respondents are within the age bracket of 31-40 yrs and this implies that most of the animal feed producers were in their active and agile age. Majority (80%) of the respondents in the study area were male while 20% were female as shown in the table. This implies that animal feed production in the study area is a male dominated business. The table further showed that 48% of the respondent had tertiary education 32% of the respondents had secondary education, 12% had primary education while 8% of the respondents had no formal education. This implies that the literacy level of feed mills managers is high and this is expected to have positive impact on their production. The results also revealed that majority (80%) of the respondents owned the enterprise while 20% of the respondents claimed to be managers of the enterprise, this implies that majority of the enterprise is a one man business.

Table 1. Socio-economic characteristics of animal feed producers in the study area.

S/N	Characteristics	Frequency	Percentages (%)
	GENDER:		
1.	Male	20	80
	Female	5	20
	Total	25	100%
	Age(in years)		
2	< 20	1	4
2.	21-30	8	32
	31-40	10	40

S/N	Characteristics	Frequency	Percentages (%)
	> 40	6	24
	Total	25	100
	Level of education		
	Primary	3	12
3.	Secondary	8	32
	Tertiary	12	48
	No formal education	2	8
	Total	25	100
	Position of respondent		
4.	Owner	20	80
	Manager	5	20
	Total	25	100

Source: field survey, 2014.

Materials utilized for animal feed production.

This section considered the equipment and tools utilized, staff strength, storage facilities, as well as feed ingredients utilized by feed producers in the study area. The equipments and tools utilized by the feed producers include crushers, generators mixers, pelleting machines, needles, bagging machine, weighing scales, wheel barrows, spades, and sacks.

Table 2. Materials utilized by animal feed producers in the study area.

S/N	FEED INGREDIENTS	Frequency	PERCENTAGE	
5/11	UTILIZED	requency	TERCENTAGE	
1	Rice Husk	23	92%	
2	Salt	25	100%	
3	Maize	25	100%	
4	Wheat Offal	20	80%	
5	Groundnut Cake	20	80%	
6	Soya Bean	17	68%	
7	Palm Kernel Cake	3	12%	
8	Bone Meal	25	100%	
9	Corn Bran	23	92%	
10	Fish Meal	14	56%	
11	Cassava Peel	2	8%	
	STAFF STRENGTH			
	1-3	9	36	
	4-6	13	52	
	7-10	3	12	
	Total	25	100	
	LIST OF PRODUCTION			
	EQUIPMENTS			
	Grinder	23	92	
	Mixer	13	52	
	Weighing scale	25	100	
	Bagging machine	10	40	
	Needles	20	80	
	Others:	5	20	
	Crusher	15	60	
	Generator	20	80	
	Shovel	20	00	
	Shovel			

Source: Field survey, 2014

In table 2. Feed ingredients, according to the respondents comprises of maize, groundnut cake, soyabean, corn bran, wheat offal, oil seeds, salt, rice husk, sunflower seeds, cassava peel, palm kernel cake cotton seeds and protein products of animal origin such as fish meal, bone meal.. Out of all the raw materials used ingredients like salt, maize, bone meal all have 100% usage. This showed that the feed mills cannot do without these ingredients.

Most of the respondent use groundnut cake (80%) more than soyabean (68%) because groundnut cake cost N125 per kilo (during the study period) is more cheaper and is readily available compared to soya bean which is N155 per kilo although the protein content of soyabean is more higher than that of groundnut cake.

Only 56% of the respondent confirmed that they use fishmeal (72% CP). This is because fish meal is more expensive than the other two protein sources. A kilo of fish meal cost about \aleph 700. Majority of the respondents (92%) use rice husk and corn bran because they are readily available and cheap in the market. For example, one kg of corn bran cost about \aleph 20. All the respondents claimed that they use ingredients not competed for by man when formulating their feed. Ingredients such as lysine, methionine, coccidiostat, premix, enzyme and palm kernel cake.

Furthermore in the table 2 above showed that 52% of the respondents employed between 4-6 staffs, 36% employed between 1-3 staffs while 12% employed between 7-10 permanent staffs. The staffs in feed mill industry include the secretary, machine operators, managers and other staffs which take part in feed milling activities such as crushing, mixing, measuring of ingredients, weighing and bagging. This will have impact on their production.

In table 2 above majority (92%) of the respondents have grinding machines, 52% have mixer, 100 have weighing scale, 40% have bagging machine, 80% of the respondents have needles and thread, only 20% of the respondents have crusher, 60% claimed that they have generators, while all the respondents claimed that they have shovels. The types of equipments used determine to a large extent the production capacity and efficiency of operation among others.

Processing Practices of Feed Mills in the Study Area

This section discussed sources of ingredients, types of feed produced, storage facilities, means of transportation, type of technology used and buyers of products in the study area.

Table 3.	Processing	Practices.
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3	SOURCE OF RAW MATERIALS	Frequency	Percentage
	Direct	15	60
	Supply by agents	10	40
	No response	0	0
	TOTAL	25	100%
	DO YOU PRODUCE ANY OTHER		
	TYPE OF FEED		
	YES	9	36
	NO	16	64
	TOTAL	25	100%
	OTHER TYPES OF FEED		
	Fish feed	8	89
	Cow feed	1	11
	No response	0	0
	TOTAL	9	100%
	DO YOU HAVE TRANSPORT		
	FACILITIES		
	YES	21	84
	NO	4	16
	TOTAL	25	100
	WHAT TYPE OF TRANSPORT		
	FACILITIES DO YOU HAVE		

3	SOURCE OF RAW MATERIALS	Frequency	Percentage
	Bike	9	36
	Truck	13	52
	OTHERS	3	12
	TOTAL	25	100
	WHAT TYPE OF TECHNOLOGY		
	DO YOU USE?		
	Low technology	20	80
	High technology	5	20
	TOTAL	25	100
	HOW DO YOU SELL YOUR		
	PRODUCTS?		
	Wholesale	5	20
	Agent	3	12
	Direct retail	17	68
	TOTAL	25	100
	LEVEL OF PRODUCTION OF THE		
	RESPONDENTS PER DAY		
	25kg and below	6	24
	50kg and below	5	20
	500kg and below	7	28
	1000kg and below	4	16
	Above 1000kg	3	12
	HOW FAR IS YOUR PRODUCTION		
	SITE FROM THE MARKET		
	1-3	10	40
	4-6	8	32
	7-10	7	28
	TOTAL	25	100

Source: Field survey, 2014

Table 3 revealed that 60% of the animal feed producers obtained their ingredients through direct retail and 40% confirmed that they obtain their ingredients through supply from agents. According to most of them, it is more convenient to obtain products through direct retail.

The above tables revealed that majority (64%) of the feed mills does not produce other types of feed, the remaining 36% produce other forms of feed, out of which majority (89%) claim to produce fish feed and 11% confirmed that they produce cow feed.

In the table above majority (84%) of the respondents confirmed that they have transport facilities while 16% confirmed that they do not have transport facilities. 52% of the respondents confirmed that they have truck, 36% have bike, while 12% of the respondents claimed they do not have any means of transportation. This implies that most of the animal feed producers have means of conveying their feed and feed ingredients thereby making marketing of their products easy.

Table 3 also revealed that 80% of the respondents use low technology in producing their feed because they are operating on a small scale of production while 20% uses high technology in their feed production. Low technology entails the use of manual labour and other manual equipments and less use of automated equipments i.e. use of needles and thread instead of bagging machine and this has a direct impact on their level of production while high technology involves the use of industrial equipments such as bagging machine, pelleting machines, among others and other laboratory equipments in carrying out proximate analysis of

the feed and ensuring standardization of the feed.

Furthermore, on marketing, table 3 above revealed that 68% and 20% of the producers sell their products to secondary buyers. These are the direct retail and wholesalers that will re-sell to livestock farmers. The remaining 12% submitted that they sell directly to agents. These are mostly operators with higher production capacity. They use high technology, have means of transportation and use more staff. The impact of these features on their turn over cannot be overemphasized. On production capacity, Table 3 revealed that 24% of the animal feed producers produce < 25kg feed per day, 20% produce 50kg and below per day, 28% produce 500kg and below per day, 16% produce 1000kg and below per day while 12% produce above 1000kg per day. This implies that the quantity of feed produce per day in the studied area varies with respect to the scale of production. A standard bag of feed in the study area weighs 25kg. The operators in the study areas use high technology, good equipments, have more staff to produce their feed and the impact of all theses on their scale of production cannot be over be overemphasized.

Majority (40%) of the respondent claimed that their production site is not far to the market and this implies that it will have positive impact on the sales of their feeds. Finally, majority of the respondents claimed that they store their feed in a cool dry place and at normal room temperature, they gave reasons that if not properly stored the feed can grow moulds and thus affect its market value. Most of the respondents claimed that they have storage facilities for their bagged feed in form of stores, room etc.

SOURCE FOR FUND	FREQUENCY	PERCENTAGES
Bank loans	3	12
Thrift and co-operative	5	20
loans		
Personal savings	13	52
Others	4	16
Total	25	100
ASSISTANCE FROM THE		
GOVERNMENT?		
Yes	7	28
No	18	72
No response	0	0
TOTAL	25	100

Table 4. Major source of funds for animal feed producers in the study area.

Source: field survey, 2014.

Table 4 indicated that 52% of the feed producers depend on personal savings of owners in financing the processing activities,12% claimed to have access to bank loans, 20% of the respondents get finance from thrift and co-operatives loans, while 16% from other sources such as family, friends and relatives. Many of the group that uses personal savings complained about financial constraints. Some of them claimed to have applied for various types of loans without success, while most of them claimed they could not obtain loan due to high interest and collaterals. This showed that if the feed producers in the study areas have more access to funds it will increase their scale of production and lead to further expansion of their mills thereby generating more profit and leads to employment of more hands. Funds have affected many graduates from venturing into feed production.

Table 4 further revealed that most (72%) of the respondents claimed that they do not receive any assistance from the government while 28% of the respondents claimed to receive governments assistance in form of loans through which they increase their scale of production. The inability of animal feed producers in the study areas to benefit from the government may be due to the corruption and lack of information while the few that from government incentives may be due to their involvement in politics or other form of connection.

Major problems faced by feed producers in the study area.

The respondents were asked to indicate the major problem/constraint militating against their optimal production. 52% of the respondents opted for lack of capital, 24% identified with high cost of feed ingredients, 16% identified with irregular supply of electricity, 8% claimed to experience transportation problem. Majority of the respondents confirmed that escalating cost of raw material is a major problem to their optimal production in which some of them claimed that most of these ingredient is been competed for by man thereby affecting its availability, hence leading to soaring cost of the raw materials. Also lack of awareness of other alternative feed stuff is another problem affecting feed producers in the study areas, most of the producers still use ingredients been competed for by man in formulating their feed, alternative feedstuff such as rumen content, poultry litter, blood meal can also be used as alternative feedstuff for some feed formulating ingredients.

Table 5. Major problems militating against optimal production of animal feed.

S/N	Constraints	Frequency	Percentages
	Electricity	4	16
	Cost of raw materials	6	22
	Bad roads	2	8
	Funds	13	52
	Total	25	100

Source: field survey, 2014.

4. Conclusion

Considering the findings from the study areas the following conclusion are drawn, majority (80%) of the respondents are male which implies that they are in their active and agile age, majority (48%) has tertiary education, majority (68%) reveals that they sell their products through direct retail and majority (52%) claimed that fund is a major problem militating against their optimal production. The study reveals that majority (52%) of the respondents uses personal savings to fund their enterprise and 28% produce 500kg of animal feed per day. If the respondents are properly motivated in terms of fund and incentives from the government animal feed production will make a meaningful contribution to rural development, improve the economic

development and the rural livelihood of the study area and the nation as well.

Since majority of the respondents are still in their active and agile age it implies that they are youths, and youths are said to be the future of a country and its strength. The need to encourage the entrepreneurship skill of this group of people cannot be overemphasized considering the long term implication of such move on the socioeconomic development of Nigeria. The study area is situated in the northern part of Nigeria which is characterized by high population and high level of poverty and unemployment, therefore, being a farming community, there is an urgent need for the government to take advantage of this opportunity and improve the agricultural sector by involving government agencies such as SMEDAN, BOI, NACRBD, ADP and other commercial and microfinance banks to orientate the people in the study areas and provide them with loans, incentives and teach them relevant technical know-how so as to improve their scale of production and tackle the issue of unemployment as well as reduce to the barest minimum the rate of social vices and insecurity.

Recommendations

Based on the result of this study, the following recommendations are made:

- 1. Government should expand agricultural products marketing outlets both locally and internationally.
- 2. Government should provide loans, subsidized the cost of equipment for farmers involved in animal feed production as well as other areas of agriculture.
- 3. There is a need for government through the agricultural development programme to monitor feed processing activities in Nigeria to prevent wrong formulation of feeds and to avoid risk posed to livestock.
- 4. Government should find solution to the constraints facing animal feed producers towards securing loans especially problems associated with collateral and interest rate.
- 5. Existing agricultural development parastatals such as Bank of Agriculture (BOA), Bank of Industry (BOI), Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) as well as commercial and microfinance banks should be encourage and monitored with a view to making full implementation of government policies regarding agricultural development.

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