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## ASSESSMENT OF THE KNOWLEDGE LEVEL OF FOOD SECURITY AMONG EXTENSION AGENTS IN OYO STATE AGRICULTURAL DEVELOPMENT PROGRAMME

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### ABSTRACT

The study was carried out to identify and describe extension agents' knowledge levels of food security in order to ascertain their education and training needs within the extension system. Simple random sampling technique was adopted in selecting 50% of all the extension agents across the four agricultural zones in the state. A total of 85 extension agents were proposed for the study but 82 extension agent were eventually considered due to number questionnaires retrieved from them. Majority (63.4%) of extension agents sampled were in the active age of 31 – 40 years with a mean age of 43 years. About 84.4% of the extension agents were males and 85.4% were married. Majority of extension agents had higher educational qualifications. Some of the respondents participated in different food security related programmes which include National Food Programme on Food Security (NPFS) (32.9%), Root an Tuber Expansion Programme (RTEP) (17.0%) and 18.3% participated in Agro processing Marketing Expansion Group (AMEG). The means years of working experience in food security related programmes was 5 years The constraints militating against the implementation and attainment of food security related programmes as identified by the agents include inadequate/insufficient funds passive participation of farmers and financial indiscipline among the farmers. Analysis of Variance (ANOVA) shows no significant difference between the extension agents' educational background and their knowledge of food security programmes. The study concluded that knowledge levels of extension agents in food security were probably due to their exposure and participation in food security programmes and not educational background. Therefore agents need to be trained and encouraged to participate in food security programmes in to address the needs of their clientele.

**KEYWORDS:** food security, knowledge level, extension agent, assessment

### INTRODUCTION

Nigeria is characterized by high reliance on food imports with rural areas vulnerable to chronic food shortages, malnutrition, unbalanced nutrition, erratic food supply, poor quality foods, high food costs, and even total lack of food. This phenomenon cuts across all ages, groups and categories of individuals in the rural areas (Akinyele, 2009).

Food security has been viewed differently by scholars. According to Food and Agricultural Organization of the United Nations (FAO, 2001), food security is a situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life Food security involves not only food availability through domestic production, storage or trade but also more importantly, food access through home production and purchase in the market. Iheanacho and Abdullahi (2006) opined that, food security is therefore not only the availability but also the accessibility, procurement and intake of adequate food (in both quantity and quality) by individual, households, community or region. Food production in the developing world is projected to increase by 45% between 1997 and 2020. However, this is likely not to be enough to keep pace with the expected population growth and if the countries and the households are unable to produce sufficient food to meet their needs, they will need to purchase it. The ability to purchase it will then depend upon their income level. Currently 1.2 billion people about 30% of the world's population have only a dollar a day or less per person to meet their basic needs (IFPRI, 2002). Ogiji (2004) views the concept of food security as traversing various segments of the nation. It transcends individual, household, local and state government and even national levels. Food security is embedded in agriculture, which traditionally is the mainstay of the Nigerian economy. In order to achieve food

demand of a rapidly growing population like Nigeria enough food has to be made available through domestic production and this can greatly be achieved through increase in agricultural production.

Empirical evidences on the impact of agricultural extension in food production from different parts of the world abound. In Kenya, agricultural extension has helped in bringing about increased farm yields on several crops. In India, the Training and Visit (T and V) system of agricultural extension has been effective in raising agricultural output. Similar evidences were reported of Uganda and Burkina-Faso (Blindlish and Evenson, 1993; Appleton and Balihuta, 1996). Therefore, any form of scientific research, which would be of help to farmers must appreciate the role of extension services to interpret and carry the results in a very practical form to the small holders who produce the bulk of food for the ever-growing population.

A number of agencies, including federal and state governments have embarked on various programmes to make food available, accessible and nutritionally acceptable. However, a number of rural dwellers have not been able to benefit from these programmes. Therefore, extension system in the country needs to be up and doing in letting its extension agent have in-depth knowledge of the concept of food security. The study therefore assessed the knowledge level of food security concept of extension agents in Agricultural Development Programme (ADP) of Oyo State, Nigeria.

#### METHODOLOGY

The study was carried out in Oyo State of Nigeria. The State was divided into four (4) agricultural zones, namely Ibadan/Ibarapa zone, Saki zone, Oyo zone and Ogbomoso zone. Fifty percent (50%) of the extension agents (EAs) was considered from each agricultural zone to arrive at total of 85 extension agents that constituted the sample size of the study (Table 1). The descriptive statistical tools used for the study include frequency distribution, means and percentages, while Analysis of Variance (ANOVA) was used as inferential to test the relationships that exist among certain variables.

Table 1. Distribution of sampled extension agents by zone

| Zone           | Number of Extension Agents | Number of extension agents sampled (50%) |
|----------------|----------------------------|------------------------------------------|
| Ibadan/Ibarapa | 56                         | 28                                       |
| Saki           | 42                         | 21                                       |
| Oyo            | 40                         | 20                                       |
| Ogbomosho      | 32                         | 16                                       |
| Total          | 170                        | 85                                       |

Source: Field Survey, 2010

#### RESULTS AND DISCUSSION

The data presented in Table 2 showed that 4.8% of the respondents were within the age group of less than 30 years; while 63.4% were within the age of 31-40 years; while 26.7% were within the age group of 41-50 years and 4.8% were 50 years and above. This indicates that majority of the extension agents sampled are middle aged and this is expected to enhance their capability in discharging their respective role in the job. The mean age of the respondents is 37.50 years. Table 2 also revealed that 64.3% of the respondents were male and 35.7% were female. This indicates that majority of the extension agents were male in the study area. The study showed that 22.6% of the respondents were Masters of Sciences holders (M.Sc), 44% Bachelor of Science holders (B.Sc), 22.6% Higher National Diploma holders (HND), 6.0% Ordinary National Degree holders (OND), 1.2% National Certificate Examination holders (NCE). This indicates that, majority of the extension agents considered for this study are university graduates and should be capable of executing the educational tasks of extension profession. The study shows that 67.1% of the respondents indicated non-participation in food security related programmes, while 32.9% indicated their participation in such programmes. The study revealed that 14.6% of the respondents were single and 85.4% were married. This indicates that, a larger percentage of the extension agents are married and this is expected to encourage their stability in their different geographical locations thereby influencing the farmers – extension agents' relationship.

Table 2. Distribution of respondents by personal characteristics n = 82

| Characteristics                                | Frequency | Percentage |
|------------------------------------------------|-----------|------------|
| Age range (Years)                              |           |            |
| ≤ 30                                           | 4         | 4.8        |
| 31 -40                                         | 52        | 63.4       |
| 41 – 50                                        | 22        | 26.7       |
| > 50                                           | 4         | 4.8        |
| Total                                          | 82        | 100        |
| Sex                                            |           |            |
|                                                | Frequency | Percentage |
| Male                                           | 54        | 64.3       |
| Female                                         | 28        | 35.7       |
| Total                                          | 82        | 100        |
| Educational level                              |           |            |
|                                                | Frequency | Percentage |
| M Sc.                                          | 17        | 22.6       |
| B. Sc.                                         | 37        | 44.0       |
| HND                                            | 22        | 26.2       |
| OND                                            | 5         | 6.0        |
| NCE                                            | 1         | 1.2        |
| Total                                          | 82        | 100        |
| Marital status                                 |           |            |
|                                                | Frequency | Percentage |
| Single                                         | 12        | 14.6       |
| Married                                        | 70        | 85.4       |
| Years spent on food security related programme |           |            |
|                                                | Frequency | Percentage |
| 1 – 10                                         | 81        | 98.8       |
| 11 – 20                                        | 1         | 1.2        |
| Total                                          | 82        | 100        |

Source: Field Survey, 2010

Results in Table 3 show that 64.6% of the extension agents indicated their participation in food security programmes while, 35.4% did not. About 34% of the respondents indicated their participation in National Programme on Food Security (NPFS) while, 17% indicated Root and Tuber Expansion Programme (RTEP), and 15.9% of the respondents participated in Agro processing Marketing Expansion Group (AMEG) (Table 4). The variation in the participation of the respondents in food security related programmes may be due to the differences in the programmes assigned to them in their respective zones.

Table 3. Distribution of Respondents by Participation in food security related programme (n=82)

| Participation in food security programmes | Frequency | Percentage |
|-------------------------------------------|-----------|------------|
| Participants                              | 53        | 64.6       |
| Non-participants                          | 29        | 35.4       |
| Total                                     | 82        | 100        |

Source: Field Survey, 2010

Table 4. Distribution of respondents by the types of food security related programmes in which they participated (n=53)

| Types of Programme | Frequency | Percentage |
|--------------------|-----------|------------|
| NPFS               | 28        | 52.8       |
| RTEP               | 30        | 56.6       |
| AMEG               | 25        | 47.2       |

Source: Field Survey, 2010

Table 5 revealed that 64.2% of the respondents indicated their involvement in information dissemination aspect of food security programmes, 13.2% indicated site personnel, 11.3% of the respondents indicated loan facilitation, while 11.3% of the respondents indicated training of farmers in food security related programmes. This implies that the extension agents sampled for the study were involved in diverse aspects of food security programmes. The study revealed that 84.9% of the respondents indicated inadequate/insufficient funds as one of the constraints militating against the execution of food security programmes while, 90.6% of the respondents indicated passive participation of farmers and 71.7% indicated financial indiscipline among the farmers (Table 6).

Table 5: Distribution of respondents by their involvement in specific aspects of food security programme n= 53

| Aspect of programme       | Frequency | Percentage |
|---------------------------|-----------|------------|
| Information dissemination | 34        | 64.2       |
| Site personnel            | 7         | 13.2       |
| Facilitation of loan      | 6         | 11.3       |
| Training                  | 6         | 11.3       |

Source: Field Survey, 2010

Table 6. Distribution of respondents by the constraints faced in executing the food security related programme n =53

| Constraint                               | *Frequency | Percentage |
|------------------------------------------|------------|------------|
| Inadequate/insufficient funds            | 45         | 84.9       |
| Passive participation of farmers         | 48         | 90.6       |
| Financial indiscipline among the farmers | 38         | 71.7       |

Source: Field Survey, 2010 \* Multiple responses

This phenomenon is likely to negate the achievement of food security programme objectives. The knowledge score means of the extension agents by their educational qualification were compared using One way Analysis of Variance (ANOVA). Extension agents' knowledge of food security concept was measured by summing their standardized knowledge question points. The possible score range was zero (if none was correct) to 18 points (if all questions were answered correctly). The observed knowledge questions scores were between 6 and 18 points, with a mean of 16.3 and a standard deviation of 1.13 approximately. The means, standard deviations and ranges of their scores are listed in Table 7. The ANOVA comparing knowledge scores (Table 8) showed no significant ( $0.893=0.05$ ) differences among extension agents of different educational background.. This implies that extension agents' knowledge of food security are determined by their exposure to participate in food security related programme and not their educational background. This finding corroborates with that of Semana (1999) that explained the understanding of extension concept as based on three premises namely being educational, having a philosophy and scope with responsibilities.

Table 7. Descriptive Statistics of Agents Standardized Knowledge of Test Scores by their Educational Qualification n= 82

| Group  | N  | Mean     | SD      | Range   |         |
|--------|----|----------|---------|---------|---------|
|        |    |          |         | Minimum | Maximum |
| M. Sc. | 17 | 13.7500  | 3.59398 | 9.00    | 17.00   |
| B.Sc.  | 37 | 14.5366  | 2.60862 | 6.00    | 18.00   |
| HND    | 22 | 14.8462  | 3.01586 | 7.00    | 18.00   |
| OND    | 5  | 15.0000  | 2.82843 | 11.00   | 17.00   |
| NCE    | 1  | 15.0000  | 0.83666 | 30.00   | 15.00   |
|        |    | 14.73117 | 2.68074 | 6.00    | 18.00   |

Source: Field Survey, 2010.

Scores on a scale of zero points for all incorrect to 18 point for all perfect responses

Table 8. One-Way Analysis of Variance of Oyo State Extension Agents Knowledge Scores by their Educational Qualification

| Source        | Sum of Squares | Degree of freedom | Mean Square | F    | Sig  |
|---------------|----------------|-------------------|-------------|------|------|
| Between Group |                | 6                 | 2.828       | .375 | .893 |
| Within Group  |                | 75                | 7.535       |      |      |
| Total         |                | 81                |             |      |      |

Source: Field Survey, 2010

## CONCLUSION

Results of the study reported here indicate that, majority of the extension agents in the study area have a wide range of knowledge levels food security concept. The results regarding the differences in knowledge levels by educational qualifications were amazing. It was anticipated that extension agents with higher educational backgrounds would have higher knowledge levels of food security concept. However, it was found that knowledge level of extension agents was probably due to their exposure and participation in food security related programmes and not their educational backgrounds. Extension agents are the front-line responders to their clientele's needs such as food security. Hence, the need to provide them with the knowledge, training and networking them with specialists that deal with food security issues. Agents should also be encouraged to participate in food security related programmes.

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