

## **IMPACT OF AGRICULTURAL RADIO PROGRAMMES ON LIVELIHOODS OF FARMERS: THE CASE OF ROYAL FM IN BRONG-AHAFO REGION, GHANA**

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### **ABSTRACT**

The study examined the impact of Radio agricultural programmes on livelihoods of farmers in five districts and municipalities in the Brong-Ahafo Region of Ghana. Questionnaire was used to collect data from a sample of 198 farmers. The study showed that farmers had gained knowledge in various improved practices as a result of the Royal FM agricultural programme. Increase in knowledge has resulted in increased agricultural output and productivity leading to higher sustainable incomes. Majority of the farmers indicated that they were satisfied with the programme as it had improved the use of agricultural technologies in the area. It was also found out that the programme had impacted positively on the livelihoods of the farmers in the study areas. The impact of Royal FM agricultural programme was very high in Banda District and Wenchi Municipal. The study recommended the need for government to support agricultural radio programme to ensure its sustainability.

**Keywords:** Radio, Agricultural programmes, Farmers, Livelihoods, Agricultural extension, Ghana

## **INTRODUCTION**

### **Background of the study**

Radio remains the most cost effective means of building awareness, and supporting the adoption of new farming practices by small scale farmers for sustainable development and sustainability in agriculture. Although radio is the most popular mass medium, agriculture programming is executed with little participation from the farmers and extension agents (Nabusoba, 2014). Availability of low cost receiving sets operated with electricity or battery have helped radio to penetrate messages deep into the rural community. Radio is appropriate for creating general awareness and bringing desirable changes in the attitude of listeners. Radio plays a significant role for illiterate farmers in gathering information on various kinds of agricultural activities so as to update their knowledge and skills. In developing

countries, radio had made its place for backing up agricultural sector extension activities. The rationale for using radio in extension and advisory services came from an understanding that radio is an excellent, cost-effective means of sharing knowledge, building awareness, facilitating informed decision-making and supporting the adoption of new practices by small-scale farmers (Chapota, Fatch and Mthinda 2014). The potency of modern electronic technology can be exploited for infotainment of farming communities (Guenthner and Swan, 2011).

Royals FM operate on 104.7 Frequency Modulation (FM). The station is located at Wenchi in the Brong- Ahafo Region of Ghana. Its broadcasts can be received within a radius of 120km. Royals FM started operating on June 1, 2000. It broadcasts for 20 hours in a day. Ninety-five per cent (95%) of the broadcasts are in the local language (Akan), and five per cent (5%) in English. The main aim of the programme is to enhance the identification and dissemination of agricultural technologies and information to benefit extension workers and farmers in the Brong-Ahafo Region of Ghana. The programme lasts for one hour; and allows stakeholders to interact with the farmers and fishermen through phone-ins and follow-ups by extension agents to the field. The topics discussed are determined through stakeholder meetings in the communities. Some of the topics discussed on the radio are on crop farming, animal farming, soil fertility improvement practices and post harvesting techniques (Ghana-QAS, 2010). Empirical studies measuring the impact of Royal FM radio agricultural programme on the livelihoods of farmers in the Brong Ahafo Region is lacking. In order to fill this gap, this study was undertaken to assess the impact of the radio programme on the livelihoods of the farmers.

### **Objectives of the study**

The general objective of the study was to examine the impact of Royal FM radio agricultural programme within its area of broadcasting in the Brong-Ahafo Region of Ghana since its inception in 2000.

The specific objectives of the study were to:

1. Describe the socio-economic characteristics of the farmers in the study area
2. Assess agricultural knowledge gained by the listeners
3. Determine farmers' level of satisfaction with the Royal FM Agricultural programme
4. Ascertain the impact of the programme on farmers' livelihoods in the five Districts and Municipalities in the study area.

## LITERATURE REVIEW

Livelihood is defined to include capabilities, assets (including both material and social resources) and activities required for a means of living (Seidu, Alhassan and Abdulai 2011). Economic theory postulates that Community Radio, to a large extent, if effectively organized, performs three main significant functions at the grassroots level for rural development. Firstly, it promotes issues of agriculture, gender equality, education, trade and commerce, disaster awareness, weather, natural calamities, poverty and social problems. Community radio is usually for the people, run by the people and owned by the people. Secondly, it enhances the capacities of local people to work together to tackle a range of social problems, including poverty and exclusion through radio. Lastly, it contributes to nurturing of the creative talents of the community and providing a forum for a diversity of opinions and information. Information is important for farmers to maintain livelihoods and to gain a competitive edge in a rapidly changing economic and production environment where traditional farming methods might be ineffective to meet new demands (Morton and Matthewman, 1996). Unfortunately, most African countries have not devoted enough attention to provide their citizens with access to information, especially in rural areas where 70–80% of the African population lives (Youdeowei, Diallo and Spiff, 1996).

According to Siyanbola, (1996), an understanding of extension communication systems in a complex chain of interaction is a major determinant of the potential success of a scientist in a research institute. Sustainable development in the agricultural sector according to Dimelu and Anyanwu, (2005) is dependent on generation of appropriate technologies and creation of effective communication strategy for dissemination of recommended techniques to end-users. Communication is conceptualized as a process of information flow by which ideas are transferred from a source to a receiver with the intent to change listener's (farmer's) knowledge, attitude and skills (Adebayo, 1997). It is the key process in information dissemination in agriculture. The dissemination of information from point of development to the point of ultimate use is an important concept in agriculture extension delivery. For technology to be relevant, its existence must be known – a condition, which presupposes communication

Development is a multifaceted and normative concept meaning different things to different people (Adebayo, 1997). Development is simply a rapid and sustained rise in real output per head and an attendant change in technological, economic and demographic characteristics in a society. Yahaya (2003) described development as a trend in the technologies, organizations, activities and values of a society. According to Yahaya (2003), the indices for measuring development are economic growth, cultural and racial prejudices, equity in income, egalitarianism (personal freedom), technology and ecology. Majority of economists, psychologists, sociologists and political scientists have, at one time or the other focused their attention on the colossal inequalities among the world's nations (Okonkwor, 1987). The gross national product (GNP) and literacy rate are often used as indices for measuring national development (Okonkwor, 1987). The tendency to notice a correlation between high per capita income and high literacy rate is then taken as the basis for national development. Fapohunda (1979) stated that the economic development of a country depends on the quantity and quality of its resources, the state of technology and the efficient deployment of resources in both the production and consumption processes

Research findings indicate that, the major missing link between research and sustainable development and sustainability in agriculture is lack of effective information delivery system. The ratio of extension agents to farmers in Ghana, especially in

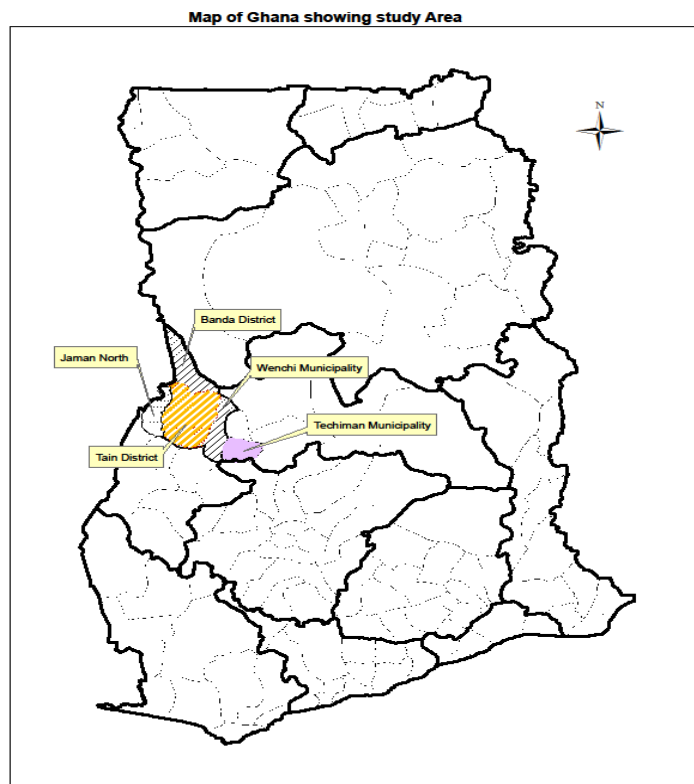
regions and districts is grossly inadequate making extension workers to reach insignificant number of the farmers, hence a wide gap exist between available knowledge of improved technology and actual practice. This has had negative effect on attempts to increase food production. It is, therefore, necessary to highlight the use of alternative channels of information to enable farmers to have timely access to improve technologies that will enhance agricultural productivity (Njoku, 2016). Among the mass media methods, radio farmer programme are used to reach large number of farmers quickly as well as making them aware of innovations and stimulates their interest (Agwu, Ekwueme and Anyanwu 2008). Agwu et al (2008) stated that, despite efforts by Imo State Agricultural Development Programme (ADP) via radio-agricultural farmer programme in transferring improved technologies to rural farmers in order to alleviate the problem of sustainable food production within the area, the problem of sustainable food production remains very high. Therefore gap between sustainable food production and impact of radio-agricultural programme in technology transfer to rural farmers needs to be examined.

Radio has proved to be an important tool for the enhancement of agriculture in the rural areas. In developing countries, radio is a powerful and effective medium to project information and knowledge related to agriculture (Nakabugu, 2001). Shree (2011) opined that radio is the reliable medium that can cover wider area and can reach a large number of people. The strength of radio as the medium of communication is the fact that it is cost effective in terms of transmission, presentation and portability. However, the literacy of farmers is important if they are to understand such programmes and apply them appropriately (Mohammad, Salleh and Hasbullah 2010). Modern radio programmes allow for phone-ins by listeners. As the rural farmers participate in the radio programmes, they become more and more interested and begin to feel a sense of belonging. As a result, the message and information being disseminated easily gets absorbed

## **RESEARCH METHODOLOGY**

### **Area of study**

The Brong-Ahafo Region has twenty seven (27) administrative and political districts/ municipalities and was created on 4th April 1959 (by the Brong-Ahafo Region Act No. 18 of 1959). Brong-Ahafo, with a territorial size of 39,557 square kilometres, is the second largest region in the country (16.6%). The region shares boundaries with the Northern Region to the north, the Volta and Eastern Regions to the south-east, Ashanti and Western Regions to the south, and Cote d'Ivoire to the west. The central point of the landmass of Ghana is in the region, at Kintampo. The region has a tropical climate, with high temperatures averaging 23.9°C (75°F) and a double maxima rainfall pattern. Rainfall ranges, from an average of 1000 millimetres in the northern parts to 1400 millimetres in the southern parts. The region has two main vegetation types, the moist semi-deciduous forest, mostly in the southern and southeastern parts, and the guinea savannah woodland, which is predominant in the northern and northeastern parts of the region. The level of development and variations in economic activity especially in relation to agriculture are largely due to these two vegetation types.



**Fig 1. Map of the study Area**

### **Population and sampling procedure**

The case study approach was used for the study. The population for the study consisted of all farmers within the transmission range of Royals FM in the Brong-Ahafo Region. A multistage sampling technique was used to select the respondents for the study. At the first stage, a simple random technique was used to select 50% of the ten municipalities and districts in the transmission range of Royal FM. At the second stage, a list of farming communities was obtained from Ministry of Food and Agriculture (MOFA) offices. One of the communities was randomly selected in each district or municipality.

At the third stage, the list of registered farmers was collected from MOFA offices in each of the districts and municipalities and six (6) farmers who listen to Royal FM agricultural programme were purposively selected from each community and interviewed. In all, 33 out of 101 communities were selected for the study. This was done based on time and resources available. The sample size of farmers for the study was one hundred and ninety eight (198). A total of 192 farmers were interviewed, which is 96.96% of the total sample.

### **Data collection and Analysis**

Data were collected through the use of questionnaire. The questionnaire was pre-tested on ten farmers in Asonkwaa community in the Brong-Ahafo Region of Ghana. This allowed for the modification of the questions to ensure reliability and validity. The

researchers personally visited the farmers to conduct the interviews in the study site. The Statistical Package for the Social Sciences (SPSS) software version 17.0 was used to analyse the data. Descriptive statistics such as means, frequencies and percentages were used to analyze the result. Inferential statistics used was One-Way Analysis of Variance (ANOVA) and Tamhane's T2 post hoc multiple comparison were used to analyse mean perceived impact of Royal FM agricultural programme on respondents' livelihoods in the five districts and municipalities of the study area.

## **RESULTS AND DISCUSSION**

### **Socio-economic characteristics of farmers**

Table 1 shows the frequency distribution of the gender of farmers who patronized the Royal FM agricultural programme. There were more males (62.5%) than females (37.5%) who patronize the agricultural programme. This may be attributed to the fact that males are more active in the farming area as compared to females. This finding is in accordance with Ango (2012) who posits that rural female farmers are not statistically identified as active population in farming; as a result, their reproductive roles are regarded as part of their domestic and economic roles. Similarly, the results indicated that 77% of farmers who listened to Royals FM agricultural programme were 50 years and below, while 23% of the respondents were between the age ranges of 51 and 70 years. The mean age of farmers in the study area was 42.6 years. This shows that, the farmers were young and within the age bracket in which people are innovative and active at work (Okwu, Kaku and Aba, 2007). These farmers therefore can make meaningful impact in agricultural production when adequately motivated with the needed farming facilities. Equally, majority of the farmers (71.8%) who listened to the Royals FM agricultural programme sampled for the study were married, while 28.2% were either single or widowed.

Likewise, majority of the farmers who listened to the programme (81.2%) had formal education while 18.8% had no formal education. This is an indication that majority of the farmers in the study area can benefit from the use of radio as a source of agricultural information. This assertion agrees with the work of Agbam and Orborhoro (2007). Age factor was found to be significant in agricultural information accessibility and utilization and as such young people (farmers) are more responsive to new ideas and practice than older ones who were observed to be conservative and less responsive to adoption of new practices. Therefore, the use of agricultural information is expected to be positively related to the level of formal education and sustainable development and sustainability in agriculture.

Correspondingly, it was found out that, 38.5% of farmers who listened to the programme have a household size of 1-4; 51.1% had a household size of 5-9; and 10.4% of the farmers had a 10-14 household size. It was realized that the mean household size was 6 people. This showed that the farmers had reasonable family labour that could help in farming. Household size in traditional agriculture determines the availability of labour and level of production (Aina, 2006). The assumption here is that the larger the household size of farmers, the more the propensity for the usage of information, hence the development of agriculture and its impact on farmers' livelihoods.

In addition, the results in Table 1 showed that the primary occupation of majority of respondents (63.5%) was farming, while 22.9% had trading/business as their primary occupation. Civil servants/retirees (8.6.1%) and artisans (4.5%) used farming as their primary occupation. This showed that farming can be relied upon as a major source of income for the family.

Data depicted in Table 1 shows that majority of the farmers (88.5%) were involved in crop production, whereas 11.5% were involved in animal production. Besides, more than half of the farmers (55.6%) had 1-19 years of farming experience and 44.3% of farmers had 20-39 years of farming experience, with a mean of 19.4 years. The farming experience showed most of the farmers had farmed for a reasonable number of years as would enable them to be abreast with the use of radio as sources of agricultural information hence sustainability in agriculture. The farming experience of farmers to a large extent affects their managerial know-how, as well as the use of various technologies disseminated through radio (Aina, 2006).

An analysis of the farmer's farm sizes after listening to Royals FM agricultural programme indicated that 62.5% of the respondents had between 1-3 hectares, 35.9% had between 4-6 hectares, and 1.6% had farm sizes between 7-10 hectares. The mean farm size is 3.4 hectares as against 1.4 hectares before the programme. Thus, the use of agricultural information disseminated through radio has a positive effect on agricultural development in the study area therefore increase in farmers' farm size. Ani, Gunnika and Ifah, (2004) reported that traditional method of farming predominates in most localities resulting from a personal low input-low output relationship. An attendant low productivity constitutes the hall mark of traditional agriculture as practiced in Ghana and farming based entirely upon traditional agriculture is inevitably poor.

**Table 1: Socio-economic characteristics of farmers**

| Sex                       | Frequency | Percentage | Mean | SD   |
|---------------------------|-----------|------------|------|------|
| Male                      | 120       | 62.5       |      |      |
| Female                    | 72        | 37.5       |      |      |
| <b>Age (years)</b>        |           |            |      |      |
| 21-30                     | 40        | 20.8       |      |      |
| 31-40                     | 44        | 22.9       |      |      |
| 41-50                     | 64        | 33.3       | 42.6 | 10.1 |
| 51-60                     | 32        | 16.7       |      |      |
| 61-70                     | 12        | 6.3        |      |      |
| <b>Marital status</b>     |           |            |      |      |
| Married                   | 138       | 71.8       |      |      |
| Single                    | 44        | 22.9       |      |      |
| Widowed                   | 10        | 5.3        |      |      |
| <b>Educational status</b> |           |            |      |      |
| Non formal education      | 36        | 18.8       |      |      |
| Primary school level      | 46        | 23.9       |      |      |
| Middle/JHS                | 86        | 44.8       |      |      |
| Secondary                 | 24        | 12.5       |      |      |
| <b>Household size</b>     |           |            |      |      |
| 1-4                       | 74        | 38.5       | 6.2  | 3.0  |
| 5-9                       | 98        | 51.1       |      |      |
| 10-14                     | 20        | 10.4       |      |      |

|                                   |     |      |      |      |
|-----------------------------------|-----|------|------|------|
| <b>Primary occupation</b>         |     |      |      |      |
| Farming                           | 122 | 63.5 |      |      |
| Trading / business                | 44  | 22.9 |      |      |
| Civil services / retired          | 17  | 8.9  |      |      |
| Artisan                           | 9   | 4.7  |      |      |
| <b>Type of farming activities</b> |     |      |      |      |
| Food crop farmer                  | 170 | 88.5 |      |      |
| Livestock farmer                  | 22  | 11.5 |      |      |
| <b>Farming experience (years)</b> |     |      |      |      |
| 1-9                               | 31  | 16.1 |      |      |
| 10-19                             | 76  | 39.6 | 19.4 | 10.6 |
| 20-29                             | 60  | 31.3 |      |      |
| 30-39                             | 25  | 13.0 |      |      |
| <b>Farm size</b>                  |     |      |      |      |
| <b>Before the programme</b>       |     |      |      |      |
| 1 – 2                             | 168 | 87.5 |      |      |
| 3 – 4                             | 20  | 10.4 | 1.3  | 0.88 |
| 5 – 6                             | 4   | 2.1  |      |      |
| <b>After the programme</b>        |     |      |      |      |
| 1 – 3                             | 120 | 62.5 |      |      |
| 4 – 6                             | 69  | 35.9 | 3.4  | 1.18 |
| 7 – 10                            | 3   | 1.6  |      |      |

Source: Field Survey, 2015

### **Knowledge gained by Farmers through Royal FM agricultural programme.**

Table 2 shows the number of respondents that gained knowledge about the various improved agricultural practices aired on Royal FM agricultural programme. The programme made impact on the knowledge-gain level of the farmers in the study area. The farmers indicated the various improved practices they gained knowledge in, and found very useful as a result of the Royal FM agricultural programme. Majority of the farmers (79.6%) gained new knowledge in the use of new improved varieties of crops for planting. Before the programme, farmers were using indigenous crop varieties for planting which often resulted in low yields. Furthermore, 75.2% of the farmers gained knowledge in timely crop planting dates. Additionally, majority of the respondents (73.4%) indicated that they gained knowledge in use of yam minisett technology, and had reduced production costs and increased profits in yam production in the study area after the programme. This result corroborated the findings of Oguntade, Thompson and Ige (2010) who concluded that yam production using the minisett technique was found to be profitable in Oyo state, Nigeria.

The results further showed that, 71.8% of farmers in the study area indicated that they had gained knowledge in the type of fertilizer to apply to different crops which had improved their yields produce, while 67.7% also indicated that they had gained

knowledge on the correct fertilizer application methods. These results agree with Ayinde (2009) who concluded that fertilizer can have dramatic effects on crop yields if applied in the appropriate formats and methods. Similarly, 64.5% of the farmers gained knowledge through the programmes about farm produce processing methods and proper management of growing crops (64.0%). Likewise, majority of the farmers (63.5%) indicated that they had gained knowledge in accessing agricultural credits from financial institutions to enable them acquire farming inputs to boost agricultural production. According to Ekwere and Edem (2014), agricultural credit enhances productivity and promotes standard of living by breaking vicious cycle of poverty of small scale farmers. Agriculture development through the use of improved technologies requires some considerable amount of capital investment. Small scale farmers especially in developing countries like Ghana cannot generate enough credit from their own savings. Farmers in the study area (62.5%) also indicated that they had gained knowledge in diseases, and insect and pest control on their farms. The over-all results showed that the Royal FM agricultural programme in the Brong-Ahafo Region had impacted positively on the knowledge towards agricultural development and improved livelihoods

**Table 2: Knowledge gained by farmers through Royal FM agricultural programme**

| Information given                       | Frequency | Percentage |
|-----------------------------------------|-----------|------------|
| Improved varieties of crops/livestock   | 153       | 79.6       |
| Timely crop planting                    | 145       | 75.2       |
| Yam minisett technology                 | 141       | 73.4       |
| Appropriate type of fertilizer to apply | 138       | 71.8       |
| Correct fertilizer application methods  | 130       | 67.7       |
| Farm produce processing methods         | 124       | 64.5       |
| Proper management of growing crops      | 123       | 64.0       |
| Easy access to information about credit | 122       | 63.5       |
| Disease, insect and pest control        | 120       | 62.5       |

Source: Field Survey, 2015. Multiple responses

#### **Farmer's level of satisfaction with the Royal FM Agricultural programme**

Table 3 reveals that 86 (43.43%) of the farmers were very satisfied with the Royal FM agricultural programme. Similarly, 61 (30.80%) were satisfied. These findings showed that 74.03% were pleased with the programme. This results, however, contradicts that of Agwu, *et.al* (2008) who stated that majority of farmers in Enugu State in Nigeria were not satisfied with radio agricultural programme. It was also found out that 15.70% were unsure, 7.07% were dissatisfied and 3.03% were very dissatisfied with the radio programme in the area of study. It is possible that, the time for airing the programme was not suitable to these particular farmers, or the subject areas of the broadcast were not of interest to them. Though the total number of farmers dissatisfied with the programme was in the minority (26.7%), efforts to air programmes targeted at them could arouse their interest, and lead to other farmers also diversifying their farming activities thereby increasing agricultural production and sustainable development. The level of satisfaction of individual farmers with the radio farmer programme will largely facilitate the utilization of radio agricultural information as a credible source of information. The results

indicated that in response to listening to radio agricultural programmes, farmers' knowledge had increased significantly and the results of the present study showed that educating farmers through media can be effective.

**Table 3: Farmer's level of satisfaction with the Royal FM Agricultural programme**

| Farmer's level of satisfaction | Number | Percentage |
|--------------------------------|--------|------------|
| Very Satisfied                 | 84     | 43.75      |
| Satisfied                      | 59     | 30.72      |
| Unsure                         | 31     | 16.15      |
| Dissatisfied                   | 12     | 6.25       |
| Very dissatisfied              | 6      | 3.13       |

Source: Field Data Source, 2015

#### **Impact of the programme on farmers' livelihoods among the five Districts and Municipalities**

Results of the study showed different levels of impact of Royal FM agricultural programme on the livelihoods of farmers in the districts and municipalities. One way analysis of variance (ANOVA) was computed to determine whether statistically significant differences existed among the mean levels of impact of the programme on farmers' livelihood in the five (5) districts and municipalities. The results in Table 4 showed that there was a significant (sig. 0.000) difference among the mean impact in the districts and municipalities at 0.05 alpha level. This implies that the programme has impacted in the five districts and municipalities at different levels. The level of impact of the programme on farmers' livelihoods was very high in Banda District (mean=4.28, SD= 0.26) and Wenchi Municipal (mean= 4.22, SD= 0.26). It was moderately high in Jaman North District (mean=3.98, SD=0.53), Tain District (mean= 3.89, SD= 0.38), and Techiman Municipal (mean=3.76, SD=0.58) as shown in Table 4.

**Table 4: One-Way Analysis of Variance (ANOVA) of Mean Impact of Royal FM Agricultural Programme on Farmers' Livelihoods in the five Districts and Municipalities of the Study Area**

| Districts/Municipalities | N  | Mean        | SD          | F ratio | Sig    |
|--------------------------|----|-------------|-------------|---------|--------|
| Banda District           | 30 | 4.28        | 0.31        | 8.923   | 0.000* |
| Wenchi Municipality      | 30 | 4.22        | 0.26        |         |        |
| Jaman North District     | 42 | 3.98        | 0.53        |         |        |
| Tain District            | 60 | 3.89        | 0.38        |         |        |
| Techiman Municipality    | 30 | 3.76        | 0.58        |         |        |
| <b>Weighted mean</b>     |    | <b>3.99</b> | <b>0.45</b> |         |        |

Source: Field Survey Data, 2015. \*p < 0.05 Scale: 5= Very High, (VH), 4=High (H), 3=Moderately High (MH), 2=Low (L), 1=Very Low (VI)

#### **Differences in impact of Royal FM Agricultural Programme on Farmers' Livelihoods in the five Districts and Municipalities of the Study Area**

Levene's test was used to determine appropriate post hoc multiple comparison to be used to determine where significant differences actually existed among mean impact of the five Districts and Municipalities since the F-test showed significance difference. The test revealed that highly significant (0.000\*) variances existed among the means. This implied that equal variances are not assumed among the five Districts and Municipalities. Based on the outcome of the Levene's test, Tamhane's T2 was chosen as the appropriate post hoc multiple comparison technique for the multiple comparison of mean difference among the Districts and Municipalities as in Table 4. Differences in impact of the Royal FM agricultural programme may be as a result of how well farmers use the information on each of the technologies disseminated in each district and municipality. Other external factors may have also resulted in such differences which may be beyond the control of the programme or farmer. One of such factors could have been the availability and distribution of rainfall in the various districts and municipalities as depicted in Table 5 below.

**Table 5: Differences in impact of Royal FM Agricultural Programme (Tamhane's T2 Post Hoc Multiple Comparison)**

| Districts/Municipalities |             | Mean Difference |           |       |
|--------------------------|-------------|-----------------|-----------|-------|
| A                        | B           | A – B           | Std Error | Sig   |
| Techiman                 | Jaman North | 0.464*          | 0.116     | 0.003 |
|                          | Banda       | 0.331*          | 0.067     | 0.000 |
|                          | Wenchi      | -0.059          | 0.073     | 0.995 |
|                          | Tain        | 0.247           | 0.093     | 0.100 |
| Jaman North              | Techiman    | -0.464*         | 0.116     | 0.003 |
|                          | Banda       | -0.133          | 0.118     | 0.955 |
|                          | Wenchi      | -0.524*         | 0.122     | 0.001 |
|                          | Tain        | -0.217          | 0.135     | 0.700 |
| Banda                    | Techiman    | -0.331*         | 0.672     | 0.000 |
|                          | Jaman North | 0.133           | 0.118     | 0.955 |
|                          | Wenchi      | -0.391*         | 0.076     | 0.000 |
|                          | Tain        | -0.084          | 0.096     | 0.992 |
| Wenchi                   | Techiman    | 0.059           | 0.073     | 0.995 |
|                          | Jaman North | 0.524*          | 0.122     | 0.001 |
|                          | Banda       | 0.391*          | 0.076     | 0.000 |
|                          | Tain        | 0.307*          | 0.100     | 0.031 |
| Tain                     | Techiman    | -0.247          | 0.093     | 0.100 |
|                          | Jaman North | 0.217           | 0.135     | 0.700 |
|                          | Banda       | 0.084           | 0.096     | 0.992 |
|                          | Wenchi      | -0.307*         | 0.100     | 0.031 |

n=198. \*p< 0.05. Source: Field Data Source, 2015

## CONCLUSION AND RECOMMENDATIONS

The study showed that Royal FM agricultural programme had made significant impact on the farmers in terms of knowledge gained in several areas of improved agricultural practices for sustainable development and sustainability in agriculture. The programme should therefore be continued. The study further revealed that the level of impact of the programme on farmers' livelihoods was highest in Banda District and Wenchi Municipal, but was moderately high in Jaman North and Tain Districts and Techiman Municipal. The evidence from the study showed that, there was a significant impact of Royal FM agricultural programme on the livelihood of farmers in the area of study. Similarly, majority of the farmers indicated that they were satisfied with Royal FM agricultural programme in the study area. The findings suggest that farmers will continue to rely on Royal FM agricultural programme as a credible source to gain agricultural information in the study area.

Based on the above conclusions the following recommendations were made:

The government should support the radio agricultural programme to ensure its sustainability since the study found out that the radio programme made positive impact on the livelihood of farmers in the study area.

Also, there should be further research to find out why some farmers were dissatisfied with Royal FM agricultural radio programme.

Other research could also be conducted in other radio stations to find out the impact of radio agricultural programmes on farmers in their areas of broadcast.

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