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ANALYSIS OF INFORMATION NEEDS OF AGRICULTURAL EXTENSION WORKERS IN SOUTHWEST OF NIGERIA

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ABSTRACT

Extension workers cannot be said to be effective in their responsibilities to their clientele if they are found to be deficient in information dissemination resulting from not being adequately informed on some subjects. It is on this basis that this study was undertaken to investigate the information needs of the extension workers in the southwest of Nigeria. The study was carried out in the southwest of Nigeria. Three states were randomly selected from the six that make up the geo-political zone. Fifty extension workers were randomly selected from the list of extension workers from each state. Data was collected using a pre-tested structured questionnaire. The information needs of the respondents were classified into technical, commercial, social, legal and general information. It was found that only the working experience of the respondents displayed a significant relationship with their information needs. Findings also showed that the respondents perceived some information sources namely training, research stations, books, technical bulletins, seminars and supervisors to be effective, while others namely clientele and colleagues were perceived not to be effective. It was therefore recommended that the training of the extension workers should include computer literacy to enable them access to internet and other electronic information technologies.

1. INTRODUCTION

The need for rapid improvement in the strategies for agricultural production in the developing countries and in Nigeria in particular does not warrant any more serious debate. More than 800 million

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people in developing countries were said to be undernourished at the beginning of 1990s, while food supply in Africa was 2300 calories against 3 500 in western Europe and America (FAO, 2002). In addition, since 1980, the population of African countries has risen by 53 percent but food has only risen by 45 percent. According to Ewuola *et al* (2002) the Nigerian population increased by between 2.5 to 3.0 percent annually, while food production increased by only 1.5 to 2.0%. It is therefore very obvious that hunger and starvation are not only being felt but has become precarious. This is because food prices have gone beyond the reach of the average persons and thereby affecting their living standard.

Efforts, though are being made by the governments at varying levels, for instance Nigeria Federal Government has put a ban on some imported food products which the local farmers could produce. There is also intensive mobilization and sensitization for cassava and cereal crops production, while Non-Governmental agencies and other financial institutions guaranteed credit facilities and input to farmers. These efforts are yet to impact positively on the living standard of the people. However, if these efforts by the governments are adequately interpreted to the farmers, there is the hope that, when adequately embraced, the level of food production could increase. The interpretation of these efforts is one of the responsibilities of the agricultural extension service.

For extension workers to be effective in the art of disseminating information of technologies and interpreting government policies to the farmers however, they must be adequately informed. Alemna (1995) earlier expressed the opinion that agricultural development, like every other development activities is hinged on information. According to him, information is one of the appropriate tools, which can be relied upon to increase food production. Aina (1990) sees agricultural information as all published and unpublished knowledge on all aspects of agriculture. He further classified information required for agricultural development as technical or scientific information, social information, commercial information and legal information. Giving this classification therefore, information may come from more than one source.

An information source could be an enterprise, an individual, a publication, credit and financial agencies or other similar institutions. Information sources according to Magnire (1994) attract two connotations; namely:

(i) the store or the location in which information is kept. In this regard, a source of information may be personal or impersonal, public or private, passive or interactive, stored locally or remotely to which delayed or access may be available and access may be difficult or easy to arrange.

ii) in the sense of writing such as books or words.

Although, information could be obtained from books, electronic and printed media/materials, conference proceedings, dissertations, internet, trainings or through interpersonal interaction, the extension worker may not be able to say specifically what information they need. This is because information need involves a cognitive process, which may operate on different levels of consciousness and hence may not be clear even to the inquirer himself. According to Cooper (1996), information need is a psychological state not a visible object or complex of symbols. It is something not directly observable but has a definite existence in the mind of the user. Where the extension worker cannot effectively assist his clientele on a particular subject, it may be regarded that the extension worker is less informed on the subject and therefore "needs" information on the subject.

It is against this background that this paper investigated the information needs of extension workers in the south west of Nigeria. Specifically the study:

- examined the socio-economic characteristics of the extension workers,

- determined the information needs of the extension workers

- identified the sources of information at the disposal of the extension workers,

- investigated and determined the future use of some selected information sources, and

- determined the effect of the extension workers' socio - economic characteristics and their sources of information.

2. METHODOLOGY

The study was conducted in the south west of Nigeria. The area is in the rain forest region. It has two seasons, a rainy season spanning from April to October and a dry season between November and March. Farming is the major occupation of the people. The farmers cultivate various crops ranging from food crops such as yam, maize, cocoyam and cassava while a few tree crops such as cocoa, kolanut and coffee are equally grown.

The south western Nigeria is made up of six states namely, Ekiti, Lagos, Ogun, Ondo, Osun and Oyo states. There is homogeinity in language and culture among the people of the study area.

Fifty percent of the area, made up of three states, was randomly selected for the study. The selected states were Ekiti, Ondo and Oyo states. The population of the study included all the extension workers in the three states Agricultural Development Project (ADP). Fifty extension workers were randomly selected from the list of extension workers of each selected state giving a total of 150 extension workers. However, only 140 of the 150 questionnaire were found sufficiently completed to be used for the study.

Data was collected using a pre-tested questionnaire containing mainly of close -ended and few open-ended questions administered during the monthly technical review meetings and training sessions/programmes.

2.1 Measurement of variables

2.1.1 Dependent variable

The dependent variable of the study was information need and was measured by asking respondents to indicate specific areas where they

perceived a need for information to be effective in the execution of their duties. Questions were asked on the following options:

(i) Commercial information
(ii) Technical information
(iii) Social information
(iv) Legal information
(v) General information

2.1.2 The independent variables

Age: This was measured in years and grouped as: (a) below 20 years (b) 21 - 30 years (c) 31 - 40 years (d) 41 - 50 years (e) 51 - 60 years (f) 61 and older.

Marital status: The respondents were asked to indicate their marital status using the following scale: (a) Single (b) Married (c) Divorced (d) Widowed (e) Separated (f) Single parent.

*Level of education***:** The respondents were asked to indicate their highest level of education from (a) General Certificate of Education/Ordinary level (b) Diploma, (c) Degree, (d) Post graduate degree, (e) Others.

Gender: Respondents indicated their gender, either male or female.

Work experience: Respondents were asked to give the exact number of years they have been working as extension personnel. This was later classified into three categories: 1 to 10 years, 11 to 20 years and above 20 years.

*Social status***:** Responses to questions that indicate the social status of the respondents in the society were later grouped to "High Status" or "Low status". Respondents who occupied an important position in the society were regarded as high social status while those who did not occupy important positions were regarded as a low social status.

3. RESULTS AND DISCUSSION

3.1 Social economics characteristics of the respondents

Table 1 shows the distribution of the socio - economic characteristics of the respondents.

Table 1: Socio - economic characteristics of the respondents (N = 140)

Variables	Percentage
Sex:	
Male	78.6
Female	21.4
Age:	
Below 25	3.6
26 - 35	19.2
36 - 45	64.3
46 - 55	12.9
Level of Education :	
Secondary School Certificate	2.9
OND/NCE	20.0
HND/BSC/PGD	67.8
M.Sc/PhD	9.3
Marital Status :	
Married	7.9
Married	91.4
Widowed	0.7
Working Experience:	
1 - 10 years	19.6
11 - 20 years	67.5
Above 20 years	12.9

Source : *Field Survey*

3.1.1 Gender

It was found that 78.6 percent were males while 21.4 percent were females. Gender studies (Olawoye, 1993) however have shown that more than 50 percent of the food produced in the developing countries is by women. Only 21.4 percent of the extension workers (females) can

work directly with women. In most of the countries where male extension workers have no access to women for socio-cultural reasons (Olawoye, 1993), women are likely to be under supplied with extension services.

3.1.2 Age and level of education

A larger percentage of the extension workers was found to be within the productive age group (less than 45) and only 12.9% were above 45 years of age. They were likely to be full of vigour and strength to carry out their responsibilities to transfer technology to the farmers. They would also be more likely adventurous particularly, in the search for a better alternative source for information generation. This was also indicated in the level of education of the respondents as only 2.9 percent had only secondary school education, 20 percent had post secondary education, 67 percent had degree and its equivalent while 9.3 percent had postgraduate education. This could therefore be regarded as an enlightened group. This high level of education of the respondents would likely endear them to the understanding of what kind of information they would need to be effective in their obligations.

3.1.3 Marital status

In addition, the result showed that, 92 percent were married. The marital status of the respondents could be regarded as a reflection of their age groups. Marital status confers on the male respondents some responsibilities.

3.1.4 Experience

Furthermore, findings revealed that approximately 80 percent of the respondents have more than 10 years of experience while 20 percent have less than 10 years of experience as extension workers. With long serving period, there was every tendency therefore, that the majority of the extension workers were in a better position to judge where they needed information based on the length of period of interaction with sources of information.

The distribution of extension workers according to Table 2, cuts across the hierarchy in extension service designations. The finding showed

that zonal managers were 1.4 percent of the respondents, the Zonal Extension Officers (ZEO) were 1.4 percent while Assistant ZEOs were 1.4 percent of the study population. Block Extension Agents comprised of 12.9 percent of the respondents, 66.4 percent were Field Extension Agents, the Subject Matter Specialists were 3.6 percent while 12.9 percent were Block Extension Supervisors.

Table 2: Distribution of respondents' designation

Designation	Percentage
Zonal Managers	1.4
Zonal Extension officers (ZEO)	1.4
Assistant (ZEO)	1.4
Block Extension Agents (BEA)	12.9
Field Extension Agent	66.4
Subject matter specialist	3.6
Block Extension supervisor	12.9

***Source** : Field Survey,*

The distribution of extension workers as indicated above makes provision for the extension service to reach every level of rural settings and strengthens subordination, which equally makes the line of management effective. The Training and Visit system according to Benor (1977) and as practised by Agricultural Development Projects (ADPs) emphasizes a single line of control.

3.2 Respondents' information needs

Table 3 provides the responses of the extension workers in regards to what information was required for their professional activities. It was found that the respondents required technical information, commercial information, social information, legal and general information.

3.2.1 Technical information

Respondents, according to Table 3, indicated a need for information on provision of high yielding crop varieties (90.0%), pests and disease control (76.4%), development of new methods of crop production (67.9%), and animal production and management (67.4%). There was also a need for information on fish production (60%) and on weather

reports (38.6%). The popularity in demand for technical information could be attributed to the fortnightly training (FNT) attended by the extension workers where a substantial amount of time of the FNT meetings, were usually devoted to teaching on technical subjects.

Table 3: Information needs of the respondents

Kind of Information	Percentage
Technical Information:	
Provision of high yielding Crop Varieties	90.0
Pests & Diseases control	76.3
New methods of crop production	67.9
Animal production & Management	61.4
Fish production & Management	60.0
Conduct of Field trials	43.6
Experimental Designs & Techniques	39.6
Weather Reports	38.6
Commercial Information :	
Cost of Farm inputs	60.7
Credits and cooperatives	48.6
Local market days	32.1
Import duties on farm implements	26.4
Export prices	20.0
Social Information:	
Community Development	63.6
Organizing Farmers' association	56.4
Home Economics	35.0
Legal Information:	
Land Use and Acquisition Law	46.4
Agricultural banks and agencies law	40.0
Legislation on agricultural products	37.1
General laws governing citizens	28.6
General Information:	
Extension methods	63.6
Administration and supervision	48.6
Information handling & Technology	32.1
Information on other discipline	30.0

Source: *Field Survey*

3.2.2 Commercial information

Extension workers also expressed a need to be informed on commercial aspects of agricultural production as 48.6% required information on credits and cooperative, 20% on export prices while 26.4% required information on import duties payable on farm implements. Furthermore, information was required on agricultural inputs by 60.7% of the respondents while only 32.1% required information on local market days. The lesser demand for commercial information in relationship with technical information may be explained due to the fact that most peasant farmers rarely ask questions from the extension workers with regards to the macro - economic aspect of their production. This therefore, reduces extension workers' desire for information in that regard.

However, farmers actually need to be informed regularly on how, when and where to take their produce for to be sold and at what price.

3.2.3 Social information

Extension workers, (who sometimes also serve as change agents), social workers and educators would need information that is appropriate to these services. According to Table 3, a need for information on community development and organization of farmers' association were expressed by 63.6% and 56.4% of the respondents respectively.

3.2.4 Legal information

The need for Legal Information with regard to public land use and acquisition, were expressed by only 46.4 percent of the respondents while 37.1% required information on legislation of agricultural products, 40% on agricultural banks and agencies and 28.6% expressed the need for information about general laws governing citizens. The relatively low need for legal information may be because of the primary responsibility of the extension worker that do not require knowledge of laws.

3.2.5 General information

General Information refers to the sundry information not classified under the above kinds of information and which could be of importance to the performance of the extension workers. In this discussion, 32% of the respondents expressed the need for information on communication strategies and technology, 30% on other disciplines while 48% sought information on administration and supervision. A very interesting finding is however that 63.6% of the respondents expressed the need for information on extension methods, a clear indication that extension workers require information on a variety of extension methods to enable them increase their performance in the field.

3.3 Prioritization of needs

According to Table 4, the respondents rated and ranked their information needs.

Table 4: Ranking of information needs by the extension workers (N = 140)

Information Needs	Ranking	Percentage
Technical information:	High	63.6
	Low	36.4
Commercial information:	High	13.6
	Low	86.4
Social information:	High	57.9
	Low	42.1
Legal information:	High	35.0
	Low	65.0
General information:	High	65.0
	Low	35.0

Source: *Field Survey*

A very interesting finding is that 65 percent of the respondents rated the need for general information higher than technical information. This is an indication that extension workers expressed a higher need for information with regard to extension methods, administration and supervision, the handling of technology information than for technical, commercial and legal information. Although, the difference between

General information (65%) and Technical information (63.6%) is not significant, there is a difference.

3.4 Sources of information

Table 5 shows the sources of information that extension workers were disposed to. The responses towards the sources indicated their present use and their intention to use or to continue to use in the future. Some of the sources that the respondents were more disposed to included; training (94.3%), supervisor (64.3%), conference & seminars (60.7%), research reports (59.3%), books/Journals (59.3%) and research stations (55.7%). The above mentioned sources had over 50 percent of the respondents subscribing to them, and about the same percentage, desired them for the future.

Table 5: Sources of information for extension workers in the present or in the future

Sources of Information	% Presently	Rank	% in the future	Rank
Boss (Manager/supervisor)	64.3	1	66.4	3
Colleagues	45.0	7	41.4	7
Clientele	23.5	10	15.0	12
Training	54.3	6	96.0	1
Research Stations	55.7	5	58.0	6
Books/Journals	59.3	3	62.1	5
Government gazette/newspapers	27.1	9	25.7	11
Electronic media (radio/television)	37.8	8	30.7	10
CDROM	12.1	12	37.8	9
Internet browsing	15.0	11	47.1	8
Research reports/technical bulletins	59.3	3	62.8	4
Conferences/Seminars	60.7	2	65.7	2

***Source**: Field Survey*
Mean = 274

Other sources of information disposed to the extension workers were colleagues, clientele, newspapers / government gazette, electronic media, CD-ROM and internet. This category had less than 50 percent of the respondents subscribing to them for information.

The result revealed that training was the most utilized source of information by the extension workers as about 95 percent affirmed it. This could be because, the training of extension workers as recommended by the Training and Visit (T&V) system, provides for very regular training meetings on new technologies. With the new wave of awareness on information and communication technology, the trend could change, towards the presently under utilized sources such as, internet, CD-ROM and other electronic media in the nearest future

Respondents, as shown in Table 6, scored the information sources which they were disposed to. The scores were used to determine whether the source of information was effective or not. Scores that were below the mean score (274) was regarded to be perceived as ineffective, while sources with scores above the mean were perceived as being effective. Further findings showed that training, research stations conference/seminar and supervision/management were ranked 1st, 2nd and 3rd respectively while CD-ROM (9th), internet (10th) and clientele (11th) were ranked last in that order.

Table 6: Respondents' perception on the effectiveness of information sources

Information Sources	Scores	Rank	Remarks
Boss	363	3	Effective
Colleagues	238	6	Ineffective
Clientele	99	11	Ineffective
Training	563	1	Effective
Research Stations	367	2	Effective
Books	352	4	Effective
Newspapers	168	8	Ineffective
Electronic media	208	7	Ineffective
CD - R OM	140	9	Ineffective
Internet	121	10	Ineffective
Technical bulletin	316	5	Effective
Conference/Seminar	363	3	Effective

***Source**: Field Survey*

On this basis, it was found that supervision/management, training, research stations, books, technical bulletins and conferences/ seminars

were perceived to be effective sources of information. The other listed sources were perceived to be ineffective. However, a source, such as the internet, may be difficult to be accepted as ineffective, since in recent time, internet has become a prominent global source of information on various subjects of human endeavour. Its perceived ineffectiveness could therefore, be attributed to the fact that, a large percentage of the respondents did not have access to internet or better put, did not make use of internet for information since only 15 percent of the respondents browsed on internet (Table 5). Reasons that may be adduced include the fact that, many of the extension workers reside among the rural dwellers where opportunities to access internet are limited.

In addition, other sources of information that were perceived to be ineffective were the extension workers' colleagues, clientele, newspaper, TV/radio and CD - ROM. This might also be attributed to inaccessibility as in the case of CD - ROM and to dearth of relevant information as in the case of colleagues and clientele. The perceived ineffectiveness of the radio however, contradicts the earlier finding of Adekunle *et al,* (2002), who reported that radio was an effective source of information for the adoption and increase in production for farmers in Ondo State, Nigeria.

3.5 Socio-economic characteristics and information needs

Table 7 shows the test of significance between information needs and some selected socio-economic characteristics of the extension workers, which included sex, age, designation, level of education, working experience and marital status. Others were household size and religion. It was found that only the working experience of the extension workers had a significant relationship with their perceived information needs. Other socio - economic variables did not show significant relationship.

4. CONCLUSION AND RECOMMENDATION

It has been found that 78.6 percent of the respondents were males, while only 12.9 percent were above 45 years of age. It was also found that 91.4 percent of the respondents were married and 80 percent have over 10 years working experience. While working experience has significant relationship with information needs all other socio-economic

Table 7: Result of test of significance, between information needs and selected respondents' socio-economic characteristics

Variables	Chi-square	Degree of Freedom	Significance at 0.05	Decision
Sex	43.74	56	.883	NS
Age	101.50	112	.705	NS
Designation	113.70	140	.950	NS
Education	85.19	84	.445	NS
Working experience	140.54	84	.000	S
Marital status	44.78	56	.859	NS
Household size	44.78	84	.245	NS
Religion	18.99	28	.898	NS

***Source** : Field Survey*
NS = Not significant
S = Significant

characteristics, such age, gender, marital status and house hold size have no significant relationship with information needs.

The information needs of extension workers have been found to include technical, commercial, social, legal and general information. The distribution of the extension workers according to the information needs therefore varies. However, training, supervision/management, conference/seminar, research reports were among the most expressed by the extension workers as information needs for extension activities.

Extension workers were equally disposed to several information sources, however the bulk of the information that they received was from regular training, seminars/conferences and their supervisors. Only the working experience of the extension workers among their socio - economic characteristics had significant relationship with their information needs. It was also found that, the extension workers rated technical information and general information higher than the rest of the information needs in the study.

It is therefore recommended that, in addition to the training received by the extension workers, efforts should be made to sensitize them towards the use of electronic technology to obtain up-to-date global

information relevant to their profession. In addition the content of the training should include the basics of computer literacy to enable the extension workers to be able to access internet and similar information technologies.

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