

Full Length Research Paper

Perceived efficacy of radio agricultural commodities trend programme among farmers in Oyo State, Nigeria

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Given the strategic position of marketing information in food supply chain and the significance of its ready accessibility to teeming farmers, this study assessed the efficacy of radio agricultural commodities trend programme among farmers in Nigeria. One Hundred and Thirty Nine farmers from four farm settlements were randomly selected and interviewed and data analysed using descriptive and inferential statistics. Results indicate that most farmers were middle aged 30 to 49 (64.1%), male (69.1%), married (91.4%) and farmers with 11 to 15 years of formal education in the modal class (69.1%). More farmers (55.4%) had favorable disposition to the radio programme while farmers' disposition were highest in areas of enhancement of farmers' bargaining power ($\bar{x} = 1.8$) and boost in products' sale ($\bar{x} = 1.8$). Farmers benefited most from increased income ($\bar{x} = 2.4$) and least from reduced market risks ($\bar{x} = 2.2$). Farmers' education ($\chi^2 = 0.53; 0.64$), age ($\chi^2 = 0.68; 0.55$), gender ($\chi^2 = 0.42; 0.56$) had no significant relationship with perceived efficacy and benefits, respectively. The radio agricultural commodities trend programme proved effective from farmers' favorable disposition therefore should be sustained and broadcast for longer duration for effective extension advisory services delivery capacity to guarantee sustainable livelihood in rural areas.

Key words: Agricultural commodities trend, radio programme, perceived efficacy, perceived benefits, sustainable livelihood.

INTRODUCTION

Market information systems play an important role in agro-industrialisation and food supply chain and it is one of the very strategic information needs of vast majority of farmers. In the opinions of Ozowa (1995) and Leroux et al. (2001), farmers' market information needs are those that enable them to make rational and relevant decisions. Market information services have the function of collecting and processing market data systematically and continuously and making it available to market participants in a form relevant to their decision making. It provides farmers with how, when, what and where of agricultural commodities thereby allowing for maximization of efforts and deployment of farm resources to

to meet clients needs. This corroborates the position of the Food and Agricultural Organization (FAO, 2005) which asserts that market information enables farmers to make informed decisions about what to grow, when to harvest, to which markets produce should be sent and whether or not to store products.

This goes a long way to determine the success or otherwise of farming enterprises. Marketing service, in recent years, have seen an increased interest in Market Information Services (MIS) and it is acknowledged that efficient market information provision can be shown to have positive benefits for farmers, traders and policy-makers. In developing countries, market information initiatives are often part of broader interventions and part of the agricultural marketing and agribusiness development strategy that many governments are actively engaged in (Haerah et al., 1979; Helder and Nyhoff, 1994; Lutz, 2006). It is commonly understood that long transaction

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chains, lack of transparency, lack of standards and insufficient access to markets for products has perpetuated low incomes in predominantly agrarian economies. Babatunde and Oyatoye (2005) identified inadequate market infrastructure among other several factors responsible for food security and marketing problems in Nigeria.

The relevance of this position will be well appreciated if one considers the triangular relationship between food production, food marketing and food security. In the opinion of Von Braun et al. (1992), food security is jointly determined by availability of food and accessibility to the food. Availability of food is a function of food production, stock holding and food marketing. Certainly, raising agricultural productivity by increasing the land area planted may increase yield per hectare, while food availability could be increased (Babatunde and Oyatoye, 2005). However, availability is not enough. The food produced must be distributed efficiently at minimum costs in order to guarantee continuous availability of the food. This is the subject of food marketing. Olayemi (1982) observed that food marketing is very important but rather neglected aspect of agricultural development. More emphasis is usually placed, by government on policies to increase food production with little or no consideration on how to distribute the food produced efficiently and in a manner that will enhance increased productivity.

In other words, food marketing by farmers and their families, mostly in the immediate post-harvest period usually involves a lot of costs and in Nigeria these costs are so high that lowering the costs through efficient marketing system may be as important as increasing agricultural production (Ahmed and Rustagi, 1987). It is on the basis of this that efforts are made to bring to farmers relevant market information. Ozowa (1995) observed that in Nigeria, agricultural market information to small scale farmers is provided by the Ministry of Agriculture through the field level extension workers and by the broadcasting media. Institutional and governmental organs are also in place to ensure that farmers get to know and adopt agricultural innovations relevant to their situations, including market information. One of such institution in Nigeria is the National Agricultural Extension and Research Liaison Services (NAERLS), the institution that provides technical backing to the Agricultural Commodity Trend Programme (ACTP) on the national radio. The use of radio by NAERLS was predicated by acclamation that radio is one of the most potent tools in the arsenal of agricultural information dissemination (NAERLS, 1992) and has the ability to permeate political, physical and sociological barriers which has made it the greatest of all available media in popularization of ideals and concepts.

Radio farm broadcast in Nigeria is conveniently traceable to the early 1960s when various regional governments in Nigeria, through the communication units of the ministries of agriculture, introduced the farm broadcast. Subsequently, all national agricultural intervention programmes till date have made use of radio as potent

tool of touching base with the targets and beneficiaries of development oriented programmes in health, agriculture and environment. Omenesa (1994) observed that radio programmes are usually timely and capable of extending messages to target audience irrespective of location thereby bridging gaps that are palpable with difficult terrain, distance, topography, time and socio-political exigencies. The apparent innumerable advantages of radio over other mass media had endeared it to development and social workers, governments and non-government concerns who have continued to exploit such benefits. Hence, radio has been used in both developed and developing world in development intervention programme especially in agricultural information dissemination; various studies have equally reported radio as an effective channel of communication particularly in agricultural information for farmers' benefits (Enitan, 1988). This has gone a long way to facilitate extension delivery as it perfectly complements the work of agricultural extension agents.

Against the backdrop of providing adequate protection for smallholder farmers from exploitation from middle men who patronise small scale farmers at the farm gates, marketing information is considered germane to ensuring fair treatment of small scale farmers who are often at the mercies of exploitative tendencies of the middlemen. Though recent Information and Communications Technology (ICT) developments in developing countries including Nigeria, such as the expansion in the use of cell phones, have opened up the possibility for speedier transmission of information, its effective deployment to reach farmers is still limited and largely remote in Nigeria at present due to infrastructural challenges. It is against this background that existing dedicated radio programme committed to providing marketing information requires constant evaluation for effectiveness and promptness of its services to its clientele. Therefore, this study investigated perceived effectiveness and benefits derivable from the Agricultural Commodity Trend Programme (ACTP) among members of its listeners' groups who are predominantly farmers. Specifically, the study,

1. Profiled personal and socioeconomic characteristics of members of the radio listeners' groups (farmers) in the study area.
2. Ascertained the general perception of the members of the listeners' group about the programme.
3. Determined the benefits derivable from the radio programme by members of the listeners' groups.

MATERIALS AND METHODS

The programme: ACTP

This programme is anchored on the national radio in Nigeria and is being sponsored by the NAERLS. Established in 1963, NAERLS is an arm of Ahmadu Bello University (ABU) Zaria charged with the responsibility of providing grassroots extension delivery to Nigerian farmers. As one of its strategies to deliver on its mandate is the use

of various radio farm broadcast dealing with wide variety of issues for extension service delivery to farmers. According to NAERLS Bulletin Number 3 (2008), the radio broadcast of ACTP was conceived to bridge the wide gap of timely provision of market information to the diverse target users. Among these users are the small scale farmers incapable of penetrating markets, merchants, commodity agents, processors, industrialists and consumers alike. To achieve this, a mixture of rural and urban markets located in six locations in Nigeria namely, Zaria, Bida, Maiduguri, Umuahia, Ibadan and Elele are being used to capture weekly prices of 25 selected agricultural commodities using standard and familiar measures.

The information from these markets are tabulated capturing price variation across the country and aired on a weekly basis on the national radio stations in seven familiar languages including local and English languages. In Oyo state where this study was carried out, listeners' groups were maintained in farm settlements by programme anchors to monitor the effect and impact of the radio programmes on the beneficiaries. These farm settlements are located in Akufo, Ido, Lalupon, Ipapao/Iseyin, Iresaaadu, Eruwa, Ilora, Ogbomosho and Ijaiye. The programme is broadcast for 15 min twice a week from 18:15 to 18:30 h on Mondays and Wednesdays.

Sampling and sample size

Respondents for this study were drawn from established farm settlements in Oyo state, Nigeria. The state houses one of the national broadcast stations and the programme anchors maintained listeners' groups. The study used a cross-sectional quantitative method to collect data from the targets while a multi-stage sampling technique was used to draw samples for this study. In the first stage, about 50% of the farm settlements were randomly selected yielding four farm settlements. Membership lists of the listeners' groups in the four farm settlements retrieved from the anchor of the ACTP were used to randomly select 30% of members of each listeners' groups. A total of 139 respondents from Akufo (29), Ijaiye (33), Ilora (40) and Ogbomosho (37) were interviewed through an interview schedule to collect relevant data for the purpose of this study.

Measurement of variable

Independent variables

Independent variables measured in this study include personal characteristics like farmers' sex, age, educational qualification, marital status, religion and farm size. Farmers were asked to pick options applicable to them from variety of options provided for these variables.

Dependent variables

For the dependent variable (perceived efficacy), a nine-item perception statements comprising of both positive and negative statements were used to gauge respondents' general disposition and programme acceptance. Respondents were asked to indicate whether they agree, are indifferent to or disagree with the statements and were scored as 2, 1 and 0 for positive statements and in the reverse order for negative statements. Maximum score of 18 and minimum of 0 were obtainable. Respondents were categorised into low (below mean scores) and high (score above and mean equivalents) perceptions.

Benefits derived from the ACTP

For benefits derived by members of the listeners' group, a list of five benefits derivable from access to market information namely increased farm and firm incomes, higher farm gate prices, development of new expanded markets for products, reduced market risks and improved farm management were presented to respondents to indicate how each of these are applicable to them as benefits derived from the market information provided by ACTP. Benefits applicability to respondents was measured as very applicable, applicable partially applicable and not applicable and scored as 3, 2, 1 and 0, respectively. Minimum and maximum scores were 0 and 15, respectively.

Data analysis

Data were analyzed using descriptive statistics such as frequency counts, percentages, means and standard deviation and inferential statistics (chi-square) was used to find the level of association between variables.

RESULTS AND DISCUSSION

Respondents' personal characteristics

From available data in Table 1, most of the respondents were middle aged between 30 to 39 (20.9%) and 40 to 49 (43.2%) years. Only a few (6.5%) were 60 years and above. The table further indicates that majority were male (69.1%) and married (91.4%). Quite a majority of the farmers in this study were educated with 69.1% having had 11 to 15 years of formal education and 20.1% had formal education that spanned more than 15 years. They were mostly of Islamic faith (56.1%) with average farm size of 6 to 10 hectare of land (70.1%) and another 7.0% with more than 10 hectare of land. Available data on the socio-economic and personal characteristics of farmers in this study portray an averagely well-off farming population in farm settlements across the study area. The population is young and active, averagely educated, with fairly large farm size. Perhaps, the idea of having elite farmers in farm settlements could be deduced as reasons for trend observed in this study as it negates familiar drift of small holder, little education and quite older population in previous studies (Yahaya and Olajide, 2005; Yahaya and Badiru, 2002). However, the finding of this study corroborates previous findings among elite farmers as Oladeji (2011) reported high level literacy among farmers in Ibadan city and Makanjuola (2002) who reported high newspaper readership among elite farmers especially those in middle age groups.

Respondents' perceived efficacy of ACTP

Information in Table 2 indicates farmers' general dispositions to the ACTP. It presents farmers' view on issues ranging from broadcast hour, duration, adequacy of information, programme content and message clarity. It also

Table 1. Respondents' personal characteristics.

Variable	Frequency	Percentages
Age		
20-29	8	5.8
30-39	29	20.9
40-49	60	43.2
50-59	33	23.7
60 and above	9	6.5
Sex		
Male	96	69.1
Female	43	30.9
Marital status		
Single	6	4.3
Married	127	91.4
Widowed	6	4.3
Years of formal education		
< 10years	14	10.0
11-15	96	69.1
>15	29	20.9
Religion		
Islam	78	56.1
Christianity	56	40.2
Traditional	5	3.6
Farm size (ha)		
1 – 2	10	7.0
2-5	23	16.5
6-10	96	70.5
>10	10	7.0

Source: Field Survey (February 2011).

It also addresses feedback mechanism, enhancement of farmers' bargaining power, consistency of information obtained from ACTP with what obtains in the markets and boost of farmers' products sale. A critical look at the farmers' perceived efficacy of the ACTP reveals that farmers' disposition were highest in areas of enhancement of their bargaining power ($\bar{x} = 1.8$), boost in products' sale ($\bar{x} = 1.8$) and adequacy of marketing information ($\bar{x} = 1.7$) from the radio agricultural marketing information programme. This implies that over the years, farmers have been able to negotiate well with the middlemen and direct consumers of farm products and thus increased sales with good prices. Other areas farmers were well disposed to as regards the ACTP were feedback mechanism ($\bar{x} = 1.4$), message clarity ($\bar{x} = 1.4$) and broadcast hour ($\bar{x} = 1.2$).

The trend observed in these results can be attributed to

broadcast of the programme in several (seven) indigenous languages and the Nigeria's official language (English), phone-in session in some dedicated editions of the programme as well as the suitability of the broadcast hour being in the evening. Yahaya (1995) observed that most farmers observe this period as leisure time in most farm settlements. However, while farmers' judgement of the programme content ($\bar{x} = 1.0$) and consistency of programme prices with market prices ($\bar{x} = 1.0$) were average, the programme anchors would have to work on the programme duration ($\bar{x} = 0.9$) that was adjudged low by farmers. The plausible explanation for the low rating of the duration stems from lack of adequate sponsorship of the programme as only the government agency charged with the responsibility of agricultural extension services in Nigeria provides sole sponsorship for the programme on radio and could only afford two session of 15 min duration

Table 2. Respondents' perception of efficacy of the commodity trend programme.

Remark (positive/negative)	Perception statement	Mean (\bar{x})	SD
1-	The broadcast hour for the ACTP broadcast is inappropriate	1.2	0.88
2-	The duration of the programme is too short for meaningful impact on the target	0.9	0.90
3+	Adequate agricultural products marketing information are disseminated through the programme	1.7	0.52
4+	Programme contents cover a wide range of agricultural commodities	1.0	0.95
5-	Messages disseminated through the ACTP on radio are unclear	1.2	0.87
6+	Adequate provisions are made for cross-checking unclear messages by audience from the radio presenters	1.4	0.75
7+	Pieces of information provided by the ACTP have been quite useful in my price bargaining in marketing my agricultural products	1.8	0.48
8-	Information from the ACTP sometimes contradicts what obtains in the market	1.0	0.92
9+	Over the years, the programme has helped considerably to boost the sale of my farm products	1.8	0.50
	Overall mean perception	1.4	0.75
	Categorization of perceived efficacy of ACTP	High 77 (55.4)	Low 62 (44.6)

Figures in parentheses are percentages.
Source: Field Survey: (February 2011)

Table 3. Respondents' perceived benefits of the commodity trend programme.

Variable	Mean (\bar{x})	SD
Increased income	2.4	0.57
Higher farm gate prices	2.3	0.65
New expanded market for farm products	2.3	0.69
Reduced market risk	2.2	0.71
Improved farm management	2.3	0.83
Overall benefits	2.3	0.67

Source: Field Survey (February 2011).

duration per week. Overall, 55.4% of the respondents had favourable (high) disposition to the ACTP while 44.6% rated the programme low in all the indices of measure combined. With overall mean average score of 1.4, the programme could be adjudged to have lived up to its expectation irrespective of the proportion of respondents (44.6%) who rated the programme low.

Respondents perceived benefits of ACTP

Statistics in Table 3 show that farmers had benefited in one way or the other in the derivable benefits from accessing marketing information from the radio programme. Farmers benefited most from increased income ($\bar{x} = 2.4$), while they benefited equally from higher farm gate prices ($\bar{x} = 2.3$), new expanded market ($\bar{x} = 2.3$), improved farm management ($\bar{x} = 2.3$) and least from

reduced market risk ($\bar{x} = 2.2$). The general favourable disposition of farmers in areas of enhancement of their bargaining power, boosting of farmers' agricultural product sales and adequacy of the market information earlier reported in this study easily explains high ratings of the perceived benefits of the radio marketing information.

Respondents' personal characteristics and perceived efficacy and benefits from ACTP

Results in Table 4 indicate that there is no significant relationship between all selected farmers' personal characteristics and perceived efficacy of the ACTP on one hand and the perceived benefits on the other hand. This implies that farmers' perception of the programme's efficacy and benefits derived were similar across farmers' statuses such as farm holdings (small and large), marital (single, married and divorced), gender, categories of years of formal education and age group. It can therefore be safely concluded that perhaps because of general wide acceptance of the ACTP among the farmers as evident in the favourable disposition expressed in the assessment of its efficacy and benefits derived, farmers' individual idiosyncrasy could not tell on their assessment of the programme efficacy and benefits derived.

CONCLUSION AND RECOMMENDATIONS

Evidently, the study revealed that overall farmers' positive disposition to the radio agricultural commodities trend

Table 4. Chi-square analysis of farmers' personal characteristics and perceived efficacy of the agricultural commodity trend programme.

Variable	Perceived efficacy		Perceived benefits		
	Df	χ^2	Decision	χ^2	Decision
Farm size	3	0.88	NS	0.67	NS
Marital status	2	0.20	NS	0.83	NS
Gender	1	0.42	NS	0.56	NS
Years of formal education	2	0.53	NS	0.64	NS
Age group	4	0.68	NS	0.55	NS

programme was high. Farmers equally rated all indices of measure of perceived efficacy positively. However, programme duration was lowly rated. Farmers benefited most from increased income and least from reduced market risks. Farmers' assessments of perceived efficacy and benefits derived from the ACTP were not significantly influenced by their individual personal characteristics. It is therefore recommended that;

1. A review of time duration for the programme from the current two sessions per week and 15 min duration to more sessions weekly and for longer duration.
2. Advocacy for multi-agency sponsor of the programme to buy more airtime for broadcast of the ACTP on radio.
3. Similar programme can equally be covered on television and other media like newspapers.
4. Emphasis can also be given to dissemination of information about market risks.

REFERENCES

- Ahmed R, Rustagi N (1987). Marketing and Price Incentives in African and Asian Countries: in Elz D (ed) *Agricultural Marketing Strategy and Pricing Policy*, International Bank for Reconstruction and Development. Washington, USA. p. 58.
- Babatunde R, Oyatoye E (2005). Food Security and Marketing Problems in Nigeria: The Case of Maize Marketing in Kwara State "The Global Food and Product Chain. Dynamics, Innovations, Conflicts, Strategies" *Deutscher Tropentag*, October 11-13, 2005, Hohenheim. pp. 1-10.
- Enitan O (1988). Comparative Analysis of Radio and Television Drama. Unpublished Bsc Thesis. University of Ibadan. Ibadan, Nigeria. 215p.
- Food and Agricultural Organization (FAO) (2005). *Agricultural Marketing Information System*. Food and Agricultural Organization Agricultural Marketing Groups FAO, Rome. pp. 1-43.
- Haerah A, Gani R, Schubert B, Zehrfield EH (1979). *Manual of Operations for an Agricultural Market Information Service*, Indonesian German Technical Cooperation Project ATA 85/86 Publication No. 7.
- Helder J, Nyhoff J (1994). Market Information for Early Warning, Document presented to the 1994 SADC Early Warning System for Food Security Training Workshop, Harare. p. 23.
- Leroux N, Wortman MS, Mathias ED (2001). Dominant Factors Impacting The Development of Business-To-Business (B2b) E-Commerce In Agriculture. *Int. Food Agribus. Manage. Rev.*, 4(2): 205 – 218.
- Lutz C (2006). Maize Market Liberalisation in Benin: A Case of Hysteresis. *J. Afr. Econ.*, 16(1): 102 – 133.
- Makanjuola SS (2002). Analysis of Reportage of Agricultural News and Advertisements in the Pioneer Newspaper (2001 AD). Thesis Submitted to the Department of Agriculture Economics and Extension. University of Uyo, Nigeria. p. 115.
- National Agricultural Extension Research Liaison Services (NAERLS) (1992). *Agricultural Extension and Commercialization of Broadcasting*. A Newsletter of NAERLS March 1992 Edition.
- National Agricultural Extension Research Liaison Services (NAERLS) (2008). *Agricultural Commodities Prices*. Quarterly Bulletin: October-December 2008.
- Olayemi JK (1982). Improved Marketing as a Strategy for Generating Increased Food Production, A Nigeria Experience. *West Afr. J. Agricultural Econom.*, 1(1): 21-26.
- Oladeji JO (2011). Farmers' Perception of Agricultural Advertisements in Nigerian Newspapers in Ibadan Municipality, Oyo State, Nigeria. *J. Med. Commun. Studies*, 3(3): 97-101.
- Omenesa Z (1994). The Role of Media in Agricultural Extension Communication. A Paper Delivered at the Training of Media Officers in Research Institutes. ABU Zaria March, 1994. p. 5.
- Ozowa VN (1995). Information Needs of Small Scale Farmers in Africa: The Nigerian Experience. *Consultative Group on International Agricultural Research (CGIAR) Newslett.*, 4(3): 10 – 12.
- Von Braun J, Bouis H, Kumar S, Pandya-Lorch R (1992). *Improving Food Security of the Poor: Concept, Policy and Programs*. International Food Policy Research Institute, Washington, USA. p. 7.
- Yahaya MK (1995). Determination of Agricultural Information Needs and Media Use Pattern of Women Farmers in North-Central Nigeria. Unpublished Ph.D Thesis. University of Ibadan, Nigeria. p. 347.
- Yahaya MK, Badiru OI (2002). Measuring the Impact on Farmers of Agricultural Radio and Television Programs in Southwest Nigeria. *J. Appl. Commun.* 86(3): 24-36.
- Yahaya MK, Olajide BR (2005). Perceived Efficacy of Indigenous Media in Agricultural Information Dissemination in Ihiala Local Government Area of Anambra State. *Niger. J. Rural Sociol.* 5(1&2): 130-136.