

CULTURED FISH FARMERS' PERCEPTION OF GOVERNMENT INTERVENTION AND CONSTRAINTS IN CULTURED FISH PRODUCTION IN KWARA STATE, NIGERIA



*AKANBI, S.O AND MUHAMMED-LAWAL, A.

Department of Agricultural Economics and Farm Management, University of Ilorin, P.M.B.1515, Ilorin, Nigeria.

Corresponding Author: dipoakanbi@gmail.com

ABSTRACT

This study examined the perception of government intervention by cultured fish farmers, and as well, the constraints faced by cultured fish farmers in Kwara State where there is an upsurge in the number of new entrants into the cultured fish business. Data used for this study were collected over one production cycle in 2012. A total of total 63 respondents were drawn through random sampling technique from a sampling frame of 121 registered cultured fish farmers. Analytical tools used for the study were descriptive statistics, correlation analysis, Likert-type scale. The results from the State's government's support showed that 32.8% and 23.8% of the sampled fish farmers were assisted with provision of fingerlings and formal credit respectively; subsidized feed-inputs and extension services were received by 46% and 68.3% of respondents respectively. The study further revealed that there was a significant relationship between fish output and government intervention strategies (p<0.05). Consequently, the production of cultured fish can considerably be improved in the study area if the government can substantially increase the fish farmers' access to formal credit to a new level which should be comparatively close to that currently being enjoyed by crop farmers under the Kwara State demand-driven off-takers crop farming scheme. Government should create a support system by establishing of a number of one-stop shops at convenient locations, so that farmers can easily access fish inputs and the services of more efficient extension workers in the study area.

Keywords: cultured fish, farmers' perception, government intervention.

INTRODUCTION

The fishery sub-sector is one of the agricultural sub-sectors which by all means has not been given the desired priority and which by all standards is capable of bridging the gap in the daily protein dietary needs of a constantly growing population (Olayiwola, 2013). In an attempt to boost cultured fish production, the Federal Government had in the past put in place a number of programmes. One of such is the Aquaculture and Inland Fisheries Project (AIFP), an intervention project being executed in collaboration with FAO. The Project is operating presently under the umbrella of the National Programme on Food Security which is a global initiative of the FAO to address the problem of hunger in poor developing countries. The National Food Reserve Agency/Agricultural Development Projects ADPs were directly responsible for the implementation of this project (Atanda, 2007). The Nigerian Micro, Small & Medium Enterprise Scheme (MSMES) also has an aquaculture component. The National Fadama Project being co-financed by the World Bank and the African Development Bank also had part objective of developing the fishery sub-sector through the provision of assistance in the area of assets/ input supply at subsidized rates and provision of relevant advisory services (FADAMA PAD, 2003, 2008). The establishment of three fisheries research institute in 1975 namely the Lake Chad Institute, Maiduguri (1975), National Institute for Oceanography and Marine Research (NIORMR) Lagos (1975) and the Kainji Lake Research Institute, New Bussa (1976) gave a further boost to the development of the fish sub-sector. These developments were capped up with the establishment of the full-fledged Federal Department of Fisheries (FDF) in 1976 with its headquarters in Lagos. (Olayiwola, 2013)

However, it is particularly worrisome, considering the acclaimed government's contribution to cultured fish production in Kwara State, that no research work, to knowledge of this researcher, has assessed effects of the specific roles played by government in the development of fish sub-sector in Kwara State in the last seven years. Of particular note to this research work are cultured fish farms that had at one time or the other enjoyed one form of

government support or the other in Kwara state. On occasions when government had cause to intervene in the fishery sub-sector in the state, not enough attention was paid to the effect of its interventions on the enterprise. This is particularly true of cultured fish farmers benefitting from one form of government's intervention/assistance or the other. The study therefore examines the perception of government intervention by cultured fish farmers, the effect of the intervention on production, and as well, the constraints faced by cultured fish farmers in the state. Assessing the effect of Government interventions will show the magnitude of gains that could be obtained by improving support for cultured production in Kwara. This study stands to provide essential information that could be relevant in policy planning and the implementation process of any aquaculture process.

METHODOLOGY

The Study Area: Kwara State shares boundaries with Oyo, Osun and Ekiti to the South, Kogi and Niger to the North, Kogi to the east and Republic of Benin on the west side. The state which is located in the North-Central Geopolitical Zone of Nigeria has sixteen Local Governments Areas. It has an estimated population of about 2.3 million people (census 2006). The daily average temperature ranges between 21°C to 33°C. The State has two distinct climatic seasons, the wet (Rainy) and dry (Harmattan) seasons. The rainfall extends between November and February. This climatic condition as well as fertile soil makes the States favourable for arable crop production such as rice, millet, yam, cowpea etc. (KWARA Ministry of Agricultural Natural Resources, 2012). Furthermore, Kwara has been noted to have a huge potential for fish production, given to its abundant water resources. At its northern border Kwara is bordered by River Niger, close to 300km in length. The River Niger has a huge reservoir that serves a host of natural earthen ponds that adjourns it. These ponds also serve as natural hatchery is for raising fingerlings and at some instances, meet the needs of some concrete-pond owners as well. This perhaps has been the driving force behind the priority the Kwara State government had accorded priority fish development over

the last seven years. Some of the noticeable achievements recorded include:

* training of over 400 youths in all aspects of fish farming throughout the state. The trained youth were thereafter empowered through the provision of soft loans from the commercial banks, FGN/CBN Loans to establish their individual fish farms.

* the introduction of a government input subsidy scheme; Kwara State government procured fish input such as nets, fibre glass canoes, outboard engines, fishing boats, fish hooks, twines, fish feeds, water pump/tanks, pelletizing machine, smoking kilns and many others for distribution to fish farmers and fishermen at subsidized rate of 50% on annual basis in the last 7years.

* the Extension services provided by the State Ministry of Agriculture to the farmers on their farm, to help them to solve problems and challenges on their farm management. The fish farmers were trained and re-trained to acquaint them with modern and improved techniques in fishery production.

The State Government also partnered with the Federal government to construct ultra modern fish markets in some local government areas of the State; the local governments include Ilorin West, Ilorin East, Asa and Moro at the total cost of N13.7million. To further boost fish farming in the state, the Federal government also assisted the State cons with the construction of a fish processing center at Jebba, Moro local government area at the cost of N23.5 Million. (Kwara MANR, 2012)

Data Collection: The data used in the study were obtained from both primary and secondary sources. Primary data were collected using a structured-questionnaire. The primary data were collected between the months of December, 2010 and June, 2012. A minimum of three visits were occasioned to the identified farms in the State under consideration; a total of 121 farmers were identified in the study area. A table of random numbers was then constructed to arrive at a sample size of 63 farmers randomly selected from the sampling frame.

Analytical Techniques: The data collected for the study were analyzed employing correlation analysis and a Five-point Likert scale.

Likert Scale Analysis

Likert Rensis (1932) developed the principle of measuring attitudes by asking people to respond to a series of statements about a topic, in terms of the extent to which they agree with them, and so tapping into the cognitive and affective components of attitudes. The Likert-type scale was given consideration in this study to help the farmers come up with relative ease the constraint to production particularly in areas that bother on Government expected interventions. A five-point Likert-type Scale was adopted in determining the constraints to cultured fish production in the study area. The scale is one-dimensional ordinal level of measurement. The responses from the respondents were ranked in a specified dimension. The responses indicating the most serious constraint were assigned the highest score while the reverse is the case with less debilitating constraints. Responses on constraints to cultured fish production were disaggregated as follows:

1 =strongly disagree

2 = disagree

3 = undecided

5 = strongly agree

The final score for the respondent on the scale is the sum of the ratings for all of the items (this is why it is sometimes called a "summated" scale).

RESULTS AND DISCUSSION

Type of Government Support accessed by Farmers

The results of the analysis of the state government's support to cultured fisher farmers showed that 32.8% of sampled fish farmers were assisted with provision of fingerlings in Kwara State. Direct credit support was another focus of government intervention programme. The study also showed that 23.8% of the sampled registered cultured fish were given direct credit support. Subsidy for feed inputs was granted to 46% of the sampled fish farmers in Kwara State. Provision of extension service is another vital focus of government intervention programme. Extension agents were recruited to educate and guide them on how to manage the established fish farms. More than half of the sampled fish farmers (68.3%) in Kwara State benefited from government extension service provision. Table 1 shows the frequency distribution of the types of government support for cultured fish production in the study areas.

| Table | 1: | Distribution | of | Respondents | according | to | |
|------------------------------|----|--------------|----|-------------|-----------|----|--|
| access to Government Support | | | | | | | |

| Response | Freq. | % |
|----------|-------|-------|
| No | 42 | 66.7 |
| Yes | 21 | 32.8 |
| Total | 63 | 100.0 |
| No | 48 | 76.2 |
| Yes | 15 | 23.8 |
| Total | 63 | 100.0 |
| No | 34 | 54.0 |
| Yes | 29 | 46.0 |
| Total | 63 | 100.0 |
| No | 47 | 74.6 |
| Yes | 16 | 25.4 |
| Total | 63 | 100.0 |
| No | 47 | 74.6 |
| Yes | 16 | 25.4 |
| Total | 63 | 100.0 |
| No | 45 | 71.4 |
| Yes | 18 | 28.6 |
| Total | 63 | 100.0 |
| No | 20 | 31.7 |
| Yes | 43 | 68.3 |
| Total | 63 | 100.0 |

Source: field Survey, 2012

Direct credit support was another focus of government intervention programme. The study shows that 23.8% of the sampled registered cultured fish were given direct credit support. Subsidy for feed input was granted to 46% of the sampled fish farmers in KwaraState which was considered inadequate by the respondent farmers. Provision of extension service is another vital focus of government intervention programme. Extension agents were recruited

^{4 =} agree

to educate and guide them on how to manage the established fish culturists. More than half of the sampled fish farmers (68.3%) in Kwara State benefited from government extension service providers.

Effect of Government Support on Production: as indicated in Table 2, there is a significant relationship between fish Output and the various government intervention strategies (p<0.05) for improved cultured fish production in Kwara State. The provision of fingerlings was positively and significantly correlated with fish output (82.4%). This suggests that government intervention programme targeted at provision of fingerlings significantly improve cultured fish production in the study areas. Credit supply was also found to be significantly correlated with fish output (64.3%) implying proportional relationship. This means that more direct credit input will lead to more fish output. It can also be inferred that with adequate provision of credit supply, other inputs such as fingerlings harvest inputs and feed inputs will be boosted. The reason is not farfetched as credit facilities give farmers power to purchase any other inputs that is needed to expand the farm. Subsidized feeds input shows significant and positive relationship with cultured fish farm output. Optimal feeding of fingerlings/juveniles is a vital part of fish production and respondents identified feed inputs as one of the most expensive items to deal with in fish production hence farmers that enjoyed subsidy element were able to improve on production. This explains why any measure of subsidy on feed inputs will significantly affect the overall output of fish produced. Furthermore, Table 2 indicated that government extension agents had significantly impacted on fish output. Respondents indicated to have benefited from visits of government extension agents for the purpose of educating and guiding them on how to manage the established fish cultured.

 Table 2: Correlation Analysis on impact of government support on fish production

| | Fish | Output | | |
|--|--------|--------|--|--|
| | (kg) | | | |
| Provision of Fingerlings/juveniles | 0.824* | | | |
| Provision of direct credit support | 0.643* | | | |
| Provision of feed subsidy | 0.492* | | | |
| Provision of land facility | 0.244 | | | |
| Provision of harvesting/processing | | | | |
| input | 0.239 | | | |
| Provision of market outlet | 0.037 | | | |
| Provision of extension service | 0.455* | | | |
| *significant at 5% level. Source: field Survey, 2012 | | | | |

Constraints/Problems of Cultured Fish Production

Empirical results on the identified constraints to cultured fish production in Kwara State are as presented in Table 3. Poor access to capital, electricity and good water supply were perceived by respondents as the major problems/constraints to cultured fish production. Table 3 shows the three variables having mean values of 4.75, 4.54 and 4.29 to rank 1st, 2nd and 3rd respectively. Access to good water supply and effective extension service were also perceived as not adequate, ; while the effectiveness of education and labour supply were not viewed as critical constraints to fish production in the study area. The two factors had the lowest mean of 2.83 and 2.71 to rank 6th and 7th respectively.

CONCLUSION AND RECOMMENDATIONS

The analysis of the State government's support showed that 32.8% and 23.8% of the of sampled fish farmers were assisted with provision of fingerlings and formal credit respectively. Subsidy for feed input was granted to 46% of respondents on a limited scale, while more than half of the sampled fish farmers (68.3%) in Kwara State benefited from government extension service providers. Provision of fingerlings was positively and significantly correlated with fish output (82.4%). This suggests that government intervention programme targeted at provision of fingerlings significantly improve cultured fish production in the study areas. Credit supply was also found to be significantly correlated with fish output implying proportional relationship. This means that more direct credit input will lead to more fish output. It can also be inferred that with adequate provision of credit supply, other inputs such as seedlings, harvest inputs and feed inputs will be boosted. Consequently, the production of cultured fish production can considerably be improved upon in the study area if the government can substantially increase the fish farmers' access to formal credit to a new level which should be comparatively close to that currently been enjoyed by their crop counterparts under the Kwara State Demand-driven off-takers crop farming scheme .The inaccessibility of the farmers to the appropriate modern technology and modern innovations such as improved fingerlings/juvenile, improved fish feeds also poses serious threat in the general supply of fish now and in the near future. Government should create a support system by establishing of a number of one-stop shops at convenient locations, so that farmers can easily access fish inputs. It is not out of place for governments in Nigeria to subsidize farm inputs, if production is to be increased. In addition, fish farmers should be provided with services of well trained extension workers in the study area, especially in the management aspect. This is imperative, as it would enable farmers make informed decision particularly in allocating production inputs more efficiently, and thereby boost the current production of fish.

REFERENCES

- Atanda A. N. (2007). Freshwater fish seed resources in Nigeria, Assessment of freshwater fish seed resources for sustainable Aquaculture FAO Fisheries Technical Paper. No. 501 Rome, FAO.
- Federal Ministry of Agriculture and Rural Development FMARD (2003). Project appraisal document for the Second National Fadama Development Project
- Federal Ministry of Agriculture and Rural Development FMARD (2008). Project appraisal document for the third National Fadama Development Project.
- KWARA Ministry of Agricultural Natural Resources, 2012, (MANR), (2012). http:// www. Theherald news .info/kwara- fish-production-hits-120000metric-tons dated accessed 12/03/2013
- Likert, R. (1932): A Technique for the Measurement of Attitudes. en.wikipedia.org/wiki/Rensis_Likert date accessed 12/04/2011.
- Olayiwola, O. O. (2013). Technical efficiency of fish production in Ijebu-Ode, Nigeria. *International Journal of Research in Management and Technology*, 2:16-42. wwwabhinavjournal.com date accessed 12/10/201

| | | | | | Kwara State | |
|--|-------------------|---------|-----------|------|-----------------|---------|
| Constraint | Perception | Ranking | Frequency | Mean | | Percent |
| Lack of Electricity | Strongly disagree | 1 | 1 | 4.54 | 2^{nd} | 1.6 |
| | Disagree | 2 | 4 | | | 6.3 |
| | Undecided | 3 | 1 | | | 1.6 |
| | Agree | 4 | 11 | | | 17.5 |
| | Strongly agree | 5 | 46 | | | 73.0 |
| | Total | | 63 | | | 100.0 |
| Lack of Institutional Education | Strongly disagree | 1 | 11 | 2.71 | 7 th | 17.5 |
| | Disagree | 2 | 17 | | | 27.0 |
| | Undecided | 3 | 9 | | | 14.3 |
| | Agree | 4 | 21 | | | 33.3 |
| | Strongly agree | 5 | 5 | | | 7.9 |
| | Total | | 63 | | | 100.0 |
| Access to pollution-free Water | Strongly disagree | 1 | 5 | 3.60 | 4^{th} | 7.9 |
| | Disagree | 2 | 13 | | | 20.6 |
| | Undecided | 3 | 6 | | | 9.5 |
| | Agree | 4 | 17 | | | 27.0 |
| | Strongly agree | 5 | 22 | | | 34.9 |
| | Total | | 63 | | | 100.0 |
| Lack of Government support for fish-input sourcing | Strongly disagree | 1 | 4 | 4.29 | 3 rd | 6.3 |
| | Disagree | 2 | 3 | | | 4.8 |
| | Undecided | 3 | 1 | | | 1.6 |
| | Agree | 4 | 18 | | | 28.6 |
| | Strongly agree | 5 | 37 | | | 58.4 |
| | Total | | 63 | | | 100.0 |
| Scarcity of Labour | Strongly disagree | 1 | 11 | 2.83 | 6 th | 17.9 |
| · | Disagree | 2 | 19 | | | 30.2 |
| | Undecided | 3 | 8 | | | 12.6 |
| | Agree | 4 | 20 | | | 31.7 |
| | Strongly agree | 5 | 5 | | | 7.9 |
| | Total | | 63 | | | 100.0 |
| Lack of Extension Agent | Strongly disagree | 1 | 13 | 2.91 | 5^{th} | 20.6 |
| 6 | Disagree | 2 | 14 | | | 22.2 |
| | Undecided | 3 | 8 | | | 13.0 |
| | Agree | 4 | 22 | | | 35.0 |
| | Strongly agree | 5 | 6 | | | 9.5 |
| | Total | | 63 | | | 100.0 |
| Insufficient Capital | Strongly disagree | 1 | - | 4.75 | 1 st | - |
| ····· | Disagree | 2 | 1 | | - | 1.6 |
| | Undecided | 3 | 1 | | | 1.6 |
| | Agree | 4 | 11 | | | 17.5 |
| | Strongly agree | 5 | 50 | | | 79.3 |
| | Total | - | 63 | | | 100.0 |

Source: field Survey, 2012