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Impact of Private Feed Formulation and Production as a Tool for Poverty Alleviation among Poultry Farmers in Ogun State, Nigeria

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Abstract: The study examines the impact of private feed formulation and production as a tool for poverty alleviation among poultry farmers in Ogun State, Nigeria. A total of Ninety-four poultry farmers were selected using a multi-stage random sampling technique information was obtained from the respondents through Questionnaires. Most of the farmers were between 31 and 60 years (71.3%) males (78.7%) and married (81.9%). Majority, of them (83%) owned and managed their farms, formally educated and their income, ranges below N25,000.00 and above N50,000.00. 47.9% operates small size farms and 33% operates medium size farms. 63.8% milled their feed privately either on-farm or at commercial milling centres while assurance of feed quality and availability ranked first among perceived impacts recorded. Also, quality of feed ingredients and technical expertise ranked highest amongst constraints of private feed production. Significant relationship was found between farm size (number of birds) and source of feed production as well as constraints to private feed production while a non-significant relationship existed between farm size and impact perceived by the poultry farmers. It is recommended that research institutes in collaboration with extension agencies should conduct training and workshops for poultry farmers to build and increase their capacities, knowledge and skills to actively participate in private feed formulation and production in the study area so that their prolonged stay in the poverty bracket that has become-the burden of majority of the poultry farmers can be a thing of the past.

Key words: Impact, feed formulation production, poverty alleviation, poverty

INTRODUCTION

As the World population continue to increase, one of the major problems being faced by the developing countries is their inability to feed their people-adequately. Protein, most especially, those from animal sources is one of the essential nutrients of human diets and it is greatly lacking in the diets of the inhabitants of these developing countries. Hence, there is need to step-up its production and subsequent provision. Poultry, which offer meat and eggs (protein of animal source) on account of its short gestation, short generative interval and handy size is expected to play a major role in this bid to provide protein of animal origin. It (poultry) is reportedly the most commonly kept livestock and over 70% of those (farmers) keeping poultry are reported to be keeping chickens (Udoh and Etim, 2008). Poultry production has become a full time job for many and is considered to be a commercially viable enterprise contributing significantly to Gross National Product (GNP). The environment to which poultry birds are exposed include the housing system, the feed they consume, climatic factor and management system. All these affect the performance of the birds (Abeke, *et al.*, 1998). The problems associated with poultry production in Nigeria are low egg production, diseases and pests, low and poor performing breeds, poor weight gain/feed

conversion, feeding and management problems and lack of capital (Apantaku, *et al.*, 1998). The business of rearing livestock, especially poultry, is cost sensitive. Feed cost alone accounts for between 65% and 80% of the total cost of raising livestock, depending on the species, breeds and environment (Bamiro, *et al.*, 2001 and Olayide, 1992) Therefore, for profit to be enhanced and poultry farmers to remain in business, there is need for reduction of feed costs in such a way that profit can be improved. However, poultry farmers are groaning under high cost of commercial feeds available and this has led many of them to venture into private feed formulation and production as a cost reduction strategy to remain in business. Studies conducted by Etim and Udoh (2006, 2007) suggested that farming in general has to use available inputs as efficiently as possible to optimize agricultural production.

Private feed production allows the farmer to make use of some of the locally available, unconventional feed resources, which are relatively cheap and in addition save costs (Atteh, 2002).

However, inefficient resource use and utilization can seriously jeopardize production output and can lead to poverty on the part of the farmers. Osho (2006) viewing poverty from productive perspective posited that it (poverty) derives from long and protracted inability to generate

productive resources for the purposes of generating a desired level of output in order to enhance the realization of an appreciable income which is the main aim of any farmer in business. This study therefore aims at examining the impact of private feed formulation and production as a tool for poverty alleviation among poultry farmers in Ogun State, Nigeria.

MATERIALS AND METHODS

This study was carried out in Ogun State which is also known as "Gateway State". The capital of Ogun State is Abeokuta. Ogun State plays host to a set of highly educated and enlightened citizens over and above most other parts of Nigeria. The chief occupations of the people are business/trading and agriculture. Food crops such as cassava, yam, maize and vegetables are grown in the areas. fruit crops such as oranges and pineapple and livestock production are popular. livestock production include goat, poultry and sheep.

The State has a land mass of 16,409.26 square kilometers and lies within latitude 6°N and longitude 2°^{1/2} and 3°E. It is bounded in the West by Benin Republic, in the East by Ondo State, in the North by Oyo and Osun States and in the South by Lagos State and Atlantic Ocean, with climate that follows the tropical pattern, with raining season starting in March and ending in November, followed by the dry season. The State has four divisions namely Egba, Yewa, Ijebu and Remo with twenty (20) Local Government Areas distributed within the divisions as 7, 4, 6 and 3 respectively Onakomaiya *et al.* (1992). The Ogun State Agricultural Development Programme is government parastatal chiefly responsible for Agricultural development and extension service.

Population sampling method and sample size: The study populations are poultry farmers in Ogun State, Nigeria.

The multi-stage sampling procedure was employed in drawing respondents for this study. Using the four traditional divisions, 60% of the Local Governments in each division were randomly selected. These are made up of four from seven in Egba, four from six in Ijebu, two from three in Remo and two from four in Yewa respectively. From the selected Local Governments, one hundred and fifty seven poultry farmers were identified comprising 45 from Egba, 62 from Ijebu, 32 from Remo and 18 from Yewa. Sixty percent (60%) of these were further randomly selected in each division which yielded 94 randomly selected poultry farmers comprising of 27 from Egba, 37 from Ijebu, 19 from Remo and 11 from Yewa divisions that constitute the sample for the study through the clip-in-the bag without replacement method. Method of Data Collection and Analysis.

Primary data for the study were collected using Questionnaires for poultry farmers. The structured

Questionnaires was structured into five sections. The first section is on personal characteristics of the poultry farmers and the second is on the identification of size of farm (numbers of birds owned). The third section attempted to identify the sources of feed production/provision for birds. It was in form of 3-item likert type questions (small scale, medium scale and large scale). The fourth section sought to determine impact of private feed formulation and production and the fifth section identified the constraints militating against their participation in private feed formulation and production. Questionnaires were personally administered on these farms and data collected were coded and analyzed using descriptive and inferential statistics.

RESULTS AND DISCUSSION

The results of this study are presented in Tables 1-5. Table 1 showed that majority of the farmers fell within the age Range of 31 and 60 years (71.3%) mostly males (78.7%) and many are Christians (68.8%). Majority were married (81.9%) owned and managed their farms (83%) and are members of co-operative societies. 56% of them are members of the Poultry Association of Nigeria (PAN) -a pressure group that is recognized Nationally. A cursory look at their farm income revealed that sixteen per cent of them do not reveal their income while those that revealed theirs ranges from below N25,000.00 and above N50,000.00 per month. Statistics on their educational attainment revealed that almost 98% had formal education at various levels. The high number of respondents with formal education indicate the bright future for the industry since education is known to be a very important tool in the adoption of new methods (Adeyemi *et al.*, 2008). The fact that over fifty percent of respondents belongs to the Poultry Association of Nigeria shows that the farmers have direct access to new and improved poultry farming techniques since PAN organizes regular symposia and farmers enlightenment seminar with a view to improving the productivity of their members. Similarly belonging to cooperative society serves in a cushioning effect to farmers in sourcing for capital, inputs and also help them to market/sell their products which can be better done on a cartel than an individual. Data recorded here showing more male involvement in Poultry farming is at variance with the reports of Ogundipe, 1989 and Kitalyi (1998) that poultry industry is largely in the hands of women in Africa communities. However Adeyemi *et al.* (2008) explained that while this may be true for rural poultry, the trend may not hold for commercial poultry enterprises.

Table 2 revealed that majority of the farmers in the study are operating at small and medium scale level according to the categorization used. Fakoya and Umunna (2008) had reported that most poultry farmers operate at small scale level of operations. Almost sixty-

Table 1: Sampling of Respondents

Study Area	Available Division in the Study Area	Available Local Government in each Division	60% Local Government was considered for study	No. of Farmers Available in 60% Local Government Areas Selected	60% of Poultry Farmers was sampled
Ogun State, Nigeria	Egba	7	4	45	27
	Ijebu	6	4	62	37
	Remo	3	2	32	19
	Yewa	4	2	18	11
Total	4	20	12	157	94

Source: Field Survey, 2008

Table 2: Personal Characteristics of the Poultry farmers

Variable	Operationalisation	Frequency	Percentage
Age	≤30 years	14	14.9
	31-60 years	67	71.3
	Above 60 years	13	13.8
Sex	Male	74	78.7
	Female	20	21.3
Religion	Christianity	59	68.8
	Islam	35	-
	Traditional	-	-
Marital Status	Single	17	18.1
	Married	77	81.9
Farm Income	Non - Response	15	16.0
	< N25,000.00	14	14.09
	N25,000.00 N50,000.00	36	38.3
	> N50,000.00	29	30.8
Membership of Social Organizations	Co-operatives	82	87.2
	Age-grade groupings	36	38.3
	Poultry Association	53	56.4
	Religious Associations	46	48.9
Farm Management	Owner-Managed	16	83.0
	Manager employed	16	17.0
Educational Attainment	No Formal Education	2	2.1
	Primary Education	22	23.4
	Secondary Education	41	43.6
	Tertiary Education	29	30.9

Source: Field Survey, 2008

Table 3: Size of Farm (Number of birds Owned)

Type	Categorization	Frequency	Percentage
Small size	Below 1000 birds	45	47.9
Medium size	1000-4999 birds	31	33.0
Large size	5000 and above birds	18	19.1
Total		94	100

Source: Field Survey, 2008

Table 4: Sources of Feed Production/Provision for birds

Type	PCF	%	PCMC	%	PFM	%
Small Scale	19	42.2	26	57.8	-	-
Medium Scale	11	35.5	14	45.1	6	19.4
Large Scale	4	22.2	3	16.7	11	61.1
Total	34	36.2	43	45.7	17	18.1

PCF = Proprietary Commercial Feeds. PCMC = Private Commercial Milling Centres. PFM = Private On-Farm Milling.

Source: Field Survey, 2008

four percent (64%) of the sampled farmers are engaged in private feed production as against reliance on proprietary commercial feed (36%) as shown on Table 3. Bamiro *et al.* (2001) also reported use of privately

prepared feed against commercial feed which resulted in reduced cost of production. Table 4 showed the impact of private feed production as perceived by the poultry farmers. Assurance of feed availability and quality ranked first, followed by increased production output, increased profit, cost reduction, better planning and time saving respectively. And, on constraints to private feed production presented on Table 5, quality of feed ingredients and technical know-how (expertise) ranked first. Adejoro (2004) had observed that the profit objective of poultry entrepreneur must bear a direct relationship with feed cost and quality. This is a function of the feed ingredient quality as well as the expertise of the producer. Cost of ingredients ranked next, followed by availability of feed ingredient, cost of milling machines, high drudgery and time requirement respectively. Test of relationship between farm-size and other variables showed a significant relationship between source of feed production and constraint of private feed

Table 5: Responses on Impact of Private Feed Formulation and Production

Variables	Frequency	Percentage	Rank
Cost Reduction	72	76.6	5th
Increased production output	80	85.1	3rd
Assurance of feed quality	94	100	1ST
Better Planning	63	67	6th
Reduced mortality	60	63.8	7th
Increased profit	79	84	4th
Assurance of feed availability	94	100	1st
Saves time	60	63.8	7th

Source: Field Survey, 2008 Multiple responses

Table 6: Constraint to Private Feed Production

Variables	Frequency	Percentages	Rank
Quality of Feed Ingredients	94	100	1st
Cost of Feed Ingredients	90	95.7	3rd
Availability of Feed Ingredient	87	92.6	4th
Cost of Milling machines	77	81.9	5th
Time requirement	34	36.2	7th
Technical know-how (expertise)	94	100	1st
High drudgery	60	63.8	6th

Source: Field Survey, 2008

Table 7: Test of Relationship between size of farm and source of feed production, impact of private production and constraint of private feed production

Variable	X ² cal	X ² tab	df	Ls	Decision
Source of feed production	32.2	9.49	4	0.05	S
Impact of private feed production	9.2	23.68	14	0.05	NS
Constraints to private feed production	38.2	21.02	12	0.05	S

Source: Field Survey, 2008

production and a non-significant relationship with the perceived impact of private feed production.

Conclusion: The results obtained in this study indicate that private feed production has many advantages as perceived by the poultry farmers. If the enabling environment and conditions are right. However, because most of these farmers are operating on small scale, afford ability has become a major factor, hence many of the farmers are privately producing their feeds on their farms and at privately owned commercial milling centres in preference to proprietary commercial feeds. This has offered them a reduction in cost of production hence, can help alleviate poverty that has become burden of the poultry farmers in the study area. These elements indicate that there are great potentials for poultry farmers in the private feed formulation and production in the study area that could be improved and build upon. The constraints that militate against the private feed formulation and production are inadequate quality of feed ingredients, technical know-how (expertise), the need for extra fund for feed ingredient, inadequate feed ingredients. If these could be addressed. However, the production and availability of cheap, small feed milling equipment will further help these small scale farmers to produce their feeds on their farms. and sustainable poultry development ensured.

Based on the conclusions of this study, it is recommended that. Research institutes, Universities and Allied Agencies should design and implement policies which will encourage and enhance poultry farmers in using private feed formulation and production. This may include trainings and workshops on skills in feed formation and production. Research institutes in collaboration with extension agencies should conduct training and workshops for poultry farmers to build and increase their capacities, knowledge and skills to actively participate in private feed formulation and production in the study area so that their prolonged stay in the poverty bracket can be a thing of the past.

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