Research article

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Social inclusion of landless farmers in extension services in Delta State, Nigeria: Implications for agricultural development

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Abstract: This study considered the level of inclusion of landless farmers in extension services in Delta State, Nigeria. A sample size of 355 landless farmers who were randomly selected formed the respondents used for this study. The results show that they had a mean age of 45 years and were mostly females who were also mostly married with little level of formal education as their highest level of formal education was secondary education. They had a mean household size of 7 persons and average farming experience of 11.5 years with mean farm size of 2 ha and very many of them did not subscribe to farmer’s groups. They were mostly (70.70%) indigenes of the communities where they resided. Their level of social inclusion in agricultural extension benefits was poor (inclusion index = 0.45). They had an average crop output of 9000kg annually. Their level of social inclusion influenced their level of outputs. Their level of social inclusion was significantly influenced by their socio-economic attributes of age, gender, marital status, and level of formal education, household size, farming experiences, group membership and indigene status. It was concluded that the landless farmers were socially excluded from agricultural extension services. It is recommended that extension agents should change their attitudes towards this class of farmers; and extension agents should persuasively convince the farmers to subscribe to membership of their relevant farmers’ groups.

Keywords: Social inclusion, social exclusion, landless farmers; extension services, agricultural development

1 Introduction

Agriculture is the most important of all the sectors in the economy of every nation, considering its contribution to the Gross Domestic Product (GDP) of nations. For instance, according to Nkonya and Philips (2009), apart from the important contribution it makes to the GDP of the nations, it generates foreign exchange earnings, provides employment to over half of the population of nations, provides raw materials for industries and it’s the source of food and fibre for the teeming population. From the aforementioned, the importance of agriculture to the Nigerian economy cannot be over emphasized.

Agricultural extension services are the drivers of agricultural development of every country. This implies that the progress made in the agricultural sector cannot be discussed without mention of agricultural extension. This indicates the position and role of agricultural extension in the development of agriculture. Agricultural extension services are meant for all without regards to differences in age, sex, social class, scale of operation, political leaning and ideology, among others. Extension process involves educational, social and economic development focus. Every group and class of farmers are to be served by agricultural extension agents as an equal opportunity service provider. This implies that every class or group of farmers is required to be fully included in agricultural extension service opportunities. Social inclusion is known to be the situation of being involved in a community and society as a whole; this implies good access of individuals or groups to available opportunities, services and resources and being involved in planning and decision making. If otherwise, then it is social exclusion (Appleton-Dyer and Field 2014). Beall (2002) observes that this phenomenon, called social inclusion, has become a buzz term because of the increasing recognition that human welfare entails a reasonable level of income and good access to material goods and services. It also connotes conscious policies and moves made to encourage institutions to change
their perceptions that give rise to and nurture exclusion (Beall 2002). Khan et al. (2015) state that social exclusion has been conceptualized by the UK’s Department for International Development (DFID) as “a process by which certain groups are systematically placed in disadvantaged position because they are discriminated against on the basis of their ethnicity, race, religion, sexual orientation, caste, descent, gender, age, disability, HIV status, migrant status or where they live. Discrimination is extant in public organizations, such as the judicial system or education and health services, as well as basic social institutions like the household (DFID 2005: 3), as well as agricultural advisory services (Ofuoku 2017b). The negative impact prompted by social exclusion includes low income, poor housing, among others, connoting poverty.

One critique of social exclusion is that the concept is based on an ‘underlying moral meta-narrative’ which has the assumption that social inclusion which is the opposite of social exclusion, is inherently very good and highly desired (Hickey and du Toit 2007). Consequently, efforts to obliterate exclusion can frequently tend to be guided by implicit normative assumptions about how social life should be led. This is often oblivious of the ways by which the terms of inclusion can prove to be problematic, disempowering or inequitable (Khan et al. 2015). However, some minority groups voluntarily exclude themselves from wider society (Khan et al. 2015). This phenomenon does not connote social exclusion, which exists for reasons that have proved to be beyond the control of the groups of individuals affected.

It is difficult to identify a single specific cause in the situation of social exclusion. People may be excluded because of deliberate action by others (e.g. discrimination development agents); because of societal processes which do not entail deliberate action; or even by choice (Tilly 2007: 4576). However, more generally, the causes of social exclusion that leads to poverty, suffering and sometimes death can be attributed to the operations of unequal power relations (Mosse 2007).

Landless farmers have been playing important roles in farming and other agriculture related activities. According to Francois (2015), within the period of 20 years, 425 poor landless farmers transformed over 1400 acres of infertile land and wasteland into cultivable land with the practices of dry land farming. Despite their contributions to the agricultural sector, landless farmers face violation of their right to food and services despite the fact that these small farmers produce the bulk of the staple crops needed to feed the rural and urban population of the world (Glosbe 2017).

Landless farmers are often among minority groups in various communities in Nigeria. Observations indicate that minorities are prone to exclusion from social and economic service opportunities. One of the glaring features of social exclusion is that it can be considered as a process and not a static condition (Percy-Smith 2000). It is a set of processes that is grossly beyond the control of the individual. The other important feature of social exclusion is that it is a correlate of a ‘relational’ concept (Percy-Smith 2000). He further asserts that groups and individuals are socially excluded from other groups and individuals, and society as a whole. Dustmann and Preston (2001) suggest that apart from the attitudes, activities and policies of government, the attitudes of the ethnic majorities significantly affect the situation of ethnic minority groups and other types of minorities. The attitude of ethnic majority populations towards the minority groups is a potentially salient determinant of social exclusion, and the welfare of ethnic minorities.

Landless farmers in every society are commonly known to be born into poverty. Barafe (2017) found that socially excluded groups in societies are born into poverty, and they are known to often die in poverty. Ofuoku (2017b) found that small-scale farmers who were mostly landless farmers were socially excluded from agricultural development schemes in Delta State, Nigeria. It is thought to be worthwhile carrying out a study of this nature to ascertain the situation of landless farmers in access to agricultural extension services. This calls for development concern as every group should be given equal opportunity. The question now arises as to whether the landless farmers in various communities in Delta State are given equal opportunities as is the case of other farmers. If given the same opportunities, it means they are socially included and social exclusion is ruled out. It is this information that prompted the conduct of this study.

2 Objectives of the study

This study was conceptualized to determine the level of social inclusion of landless farmers in agricultural extension services benefits in Delta State, Nigeria. Specifically, it was done to:

1. describe the socio-economic characteristics of landless farmers;
2. ascertain their level of social inclusion in extension service delivery;
3. determine their annual level of arable crops production;
4. ascertain the effect of social inclusion in extension service delivery on their annual output; and
5. determine the influence of their socio-economic characteristics on their social inclusion in extension service.

3 Hypotheses

H₀: Landless farmers’ social inclusion in extension service delivery does not relate with their crop output level.
H₁: Socio-economic characteristics of landless farmers do not influence their level of social inclusion in agricultural extension service benefits.

4 Research methods

The study was carried out in Delta State between June and November, 2017. The state is situated within longitudes 5º 50’ and 6º 45’ east of the Greenwich meridian and latitudes 5º, 25’ and 6º 30’ north of the equator. The state is vegetatively covered by mangrove forest in the South, rain and fresh water forest in the central and derived savannah in the northern parts.

It is demarcated into three agricultural zones according to the vegetational belts by the Delta State Agricultural Development Programme (DTADP): Delta South; Delta Central; and North agricultural zones. The Delta State Agricultural Development Programme (DTADP) is the public extension agency of the state. Delta South Agricultural zone is constituted by 6 local government areas’ (LGAs) extension blocks; Delta Central is made up of 10 LGAs (blocks); while Delta North Agricultural zone is composed of 9 LGAs (blocks). The major source of livelihood of the people is agriculture (farming); in a mixed cropping system. Cultivated crops include cassava, yam, okra, garden egg, cocoyam, maize, rice, potato and leafy and fruit vegetable crops. They are known for oil palm, rubber and marginally, and cocoa cultivation. They mostly rear poultry birds, goats and sheep. Observations and inquiries revealed that the landless farmers in the state are mainly engaged in arable crops production, particularly cassava.

A multistage sampling technique was applied to select the respondents. In the first stage, 50% of the extension blocks in each agricultural zone were randomly selected. The result was Delta South Agricultural zone – 3 blocks; Delta Central Agricultural zone – 5 blocks and Delta North – 5 extension blocks. This led to the selection of Patani, Warri South West and Warri North LGAs (blocks) in Delta South Agricultural zone; Ethiope West, Ethiope East, Ughelli North, Okpe and Udu blocks in Delta Central Agricultural zone and Ndokwa West, Ukwuani, Aniocha North, Oshimili North and Ika South blocks in Delta North Agricultural zone.

In the second stage, two (2) farming communities were randomly selected from each block, resulting in the selection of 26 farming communities. The landless farmers in each of the selected farming communities were identified with the help of key informants in each community. All the identified ones were 361 in number. They were all used as the respondents in this study. Data for the study were collected utilizing a structured interview schedule and questionnaire. The administration of the instruments for data collection was done by the researchers and trained enumerators, who are agricultural science teachers in the secondary schools located in the communities or close to the communities. At the end 6 questionnaires could not be retrieved resulting in the use of data from 355 respondents. The data were subjected to statistical analysis with the application of frequency counts and percentages, means derived from 4-point likert type scales for objectives “i” and “iii” respectively. However, an involvement index was also computed for objective “ii”. Objective “iii” was addressed with the use of frequency counts and percentages. Objective ‘iv” was addressed by hypothesis 1 and objective ‘v’ by hypotheses 2.

The involvement or inclusion index was computed as: the landless farmers were asked to indicate their inclusion level on a 4-point likert-type inclusion scale as adapted from Uzokwe et al. (2017) and Ogato (2009). Their response categories to inclusion statements and corresponding weighted values were done as follows: Strongly agree = 4; Agree = 3; Disagree = 2; strongly disagree = 1. The inclusion index was computed as follows:

1. Computation of the total mean (M) inclusion score. This was computed by dividing the total inclusion scores by the number of respondents involved.
2. Computation of the grand mean (M) inclusion score. This was computed by skimming all the mean inclusion scores and dividing them by the number of inclusion statements captured.
3. Computation of inclusion index was done by dividing the grand mean (M) inclusion score by 4 (i.e. the 4th point of the likert scale).
Hypothesis was tested with the use of Pearson product moment correlation coefficient. In a similar study Dustmann and Pearson (2001) applied the Pearson product moment correlation coefficient. The formula is given as follows:

\[ r = \frac{\sum XY - (\sum X)(\sum Y)}{\sqrt{\left(\sum X^2 - (\sum X)^2 \right) \left(\sum Y^2 - (\sum Y)^2 \right) / N}} \]

Where:
- \( X \) = level of inclusion
- \( Y \) = Crop output
- \( \sum \) = Sum
- \( N \) = Sample size

Hypothesis 2 was tested with the use of linear regression model. The linear regression model was adopted by Emuoboria (2009) in a related study. The model is implicitly stated as follows:

\[ Y = f(X_1 + X_2 + X_3 + X_4 + X_5 + X_6 + X_7 + X_8 + X_9 + \mu) \]

Where:
- \( Y \) = Level of inclusion in agricultural extension benefit (no of activities involved in)
- \( X_1 \) = Age (Years)
- \( X_2 \) = Gender (Male = 1, otherwise = 0)
- \( X_3 \) = Marital status (Married = 1, otherwise = 0)
- \( X_4 \) = Formal education (No of years of schooling)
- \( X_5 \) = Household size (no of persons)
- \( X_6 \) = Farming experience (Years)
- \( X_7 \) = Farm size (Hectares)
- \( X_8 \) = Membership of farmers’ group (Yes = 1, otherwise = 0)
- \( X_9 \) = Indegene status (Indegene = 1, Otherwise = 0)
- \( \mu \) = Error term

**Ethical approval:** The conducted research is not related to either human or animals use.

**5 Results and discussion**

Table 1 indicates that most (85.35%) of the landless farmers in the study area were in the age range of 20 – 49 years with an average age of 45 years. This implies that most of them are in their youthful years and are still energetic enough for farming. The majority (63.66%) were women while 36.34% were men. This is indicative of the fact that women dominate arable crop farming in the study area. This is congruent with Uzokwe and Ofuoku (2006) who found that women have taken over the various tasks required in farming. This has implications for land ownership or acquisition. Ofuoku and Emuh (2009: 348–360), Nwalieji et al. (2014) stated that women are always excluded from owning and controlling property in many developing countries. The implication is that women are excluded from various resources that would allow them to improve their agricultural production capacities. Samsel and Perepa (2013), Zhang and Haller (2013), Hahn (1995) consider sex as one of the drivers of exclusion.

Most (58.31%) of them were married, 22.82% were single, as 14.08% were widowed and 4.79% were divorced. The percentage of the divorced among them is low because of the way the society frowns at divorce incidences. People try to avoid divorce for this reason. Observations showed that they all had responsibilities as they had their children and relatives living with them. The African society allows relatives to live with one with blood ties. With respect to level of formal education, most (43.38%) of them had secondary education, 29.01% had only primary education. However, 27.61% of them had no formal education. Bynner (2001) indicts education as one of the drivers of social inclusion and exclusion. This implies that individuals or groups of individuals with reasonable level of formal education are often socially incuded in opportunities, while those with little or no formal education are often socially excluded from opportunities. They had an average household size of 7 persons, indicating that they had large household sizes. This is prompted by the culture of housing and feeding a lot of relatives and polygamy that thrives in the study area. However, most members of households constitute the labour used in farming exercises or tasks. The children are always involved in the family farm as part of the required labour, as most households cannot afford the cost of hiring labour.

Ofuoku et al. (2014) found that children of the ages of 14 – 17 years were used by households in Nigeria in all farm operations. The use of children is discouraged by UNICEF, but according to Ofuoku et al. (2014): for cultural reasons; farming skills and knowledge transmission from generation to generations; training of children to make them independent; exposure to life’s intricacies; and for norms and value transmission, households engage their children in farm labour.

They had a mean farming experience of 11.5 years and average farm size 2 hectares of land, which was observed to be rented on a yearly basis. This shows that they were small scale farmers, implying that they still used crude implements for farming. Most (92.68%) of them did not subscribe to farmers’ groups. Because of the dearth of field extension workers, extension farmers’ meetings
Table 1: Socioeconomic characteristics of respondents

| Variables                        | Frequency | Percentage (%) | Mean |
|----------------------------------|-----------|----------------|------|
| **Age (Years)**                  |           |                |      |
| 20 – 29                          | 109       | 30.70          | 45 years |
| 30 – 39                          | 119       | 33.52          |      |
| 40 – 49                          | 75        | 21.13          |      |
| 50 – 59                          | 42        | 11.83          |      |
| 60 and above                     | 10        | 2.82           |      |
| **Gender**                       |           |                |      |
| Male                             | 129       | 36.34          |      |
| Female                           | 226       | 63.66          |      |
| **Marital Status**               |           |                |      |
| Married                          | 207       | 58.31          |      |
| Single                           | 81        | 22.82          |      |
| Widowed                          | 50        | 14.08          |      |
| Divorced                         | 17        | 4.79           |      |
| **Level of formal education**    |           |                |      |
| No formal education              | 98        | 27.61          |      |
| Primary education                | 103       | 29.01          |      |
| Secondary education              | 154       | 43.38          |      |
| Tertiary education               | 0         | 0             |      |
| **Household size (No of persons)** |       |                |      |
| 1 – 2                            | 16        | 4.51           | 7 persons |
| 3 – 4                            | 58        | 16.34          |      |
| 5 – 6                            | 46        | 12.96          |      |
| 7 – 8                            | 99        | 27.89          |      |
| 9 – 10                           | 69        | 19.44          |      |
| Above 10                         | 67        | 18.87          |      |
| **Farming experience**           |           |                |      |
| 1 – 5                            | 123       | 34.65          | 11.5 years |
| 6 – 10                           | 87        | 24.51          |      |
| 11 – 20                          | 74        | 20.85          |      |
| Above 20                         | 71        | 20.0           |      |
| **Farm size:**                   |           |                |      |
| 0.5 – 1                          | 89        | 25.07          | 2 ha |
| 1.5 – 2                          | 101       | 28.45          |      |
| 2.5 – 3                          | 99        | 27.89          |      |
| 3.5 – 4                          | 66        | 18.59          |      |
| **Group membership:**            |           |                |      |
| Yes                              | 26        | 7.32           |      |
| No                               | 329       | 92.68          |      |
| **Indegenship status**           |           |                |      |
| Indegenie                        | 251       | 70.70          |      |
| Non-indegenie                    | 104       | 29.30          |      |

and interactions are now carried out in groups (Ofuoku 2013; Marc and Mamusha 2011; Quinines 1999). Farmers join farmers’ associations to access credit facilities and agricultural information (Ofuoku 2013; Agbam 2011; Martin et al. 2008). Prompted by the poor ratio of extension agents to farm families, extension activities are currently conducted in groups (Agbam 2011). Most (70.70%) of the landless farmers were indigenes of their respective farming communities while 29.30% were sojourners. This has implications for land ownership.

5.1 Level of inclusion in extension

Table 2 indicates that the level of involvement, therefore, inclusion in all the agricultural extension activities are poor, as all the means did not meet the cut-off mean of 2.50. This is further confirmed by the inclusion index of 0.45, which implies that only 45% of the landless farmers were involved in agricultural extension activities. This is attributable to the fact that many of these farmers did not subscribe to memberships of various farmers’ groups. A critical constraint facing agricultural extension in Nigeria is
Table 2: Level of inclusion in extension activities

| Agricultural extension activities               | Strongly agree (4) | Agree (3) | Disagree (2) | Strongly disagree (1) | Score | Mean |
|------------------------------------------------|--------------------|-----------|--------------|-----------------------|-------|------|
| Regular meeting of farmers and extension agent | 8(32)              | 18(54)    | 151(302)     | 178(178)              | 566   | 1.59 |
| Farm visit                                      | 11(44)             | 15(45)    | 112(224)     | 217(217)              | 530   | 1.49 |
| Result demonstration                            | 26(104)            | 31(93)    | 147(294)     | 151(151)              | 642   | 1.81 |
| Method demonstration                            | 13(52)             | 21(63)    | 214(428)     | 107(146)              | 650   | 1.83 |
| Input supply                                    | 58(232)            | 76(228)   | 153(306)     | 68(68)                | 834   | 2.35 |
| Field trials                                    | 21(84)             | 29(87)    | 159(477)     | 146(146)              | 794   | 2.24 |
| Agricultural shows                              | 26(104)            | 36(108)   | 49(98)       | 244(244)              | 554   | 1.56 |
| Field trips                                     | 21(84)             | 17(51)    | 172(344)     | 145(145)              | 624   | 1.76 |
| Focus group discussion                          | 15(60)             | 11(33)    | 161(322)     | 168(168)              | 583   | 1.64 |

Cut-off score = 2.50 (≥ 2.50 = inclusion; < 2.50 = poor inclusion)
Grand mean = 1.81
Inclusion index = 0.45

Table 3: Annual level of crop (cassava) production

| Level of production per annum (kg) | Frequency | Percentage | Mean |
|----------------------------------|-----------|------------|------|
| 1000 – 5000                       | 130       | 36.62      |      |
| 5100 – 10,000                     | 53        | 14.93      |      |
| 10,100 – 10,500                   | 26        | 7.32       |      |
|                                   |           |            | 9,000 kg |
| 10,501 – 20,000                   | 34        | 9.58       |      |
| 20,100 – 20,500                   | 26        | 7.32       |      |
| 20,501 and above                  | 86        | 24.23      |      |

the inadequate number of agricultural extension agents in relation to the large population of farmers (Agbamu 2011). Because of this, as pointed out by Ofuoku and Chukwuji (2012), extension farmers’ meetings are now conducted in specialized farmers’ groups. This idea emanated from the idea of how to reach farmers satisfactorily, to ensure that most farmers benefit from agricultural extension outreach. The implication of the results in the table is that a very high percentage of the landless farmers were excluded from agricultural extension service, further implying that these farmers had not been benefitting from extension services.

5.2 Annual level of crops production

Most (36.62%) had annual crop output of between 1000 – 5000 kg; 24.23% had 20501 kg and above; 14.93%, 5100 – 10000 kg; 9.58%, 10501 – 20000 kg while 7.32% had 20100 – 20500 kg (Table 3).

The output figures confirm the earlier findings that the landless farmers were predominantly small-scale farmers. This is informed by the fact that they did not have free hold to any land and had to pay for rent or lease on the lands they farm on. The farm rent or lease value in monetary terms is determined by the size of the land. The larger the size of the land, the higher the rentage or lease value they pay for the land. Nkoya and Philip (2009) states that the lease/rent value of farm land is determined by the size and fertility of the land.

5.3 Influence of level of social inclusion in extension service on crop output

Table 4 shows that the level of social inclusion positively influenced the landless farmers’ crop output level, (r = 0.642) at 5% level of significance. The null hypothesis is therefore rejected. This implies that a unit increase in social inclusion level in extension services of the farmers would most likely translate into a unit increase in their crops output levels. This is congruent with the findings of Ofuoku (2017) as he found that social inclusion of rural
women at farmer’s group’s level influenced their annual crop outputs. Ideas, innovations and other benefits, which farmers gain from extension services, have direct and ripple effects on their farming activities and consequently affect their outputs. Peace (2001) opines that social exclusion affects economic activities of those excluded as such leads to disadvantaged position.

That is, groups or social actors or individual farmers change their behaviour based on new knowledge gained with the guidance of change agents. This change in behaviour goes on to affect their practice and the product of such practice information for social learning guide pathways for the design of social learning process for sustainable development by the change agents and the beneficiaries working together (Siebenhiiner and Heinrichs 2010: 185–1999).

5.4 Influence of socio-economic characteristics of landless farmers on their social inclusion in extension service

The coefficient of linear regression ($R^2$ of 0.79) implies that 79 percent of the variations in social inclusion of landless farmers in extension service were prompted by the socio-economic characteristics according to the independent variables captured in the regression model (Table 5). The results show that age, gender, marital status, formal education, farming experience and group membership were significant at 5% level, while household size and indigene status were significant at 1% level. This prompts the rejection of the null hypothesis.

The coefficient of age was significant but bore a negative sign. This means that a unit decrease in age would most likely lead to a unit increase in the level of inclusion of landless farmers in extension services and vice versa as this is an inverse relationship. As farmers age, they become conservative and reluctant to attend extension and farmers’ meetings. Gender also had significant influence on social inclusion of landless farmers in extension service; however, the coefficient also bore a negative sign. This again, is an inverse relationship meaning that feminism leads to increased level of social inclusion in agricultural extension service. This is because women are more involved in arable crop farming and cassava. Women are desperate to satisfy their needs and they can bulldoze their way into any meeting farmers have with extension agents, even when discriminated against. This is at variance with a priori expectation as Ofuoku (2011) found that extension agents’ contact with female farmers was inadequate.

Adisa and Okunade (2005: 66–77) suggest that because of the role of women in agricultural production,

| Table 4: Estimation of influence of social inclusion on crop output |
|---------------------------------------------------------------|
| Variables         | Social inclusion | Crop output |
| Social inclusion  | 1.000            | 0.642**     |
| Crop output       | 0.642**          | 1.000       |

Significant at 0.05 level of significance

| Table 5: Estimation of the influence of socio-economic characteristics on social inclusion |
|---------------------------------------------------------------|
| Variables         | Coefficient | Standard error | t-value |
| Constant          | 7.599       | 1.629          | 5.044*** |
| Age ($X_1$)       | -1.590      | 0.768          | -2.377** |
| Gender ($X_2$)    | -1.489      | 0.684          | -2.515** |
| Marital status ($X_3$) | 1.802       | 0.834          | 2.558** |
| Formal education ($X_4$) | 1.208       | 0.601          | 2.130** |
| Household size ($X_5$) | -1.771      | 0.634          | -3.285*** |
| Farming experience ($X_6$) | 1.449       | 0.721          | 2.204** |
| Farm size ($X_7$) | 0.828       | 0.625          | 1.406    |
| Group membership ($X_8$) | 0.740       | 0.410          | 2.179** |
| Indigene status ($X_9$) | -1.859      | 0.657          | -3.312*** |
| $R^2$              |             | 0.79           |         |
| F-Ratio            |             | 7.44           |         |

*** significant at 0.01 level of significance
** significant at 0.05 level
they should be reached with new information.

Marital status had a significant and positive relationship with social inclusion of landless farmers in extension services. This means that the status of being married would most likely increase the chances of landless farmers to be socially included in extension service benefits. Marriage brings many responsibilities, as a family is formed. The individual farmer, in the quest for increased output/yield, will always seek extension services, even when they are not recognized by extension agents as part of their clientele. Formal education also had significant positive relationship with social inclusion in agricultural extension service benefits. A higher level of formal education increases the chance of being recognized by extension agents as this makes both the extension agent and such educated farmer homophile partners.

When change agents and farmers are similar in some attributes, they tend to belong with each other. Rogers (1983) opined that generally, when two individuals with common social attributes meet, communication between them is likely to be more effective. Communication is very effective when the sender and the receiver are homophilous (Agbamu 2006: 216–229). With a similar level of formal education, extension agents and formally educated farmers belong with each other and interact better. Wolfensburger (2000) suggests that those with higher educational values will be treated well while those with low value formal education are treated badly or excluded by others.

Household size also had a significant influence on social inclusion of landless farmers in extension services benefits. However, the coefficient bore a negative sign. This means that a unit decrease in household size would most likely result to a unit increase in social inclusion in agricultural extension benefits and vice versa. This is attributable to the fact that a large household is difficult to control, therefore the landless household heads have little or no time to make himself or herself available for inclusion in extension service benefits. Again, landless farmers with large household sizes are always busy with farming activities to be able to cater for the members of their households.

Farming experience had significant influence on social inclusion. A unit increase in farming experience will most likely lead to a unit increase in socially inclusivity. With experience, which is the best teacher, the landless farmer will make him/herself available at all cost to be socially included in extension services benefits. The farmer will seek the attention of the change agent even when the change agent does not pay significant attention to landless farmer and small farmers as is common in the study area.

Group membership significantly influenced social inclusion of landless farmers in extension services. Most extension farmer contacts in these contemporary times are done in farmers’ groups because of the dearth of field extension agents. Membership of such farmers’ groups increases the chance of being socially included in extension service delivery benefits. As pointed out earlier, Ofuoku and Urang (2012) found that farmers subscribe to membership of farmers’ groups for some reasons including access to information and extension service. Indigene status also had a significant influence on social inclusion of landless farmers in agricultural extension service delivery benefits. However, the coefficient bore a negative sign. The implication is that the more indigenous a farmer is to the community, the lower the chance of being socially included in agricultural extension service delivery benefit and vice versa. This is a deviation from a priori expectation. This means that non-indigenes of the farming communities are more likely to benefit from extension services than the indigenes. This may be prompted by the fact that the change agent may also not be an indigene of such community and therefore tend to align with other non-indigenes. This again is a homophilous factor.

6 Conclusion, implications for agricultural development and recommendations

The landless farmers had a mean age of 45 years and this class of farmers was dominated by female farmers who were mostly married and therefore had responsibilities on their shoulders. Their highest level of formal education attained was secondary education. They had an average household size of 7 persons and means farming experience of 11.5 years with average farm size of 2 ha indicating small holdship. Most of them did not join farmers’ groups, but were mainly indigenes of the respective communities covered in this study.

Most of them were not involved in extension activities and their level of Cassava output confirms this fact, as it is low. Their low level of output was influenced by their low level of social inclusion in agricultural extension service delivery. Their socioeconomic attributes influenced their level of social inclusion in agricultural extension services. Conclusively, as most them were not involved in agricultural extension activities, most of them were socially excluded from agricultural extension services.

Agricultural extension service delivery is meant
for agricultural development. The level of agricultural
development of any nation is an index of the level of
development of the nation. One of the aims of an
agricultural extension service is helping every available
farmer to help themselves to achieve their goal of enhanced
productivity and consequently a higher level of living. This
is indicative of the fact that agricultural extension services
should be rendered to every class of farmers not minding
their socio-economic status. This means they should not
be discriminated against and not be deprived of access to
extension resources and benefits.

This study has unveiled the level of discrimination
against landless farmers. This is more so as they had
been socially excluded from accessing extension services
and resources. This situation is inimical to agricultural
development, which forms the broad objective of
agricultural extension services. If extension agents do
not re-address their minds and remedy the situation, our
dream for a well-developed agricultural economy will not
be actualized.

Considering the aforementioned outcome of this
study, it is recommended that agricultural extension
supervision should as a matter of urgency direct field
extension agents to also reach out to landless farmers and
follow up supervision should become a regular exercise
by extension supervisors.

Landless farmers should be persuasively convinced to
subscribe to membership of their relevant famers groups
where they will hold membership with other classes of
farmers.

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