
University aquaculture researchers' demographic characteristics and linkage with fish farmers

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The transfer of technology from researchers to end users with respect to aquaculture is often a weak link. This study examined the relationship between demographic characteristics of University aquaculture researchers and linkage with fish farmers. Coastal and inland states were purposively selected for the study. Simple random sampling was used to elicit information from 30 researchers using structured questionnaire. The findings revealed 70 percent of researchers are male and married (93.3%). Seminar was the most used method of linkage with fish farmers while workshop was least used. Researchers identified low funding as a major constraint in their linkage with fish farmers. Significant relationship was recorded between gender and linkage ($\chi^2 = 4.98$, $p < 0.05$). It was concluded that gender determines the extent of linkages between University aquaculture researchers and fish farmers.

Key words: Coastal state, Inland state, Technology, Linkage services

Introduction

Most studies in Africa as a whole emphasized on the need for the availability of fish as a cheap source of protein (Kolindadacha *et al.*, 2007; Ayorinde, 2007; Ayodele and Fregene, 2003). The fishery industry has been of critical importance to the economy and to the social well-being of humanity. It provides a vital source of food, employment, recreation, trade and economic well being for people throughout the world (Ogunremi and Obasa, 2009). Agricultural research remain an important resource for the economic recovery predicted by the World Bank for sub-Saharan Africa, thus there is need for the

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intelligent mobilization of research and the dissemination of its results and technologies (Pierre-Morrie and Elten, 1995). Oladele (1999) noted that the dissemination of research results would keep people thinking about research, make them recognize and accept the need for further research work towards increase productivity. Rhonda and Laralie (2006) observed that although University specialists were considered a trustworthy source of information, they were one of the least used. The method of linkage used by researchers to producers may influence whether a farmer accesses, and uses this information. A cardinal function of the University is responsible research and publishing, they are specially saddled with the responsibility of teaching, research and production of high quality manpower.

Materials and methods

The study was conducted in a coastal State (Lagos) and an inland State (Oyo) in Nigeria. The target population consisted of all aquacultural researchers found in the three Universities located in the study areas. Thirty questionnaires (67%) were retrieved from a total of forty five researchers. Data were analyzed using descriptive statistics such as frequency counts and percentages. Inferential statistics – Chi-square (χ) was used to test the hypothesis.

Results and discussions

Most of the University researchers are males (70.0 %), married (93.3%), 40 percent were between 31 and 40 years and 56.7 percent had doctoral degree while 73.3 percent have between one and 10 years work experience as shown in Table 1. This agrees with earlier findings of (Ogungbaigbe, 2004). This trend means that males offer more aquacultural courses or attend training courses in aquaculture. The predominance of male could however have advantages in staff deployment situations. Deployment of scientists especially women to the sub-stations when necessary may be obstructed by complaints of threats to the scientists' family life because of separation (Oyedokun, 2000). Angba (2000) reported high percentage of researcher below 50 years of age. The result suggests that a large proportion of researchers are young and in their active years. Also 84 percent were married while about 11 percent were single. Oladele (1999) indicated 72 percent as number of married researchers which was equally high. It therefore means that majority of researchers can be assigned position of responsibility. Oyedokun (2000) reported that universities in Nigeria have higher concentration of qualified researchers than the agricultural research Institutes. Institutes with few post- graduate scientists might have to commit a lot of resources to manpower development. Researcher

ability and analytical skills may be low and performance, however, 42.2% are currently studying for higher degrees. Ogunbaigbe (2004) reported that a relatively inexperienced Institution is one with researchers having less than five years of work experience. The contact existed between university researches and farmers. Researchers linked fish farmers mostly through seminar (23%) and least through workshops (7%) as shown in Figure 1.

Table 1. Researchers Demographic Characteristics

	Variables	Percentages
Gender	Male	21 (70.0)
	Female	9 (30.0)
Age	Less than 30	-
	31-40	10(33.3)
	41-50	12(40.0)
	Above 50	8 (26.0)
Marital status	Single	1(3.3)
	Married	28(93.3)
	Divorced	1 (3.3)
Educational level	BSc	2 (9.9)
	M.Sc	10 (33.3)
	M.Phil	1 (3.3)
	Ph.D	17 (56.7)
Studying or higher degree	Yes	22 (73.3)
	No	7(23.3)
	No response	1(3.3)
Job tenure	1-10 years	22 (73.3)
	11-20 years	4(13.3)
	Above 50	4(13.3)

Researcher's linkage with fish farmers

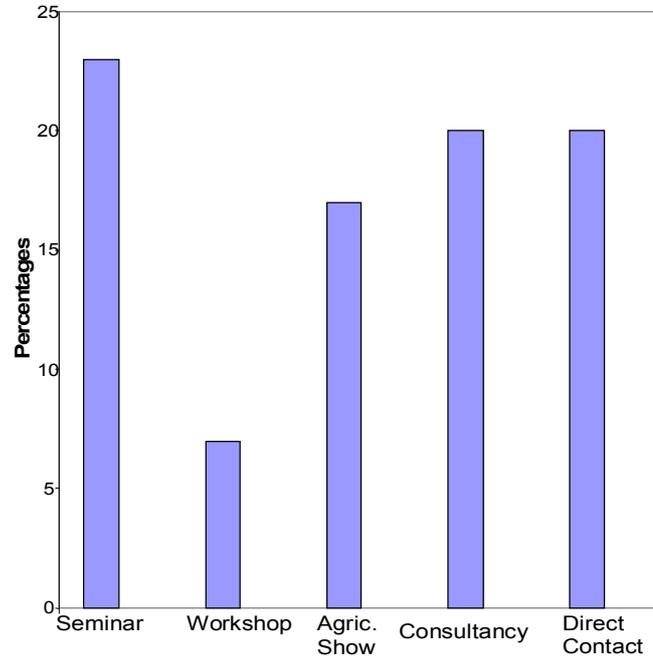


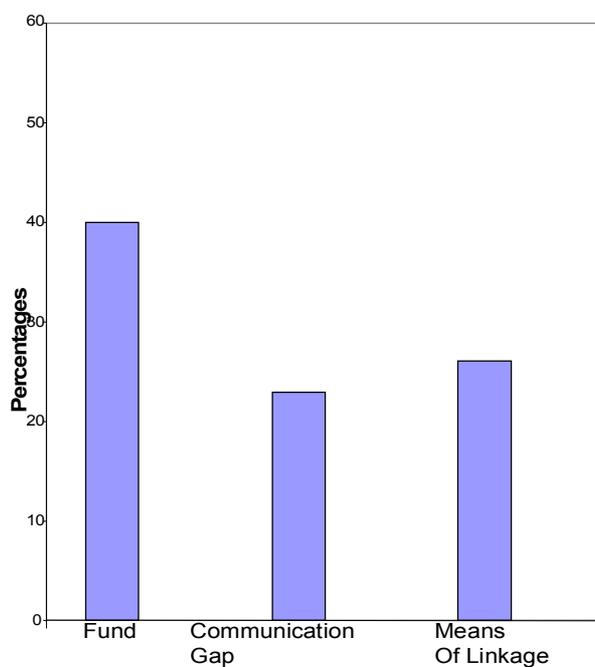
Figure.1. Researcher's Linkage with Fish Farmers

Technologies introduced by University Researchers

Out of nine different technologies, fish nutrition was the most disseminated (70%) as shown in Table 2. This is simply because the back bone of high yield could be traced to the quality of feed given to fish. Fingerlings production and water quality management were at the same level (56.7%). The least disseminated area of research was recirculatory. Angba (2004) reported that if awareness level is high, it is expected that adoption rate should be high as well. Recirculatory system was highly on research level (76%).

Table 2. Technologies Disseminated to fish farmers by University Aquaculture Researchers

Technologies	Experimental Level		Disseminated/Practiced	
	Frequency	Percentage	Frequency	Percentage
Fingerlings Production	13	43.3	17	56.7
Fish nutrition	9	30	21	70.0
Water quality management	13	43.3	17	56.7
Pond fertilization	16	53.3	14	46.7
Fish seed transportation	20	66.7	10	33.3
Ponds draining	15	50.0	15	50.0
Stocking density	19	63.3	11	36.7
Recirculatory system	23	76.7	7	12.3
Weed control	22	73.3	8	26.7

**Fig. 2.** Constraints in Fish Farmers' linkage

There was no significant relationship between demographic characteristics of researchers and their linkage services. It indicates that the gender of researchers is significantly related to linkage activities ($X^2 = 4.983$ $P < 0.05$) as seen in Table 3. Oyedokun (2000) reported significance between gender and linkage services provided. Gender significance may be with respect to predominance of more males offer aquacultural courses or attend training courses in aquaculture. Researchers' marital status, degree, area of

specialization and job tenure were not significantly related to their linkage services – a hint that none of these characteristics posed a limiting effect on their linkage activities. Linkage services can be carried out irrespective of the degree, area of specialization and job duration, linkage activities are the same.

Table 3. Chi square analysis of relationship between demographic characteristics and linkage services of researchers

Variables	X²- value	DF	P	Remark
Gender	4.983	1	0.03	S
Marital status	1.241	2	0.54	NS
Educational level	5.373	4	0.25	NS
Study for higher degree	0.600	2	0.74	NS
Area of specialization	1.241	1	0.27	NS
Job tenure	11.411	14	0.65	NS

Conclusion

Gender determines the extent of linkages between University aquaculture researchers and fish farmers meaning male researchers which were effective in linkage of aquaculture technologies compared to female researchers since more male offer aquaculture in the Universities. Fund as a bottle neck to aquaculture researchers and fish farmers linkage needed to be addressed so that fish farmers can benefit from active research work, also it would encourage researchers to research more instead of only teaching the theoretical part of fish farming.

References

- Angba, A.O. (2000). Determination of sustained use of selected technologies Recommended to farmers by Cross River State Agriculture development programme (ADP). *Ph.D* Thesis in the Department of Agricultural Extension and Rural Development, University of Ibadan, Ibadan. Nigeria.
- Ayodele, I.A and B.T. Frequene (2003). Essentials of Investment in Fish farming. Ibadan. Hope Publications Ltd. Pp 9-37.
- Ayorinde, B.J.O. (2007). Efficiency of Frozen fish marketing in Ogun state, Nigeria. Ph.D Thesis in the Department of Wildlife and Fisheries Management, University of Ibadan, Ibadan. Nigeria pp 180.
- Kolndadacha, O.D., Okaeme, A.N., Ibiwoye, T.I.II., Atnbom, R.T. and Musa, Y.M. (2007). Fish Disease Cntrol: A key success to Aquaculture Development in Nigeria. Biological and Environmental sciences. *Journal for the Tropics* 4 (1), June, 2007. PP 84-90.
- Ogungbaigbe, L.O. (2004). Research-Extension-farmer linkages for fruit technology transfer in selected states of south western Nigeria. Ph.D Thesis in the Department of Agricultural Extension and Rural Development, Ibadan. Nigeria.

- Ogunremi, J.B. and Obasa, S.O. (2009). Growth and Survival of *Clarias gariepinus* Fry Raised on Plankton from Cow Dung and Poultry Manure. *Pakistan Journal of Nutrition* 8 (4):392-394.
- Oladele, O.L. (1999). Analysis of the institutional Research-Extension-farmers linkage system in south-western Nigeria. Ph.D Thesis in the Department of Agricultural Extension and Rural Development, University of Ibadan, Ibadan. Nigeria 141pp.
- Oyedokun, A.O. (2000). Communication factors influencing Scientists' Job performance in Agricultural research Institutes in Nigeria. Unpublished PhD thesis in the Department of Agricultural Extension and Rural Development, Ibadan, Nigeria.
- Pierre-Marie, Bose and Ellen, H.F. (1995). *Agricultural Research and Innovation in Tropical Africa* CIRAD/SPAAR.
- Rhonda, L.M. and Laralie, C. (2006). Technology Transfer Preferences of Researchers and Producers in Sustainable Agriculture. *Journal of Extension* Vol. 44 No 3 www.joe.org.

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