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Effects of Indigenous Communication Methods on Agricultural Innovation Dissemination among Rural Women Farmers in Imo State, Nigeria

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ABSTRACT
The study examined the effect of indigenous communication methods on innovation dissemination to women farmers In Imo State, Nigeria. The study among other specifics, investigated indigenous communication methods used in disseminating agricultural innovation among rural women in the study area; examined effects of indigenous communication method on innovation diffusion among rural women. Data were collected from 300 rural women farmers selected through multistage sampling procedure. Frequency count, Percent score and Analysis of variance were used to analyze the data collected. The result indicated that name (90.3%) was the major indigenous method used to communicate agricultural innovation in the study area. Majority (92.0%) of the rural women attested that the use of indigenous communication methods enabled those constrained by literacy to communicate (understand and relate) innovations to other users of agricultural information and technologies. The ANOVA test conducted produced an F-value of 1.69 which was not significant at 5% probability level when compared with the critical F-value of 2.90, implying that the use of indigenous communication methods in disseminating agricultural innovation across the 3 zones of Imo State did not differ significantly. The use of variety of local content communication media enables rural women farmers adequately understand and interpret technical messages.
Keywords: Agricultural innovation, indigenous communication, indigenous knowledge, rural women farmers, Imo State

INTRODUCTION

The agricultural production system essentially requires that agricultural innovations, such as Good Agronomic Practices (GAP), soil fertility management practices, climate smart agriculture,

improved crop varieties and livestock species, marketing efficiency, effective postharvest handling, agricultural development programmes, finance and markets linkages flows from research to producers and utilizers of agricultural information and technologies (Asiabaka, 2012; Nwachukwu, 2013). The desire to integrate information/innovation flow into the agricultural production system is to make for a robust value chain that is supported by efficient innovation delivery. Improving the innovation delivery system largely demands improving the capacity of rural women farmers to become more efficient in technical message interpretation, record keeping, result analysis and reporting.

Though characterized by high socioeconomic deficits that have earned them social status like landless farmers, illiterate agribusiness operators, crude farmers, small holder farmers, resource poor farmers, farm wage earners, processors, petty traders, rural women farmers have continued to play pivotal role in the disseminating agricultural innovations both at household level and at community level in Nigeria. They juggle between agricultural activities like cultivation, weeding, fertilizing, watering, harvesting, storage, processing, marketing and domestic activities like cooking, washing, breastfeeding, care giving, fetching water, cutting fuel wood. Yet much of what they do is not accounted for in the national accounts system, as they remain active in the informal sector where they work as unpaid family workers (International Labour Organization, ILO, 2012; Otobe, 2014).

Many rural women farmers are not able to access available agricultural innovations or communicate with the innovation system. Most innovation packages are coded in technical terms that require some level of literacy to decode and apply, exacerbating the information needs of the not-too-literate rural women farmers. However, they tend to see methods and results demonstrated in local dialect as authentic and replicable in their own context, as it enables the often complex and complicated innovation to be broken down for farmers to understand. Asiabaka and Aboh (2019) refers to such mode of communication in which the experiences of the people regarding agricultural production is accumulated as indigenous communication method. Thus, indigenous methods of communication is defined as the use of folklore songs, sounds, signals, display, demonstration, which convey peculiar meanings to communicate to a target audience. Its peculiarity attribute makes it efficient in relating location specific message. It enables rural farmers effectively relate with the content of an innovation. Indigenous language is a basic tool in innovation communication which enables farmers and innovation communicators relate more effectively for greater adoption and productivity. Peculiar indigenous communication methods employed by rural women in exchanging knowledge and skills regarding agricultural production include: names folklores songs, plays, stories, puppet shows, signal, music (Uwem*et al.,* 2013). These methods are important indigenous mix for local people and potent forces in innovation dissemination (Wilson, 2005).

Unfortunately, the use indigenous communication methods in the study area for innovation dissemination by statutory agencies like the Imo State Agricultural Development Programme (ADP) has lost intensity. For instance, folklore songs, drama, panel of discussion and farmer radio programme that once dominated the radio airways in the study area are hardly accessible to the farmers. The unfortunate outcome of this includes that farmers in the bid to comprehend most technical components of innovations end up misinterpreting and misapplying the contents of the innovation. Little wonder Onweagba (2007) noted that if the receiver and communicator of the innovation fail to articulate a clear and understandable message, the desired effect of the innovation becomes illusive. That is, if the message is not accurately interpreted, the feedback will likely run contrary to the desired goal.

The need to underscore the impact of disseminating innovation in local dialects, folklore song, drama, name-giving, symbols inspired this work. This is necessary in ascertaining whether indigenous communication methods are still cost-effective in this modern era, as to justify its use or jettison towards greater agricultural productivity.

Objectives of the study

This study examined the effects of indigenous communication methods on innovation dissemination to women farmers In Imo State, Nigeria. The specific objectives include to:

(1) Ascertain indigenous communication methods used in disseminating agricultural innovation among rural women in the study area;
(2) assess type of message conveyed through indigenous communication to rural women;
(3) determine how the use of indigenous communication methods affect innovation diffusion among rural women;
(4) Analyze differences in the use of indigenous communication method among rural women in three agricultural zones of Imo State.

METHODOLOGY

The study was carried out in Imo State of Nigeria. Imo State is located in the South Eastern zone of Nigeria and lies between latitudes 5° 45′N and 6° 35′N of the equator and longitude 6° 35′E and 7° 28′ E of the Greenwich Meridian (Nwajiuba*et al*., 2008). The State is bordered by Abia State on the East and Northeast, Rivers State on the South, Anambra State to the North and Rivers State to the South. Imo State is divided into three agricultural zones of Owerri, Orlu and Okigwe and 27 Local Government Areas. With a total land area of 5,530 Km^2. The population of Imo State varies from 230 persons per Kilometer square in Oguta/Egbema areas to about 1400 persons per Kilometer square in Mbaise, Mbano, Orlu and Mbaitoli areas (Federal Republic of Nigeria Official Gazette, 2007). Imo Agricultural Development Programme (ADP) serves as the extension arm of the State Ministry of Agriculture

A multistage sampling procedure was used in selecting the study respondents. First, the three agricultural zones in the State were purposively selected to achieve a representative sample. In the second stage, two LGAs were randomly selected from each zone to give six (6) LGAs. The third stage, involved the random selection of 5 communities from each of the 6 LGA to give 30 communities. In the fourth stage, 10 women from each of the communities were randomly selected to give a total sample size of 300 women (respondents) for the study. The sample frame was drawn from the list of women registered in women associations, ADP contact farmers, town union, churches, cooperative societies as supplied by the organizations and key informants. Objectives I, II and III were achieved using frequency count and percentage score. While objective IV was achieved using Analysis of Variance.

RESULTS AND DISCUSSION

Indigenous communication methods used in disseminating agricultural innovation

Table 1 is the distribution of rural women by indigenous communication methods. The result indicated that giving a name (90.3%) was the major indigenous method used to communicate agricultural innovation in the study area. This was followed by music (86.0%), town crying (70.0%) and folklore song (67.3%), also identified amongst methods used indigenously to disseminate agricultural innovation among rural women. This finding confirms the assertion of Uwen *et al*.(2013) that through names indigenous people capture events and times. In the study area, improved crop varieties and breeds of animals are given native names that enable rural women keep track of their adoption and sequence of introduction. These native names often predicate on the origin, size, colour, major consumers and taste of the crop variety or animal breed. For instance, in the study area *Ede Ghana* is a native for NCe 006 cocoyam variety, as the cocoyam variety is majorly consumed by Ghanaians. Others include *Ede Ofe* for green fleshed NCe 002 variety, *Ede Ocha* for the white fleshedNX_s001 variety. Through native names of crop variety and animal breeds, rural women are able to tell chronologically which varieties and breeds have been adopted, sustained or discontinued in their locality. On the use of music, town crying and folklore, Asiabaka (2019) corroborated that these channels provide for rural women a system in which the experiences of a person or group in agricultural production is accumulated. Thus, indigenous communication methods serve as innovation repository for rural dwellers, and as such, increased use of native names, folklore songs, town crying, among other indigenous communication methods will entail increased diffusion and adoption of innovation for greater productivity.

Table 1: Distribution of rural women by indigenous communication methods used in disseminating agricultural innovation

Indigenous communication method	*Frequency	Percentage
Giving a name	271	90.3
Folklore song	202	67.3
Indophones	112	37.3
aerophones	95	31.7
Symbolography	202	67.3
Paintings and drawings	165	55.0
Music	258	86.0
Town crying	210	70.0
Signs	122	40.7

Source: Field survey data, 2018. Multiple responses recorded

Type of messages disseminated through indigenous communication method

Table 2 is distribution of rural women based on the type of messages disseminated through indigenous communication methods. From the result, majority (43.0%) of the rural women acknowledged technical/improved agricultural production messages among the category of messages disseminated through indigenous communication methods. This was followed by 40.0% of the rural women who indicated motivational message and another 33.0% who identified marketing message among indigenous communication methods used in disseminating agricultural innovation. This finding confirms the assertion of Nwachukwu, 2003; Asiabaka (2012) that agricultural innovations are technical messages that must be conveyed in the right form through the right channel for effective interpretation and application of innovations. It is important to ensure that technical messages are not misinterpreted or distorted, as such could widen the gap between what research has shown to be feasible and what obtains in the field on the other hand. It could be seen also that motivation and marketing constitute critical message of an innovation. Implicitly, those saddled with the responsibility of disseminating agricultural innovations are required in addition to possessing competences for decoding technical messages of an innovation to also demonstrate empathic and marketing skills in their interaction with rural women.

Table 2: Distribution of rural women according to type of messages disseminated through indigenous communication method

Type of message	*Frequency	Percentage
Technical/agricultural production messages	130	43.0
Motivational message	120	40.0
Marketing message	100	33.0
Awareness message	80	27.0
Entertainment messages	70	23.0

Source: Field survey data, 2018. Multiple responses recorded

Effects of indigenous communication method on innovation diffusion among rural women

Table 3 presents the distribution of rural women by effects of indigenous communication method on innovation diffusion among rural women. The result showed that 92.0%, representing majority of the rural women attested that the use of indigenous communication methods enables those constrained by literacy to communicate (understand and relate) innovations to other users of agricultural information and technologies. This was followed 81.3% who indicated that it promotes farmer-to-farmer extension approach;66.3% noted that it promotes the use of indigenous knowledge; while 65.0% acknowledged that it facilitates innovation diffusion and adoption of improved varieties of crops and species of animal. This finding corroborates the statement of Okoroma *et al.* (2015) that when agricultural innovations are communicated to farmers in local dialect, the illiterate rural farmer hitherto considered a passive audience becomes an active component of the innovation communication process. Taking up active role makes the rural

woman an agent of innovation dissemination. Typically, rural women transfer farming the knowledge of techniques, improved varieties and species, methods and results acquired from external sources like co-operative societies, community development associations, religious organizations to their immediate environment and households for greater productivity. By promoting the use of indigenous knowledge, it enables social capital to be mobilized, ensuring that local knowledge is adapted to local conditions (Nwakwasi, 2013). Indigenous knowledge often offers a cost-effective means of addressing farmers' problems. use of weaker walls, organic fertilizer, rain harvesting, change of planting and harvesting dates, are among products of indigenous knowledge employed to combat continual erosion menace, loss of soil fertility, climate change, postharvest losses.

Table 3: Distribution of rural women by effects of indigenous communication method on innovation diffusion among rural women

Effects of indigenous communication method	*Frequency	Percentage
Enables those constrained by literacy to communicate	276	92.0
Make message believable and replicable in local context	153	51.0
Facilitates innovation diffusion and adoption of improved varieties of crops and species of animal	195	65.0
Increases independent innovation trial	144	48.0
Enhances the application of technical message	158	52.7
Promotes farmer-to-farmer extension approach	244	81.3
Promotes cultural preservation and indigenous development	142	47.3
Encourages technology conservation	115	38.3
Promotes the use of indigenous knowledge	199	66.3
Reduces cost of adoption	153	51.0
Increases farmers' resilience	120	40.0
Increases climate change adaptation and mitigation practices	114	38.0

Source: Field survey data, 2018. Multiple responses recorded

Differential use of indigenous communication methods

Table 4 shows the analysis of variance test of significant differences in the use of indigenous communication method among rural women in Imo State. The ANOVA test conducted produced an F-value of 1.69 which was not significant at 5% probability level when compared with the critical F-value of 2.90. Hence, the proposition that there is no difference in the use of indigenous communication method among rural women in the three agricultural zones of Imo State is accepted. This result implies that the use of indigenous communication methods in disseminating agricultural innovation is a common phenomenon among rural women in Imo State. This is displayed during the annual August meeting of rural women in Imo State, during which agricultural innovations are displayed using indigenous communication methods like folklore songs, traditional dances, methods and results are demonstrated.

Table 4: Differences in the use of indigenous communication method among rural women in three agricultural zones of Imo State at P < 0.05

	Sum of Squares	DF	Mean Square	F-cal	F-tab	P-value
Between groups	68426	2	34213	1.69*	2.90	0.235
Within Groups	59842	297	20149			
Total	60526	299				

Source: Field survey data, 2018

CONCLUSION AND RECOMMENDATIONS

The study concludes that giving native names to agricultural technologies was the major indigenous method used to communicate agricultural innovation in the study area. Technical/improved agricultural production message was the major message disseminated through indigenous communication methods. The use of indigenous communication methods enables those constrained by literacy to communicate innovations to other users of agricultural information and technologies. There was no difference in the use of indigenous communication methods in disseminating agricultural innovation across the 3 zones of Imo State. Hence, it is recommended that extension agencies and other organizations involved in innovation dissemination should upscale the use of indigenous communication methods by deploying variety of local content extension teaching media to enable rural women farmers adequately understand and interpret technical messages.

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