

# Analysis of seed yam varieties, sources and quantity demanded by farmers in major yam producing districts in Ghana

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## ABSTRACT

The study analysed the varieties, sources and quantities of seed yam demanded by farmers for cultivation in order to inform policies aimed at ensuring adequate supply of quality seed yam of desirable varieties at an affordable price to boost yam productivity for improved income and livelihoods. A structured questionnaire was administered to 380 randomly selected yam farmers in three major yam producing districts in Ghana in 2015. The data analysis was done using STATA statistical software. The study identified Pona/Punjo, Lariboko, Asana, Afebetuye, Dente, Olondo and Kparinjo as the yam varieties mainly cultivated by farmers in a reducing order with high market demands by consumers. Own production remains the major source of seed yam for farmers. The estimated monetary value of quantity of seed yam used by farmers for cultivation in 2014 farming season was GH¢ 198, 552,841.0 (USD 51,706,469.0) in the study locations. About GH¢ 5,679,979.0 (USD 1,479,161.2) worth of quantities of seed yam was obtained from the market and other sources. The results demonstrate the existence of market potential for commercial seed yam production and supply in Ghana. Commercial seed yam certification system and yam breeding activities should target the identified yam varieties.

**Keywords:** Seed yam; seed sources; quantity demanded; certification system; commercial seed system

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## Introduction

Yam (*Diocosea ssp.*) is a vital crop in the West African sub-region. Daily utilization of yam per capita is high in Benin, Côte d'Ivoire,

Ghana and Nigeria with estimated quantity of 364, 342, 296, and 258 kcal, respectively (Nweke *et al.*, 2013). Yam is the third most vital provider of energy in Ghanaian food. It

accounts for about 20% of aggregate caloric consumption (Nweke *et al.*, 2013). This shows the irreplaceable popularity of the crop in the West African sub-region. Yam is important commodity in both domestic and international markets, but domestic markets drive the value chain (Otoo *et al.*, 2013). Sale prices of ware yam have seen a tremendous increase over the years. Various authors have argued that the increases in the prices of yam are not only because of increase in disposable incomes due to economic growth but also population growth and increased demand from countries within the sub-region and beyond (MiDA, 2010; MEDA, 2011; Otoo *et al.*, 2013). Therefore, low-income households find consumption of yam relatively unaffordable compared to other roots and tubers such as cassava, cocoyam and taro (Aidoo, 2009; IITA, 2014).

Seed is the most fundamental input in crop production (Ghimire *et al.*, 2012; Badstue *et al.*, 2006) and serves as important source of germ-plasm for crop improvement, management and conservation of genetic resources (Bellon, 2004; Almekinders, 2001; Almekinders & de Boef, 2000; Jarvis *et al.*, 2000). Farm productivity depends, to a greater extent, on good quality seed of desirable variety planted by farmers (Cromwell, 1990). Consequently, the sources of seed of the desired varieties and of good quality are therefore major concerns to farmers and society at large in the quest to achieve food security and to end hunger as unambiguously stated in Goal 2 (2015) of UN 2030 Sustainable Development Goal (SDGs).

Although seed accounts for a minor portion of the total production costs of majority of crops (Ghimire *et al.*, 2012; Verma & Sidhu, 2009), that case of yam production is on the contrary as the cost of seed yam constitutes

over 45 percent of production costs (Aighewi & Maroya, 2013; Ezeh, 1991; Asumugha *et al.*, 2008). Quality seed is required to obtain the needed productive yield, given other complementary inputs (Singh *et al.*, 1990). The lack and availability of quality seed yam pose major limitations to production, which is an important food and cash crop, in the West African sub-region (Mignouna *et al.*, 2014b). In the absence of certified seed yam system to supply quality seed to yam farmers, farmers rely on traditional methods to produce seed yam for cultivation. This involves “milking” or harvesting the yam tubers (also known as ware yam) early and using some portion of the seed yams that result from the process for planting; cutting smaller tubers into 250-500 g; using the head portion of tubers only or the use of small whole tuber from ware yam production (Aighewi *et al.*, 2014).

The traditional methods of seed yam production (own production) are however constrained by low multiplication ratio (1:4-1:8), unavailability of seed yam for first-time growers, and encourages the spread of diseases. The process also requires the use of high proportion (up to 30%) of ware yam as seeds, which reduces the quantity of yam available for sale and consumption (Otoo, 2003; Otoo *et al.*, 2013; Aighewi *et al.*, 2013; Aighewi & Maroya, 2013). Consequently, there are ongoing efforts by donor agencies, international organizations in collaboration with the Government of Ghana to establish commercial seed yam certification system to ensure sustainable supply of quality seed yam to boost yam production. Seed system is the process by which producers obtain seeds required for cultivation. It may involve production, selection, saving and/or procurement of seed from diverse sources (Sthapit *et al.*, 2008). Ragassa (2000) opined that sustainable

agricultural development is dependent on the availability of regular supply of quality seeds and complementary input supply to smallholder farmers. According to Tripp (2003), until smallholder farmers are connected to inputs and produce markets, they will produce their own seeds and/or procure surpluses seed from other farmers. Various authors (Louwaars & De Boef, 2012; Tripp, 2003; ICRISAT, 2009) have stated that seed system in commercial growth perspective is essential to supply quality seeds for various crop varieties to meet the increasing consumer demands as well as industrial needs.

The establishment and smooth operation of commercial seed yam certification system would be dependent, among others, on knowledge about major varieties cultivated by farmers, sources and quantities of seed yam obtained from such sources. The former has implications for yam-breeding activities, while the later could provide market signals for commercial seed producers to participate in seed yam production and supply. In view of these, this paper is set out to:

- Identify yam varieties cultivated by farmers in major yam producing districts in Ghana
- Identify the sources and quantities of seed yam obtained from such sources; and
- Estimate and predict quantity of seed yam demanded by farmers in the major yam producing districts in Ghana.

### Materials and methods

The data used for this paper were obtained from a field survey conducted in 2015 in Kintampo (transition agro-ecology), East Gonja (guinea savannah) and Afram Plains (deciduous forest zone) districts, located in Brong Ahafo, Northern and Eastern regions, respectively, in Ghana.

The three regions from which three districts were selected together contribute about 76% of yam production in Ghana (Anaadumba, 2013). After purposive selection of the three districts based on production and distribution across different agro-ecological zones, five communities were randomly selected from a sample frame of major yam producing communities obtained from the District Agricultural Development Units of the District Assemblies in the study locations. At the community level, listing of houses and households was conducted to provide sampling frame of yam farmers. With the aid of the sampling frame, simple random sampling was used to select at least 25 yam farmers per community for the study. A total of 380 yam farmers responded to the survey questionnaire. The survey was conducted in August 2015.

The quantity of seed yam demanded (in monetary terms) by farmers from various sources was estimated using equation 1:

$$Q_d = \sum [Q_i * V_i] \quad [1]$$

Where:

$Q_d$  is monetary value of quantity of seed yam demanded by farmers;

$Q_i$  is the quantity of seed yam obtained by farmers in bunches (A bunch of seed yam is made up of 100 pieces of seed yam, seed yam are classified into small (45kg), medium (84kg) and large size (180kg). A bunch of large size seed yam could be divided into a minimum of 5 pieces each of 300g; a bunch of medium size seed yam could be divided into three pieces of 300g each; and a maximum of 150 pieces of 300g could be obtained from a bunch of small seed yam); and

$V_i$  is the value/ market price of seed yam at a given time

### Results and discussions

The socio-economic characteristics of yam farmers are presented in Table 1. The results show that 96.3% of all the respondents were males and the remaining, females. The results corroborate the findings of Otoo *et al.*

(2013) and Mignouna *et al.* (2014a) that male dominate yam activities at the production level. The data did not show much variation in terms of gender distribution across yam farmers in the study locations. Males were 96.8%, 95.5% and 98.8%, in the Kintampo, East Gonja and Afram Plain districts, respectively.

TABLE 1  
*Socio-economic characteristics of yam farmers*

Variable	All (N=380)		Kintampo district (N=123)		East Gonja district (N=133)		Afram Plains district (N=124)		
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	
<b>Sex</b>									
Male	366	96.3	119	96.8	127	95.5	120	96.8	
Female	14	3.7	4	3.3	6	4.5	4	3.2	
<b>Age group</b>									
<30	47	12.4	10	8.1	33	24.8	4	3.2	
30-49	203	53.5	69	56.1	63	47.4	71	57.3	
50+	130	34.3	44	35.7	37	27.8	49	39.6	
<b>Mean</b>		<b>45.2</b>		<b>47.6</b>		<b>40.9</b>		<b>47.5</b>	
<b>Educational level</b>									
None	315	82.9	98	79.7	121	91.0	96	77.4	
Basic	49	12.9	18	14.6	5	3.8	26	21.0	
Secondary	14	3.7	6	4.9	6	4.5	2	1.6	
Tertiary	2	0.5	1	0.8	1	0.8	0	0.0	
<b>Experience in yam (years)</b>									
1-5	55	14.5	26	21.1	19	14.3	10	8.1	
6-10	68	17.9	20	16.3	26	19.6	22	17.7	
11+	257	67.6	77	62.6	88	66.2	92	74.2	
<b>Yam farm size (hectares)</b>									
<2	236		62.1	72	58.5	91	68.4	73	58.9
2-5	125		32.9	38	30.9	41	30.8	46	37.1
> 5	19		5.0	13	10.6	1	0.8	5	4.0
<b>Mean</b>	2.1			2.6		1.7		1.9	
<b>Income level (Ghc)</b>									
<3000	142	37.4	55	44.7	66	49.6	21	16.9	
3,001-6,570	103	27.1	33	26.8	38	28.6	32	25.8	
6,571-25,200	105	27.6	24	19.5	26	19.6	55	44.4	
>25,200	30	7.9	11	8.9	3	2.3	16	12.9	

Source: Field survey, 2015

The results show that the majority of the respondents were between the age group of 30-49 years. About 53.5% of all respondents were in this age category with an overall average age of 45.2 years. This result corroborates the

findings of Mignouna *et al.* (2014a). Similar distributions of age group were observed across the three districts with variations in mean ages. While the average age of respondents was about 47.5 years in both Kintampo and Afram

Plains districts, that of the East Gonja district was a little lower, about 40.9 years (Table 1). Also, the overall sample shows that only about 12.4% of the respondents were below 30 years. The proportion of respondents who were below 30 years ranged from 24.8% in the East Gonja district, 8.1% in the Kintampo district to a minimum of 3.2% in the Afram Plains district. About 82.9% of all the respondents had no formal education. The proportion was even higher in the East Gonja district, where as high as 91.0% of the respondents did not have any formal education. The proportion of respondents who had no formal education was similar in the Kintampo and Afram Plain district, about 78%. Respondents with basic level of education were about 12.9%, while those with secondary or higher level of education were less than 5% of the total sample of the study.

Regarding land allocation to yam production, the results show an average yam farm size of 5.2 acres (2.1 ha). The yam farm size of the majority of farmers (62.1%) was below 5 acres (2.0 ha). Also, the highest average yam farm size of 6.4 acres (2.6 ha) was recorded among farmers in the Kintampo municipality. This is about 0.8 hectares bigger than that operated by farmers in the East Gonja and Afram Plains district. Access to the market might have accounted for the variations.

Household annual income comprises income from employment, agricultural and non-farm activities, rent, remittances, and income from other sources. Following the Ghana Living Standards Survey Six (GLSS6) report, the respondents' annual household incomes were classified into three income groups (i.e. low,

middle and high). The low-income households have average annual income of GH¢ 6, 571.8, middle-income households have averages income of GH¢ 14,823.5 while high-income households have average annual income of GH¢ 25,200.9 (GSS, 2014). Table 1 shows that about 64.5% of the farmer households were low-income households with about 37.4% having average annual income that is less than half of the annual average of the low-income group. About 27.6% of the respondents were within the middle-income group and 7.9% of respondent was within the high-income group.

#### *Yam varieties cultivated by farmers*

Farmers in the study locations cultivate many different yam varieties. Figure 1 shows the percentage distribution of more than 15 yam varieties cultivated by farmers. The five common white yam varieties cultivated include Pona/Punjo (15.9%), Lariboko (11.7%), Afasie (9.3%), Asana (8.7%) and Kparinjo (7.4%). The predominance of yam cultivated by farmers varied across the three different study locations. In the Kintampo municipality, for instance, the top three varieties cultivated by farmers were Pona/Punjo (22.5%), Afebetuye (11.2%), and Dente/Ponjo (11.2%) (Figure 2). Lariboko, Olando, and Pkarinjo, were the top three yam varieties cultivated by 27.8%, 12.7% and 12.5% of farmers in the East Gonja district, respectively (Figure 3). Factors such as market demand which is influenced by sweet taste, poundability, and storability were among the reason for the variation in preference of yam cultivars in the study locations.

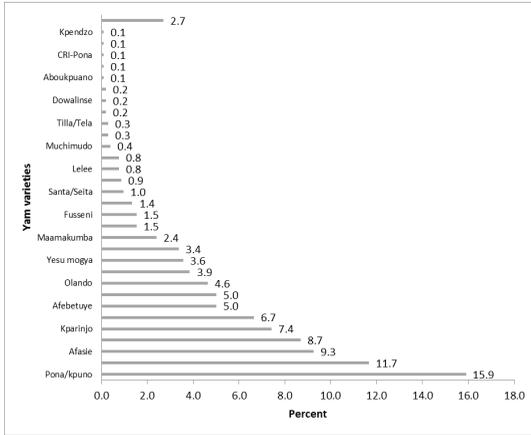


Fig. 1: Distribution of yam varieties cultivated by all respondents (N=380)  
Source: Field survey, 2015

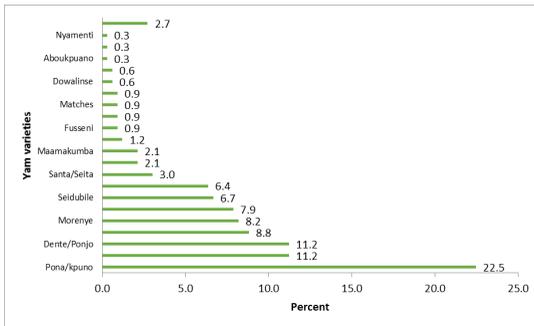


Fig. 2: Distribution of yam varieties cultivated in the Kintampo municipality  
Source: Field survey, 2015

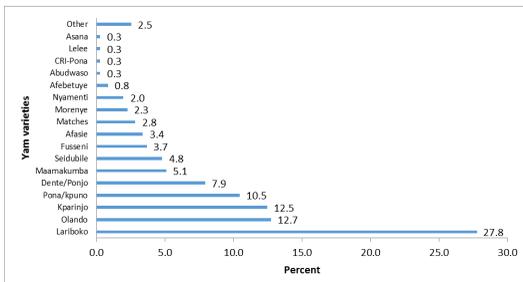


Fig. 3: Yam varieties cultivated in East Gonja District  
Source: Field survey, 2015

Figure 4 further shows that Asana (25.1%), Afasie (15.5%), and Pona/Kpuno (10.4%) were the three main yam varieties cultivated by farmers in the Afram Plains district.

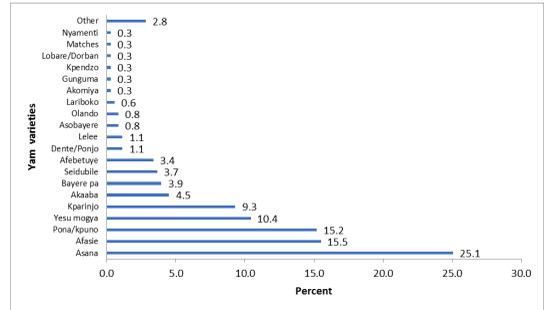


Fig. 4: Yam varieties cultivated in Afram Plains District  
Source: Field survey, 2015

*Sources of seed yam for production*

Yam farmers obtain seed yam from three main sources (i.e. own production, market and other farmers). Own production was the source of seed for 84.7% of yam farmers. This was followed by seed obtained from other farmers (7.7%), and market sources (7.5%). Other source such as MoFA was very insignificant (0.1%) (Figure 5). Interventions in the seed yam sector are not effective because they are mostly based on project as such the support truncates with the end of project interventions. Also, the miniset technology promoted by MoFA and other agencies has not received the needed adoption by farmers owing to the special care required for the minisets and the need to cultivate the minisets to develop microtubers for cultivation. Farmers are impatient and indicated they would prefer using the period to cultivate micro-tubers to cultivate ware yam. Thus, there is a need for a commercial entity to fill the gap and perform that function. The percentage distribution of sources of seed

yam to farmers were similar in all the study areas with the exception of Afram Plains district where the proportion of farmers who obtained seed yam from other farmers were 3.5% less than those who obtained seed yam from the market. Although own production is the main source of seed yam to farmers, all the respondents indicated that they purchased seed yam to supplement their seed used for planting in the previous farming season. They further indicated that whenever a new variety of yam is introduced on the market they purchase some to try on their farms. Own production of seed yam remains dominant partly because the market is unable to supply enough seed yam for sale. Farmers have no choice than to produce their own seed yam. Furthermore, the seed yam supplies to the informal market are surpluses of other farmers that may be of lesser quality. A study by Boadu *et al.* (2019) found that farmers are willing to pay for certified seed yam.

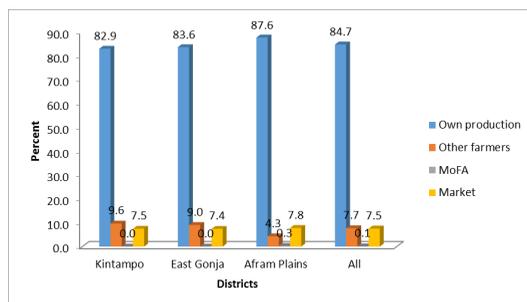


Fig. 5: Sources of seed yam to farmers  
Source: Field survey, 2015

#### *Quantities and value of seed yam obtained from own production*

The quantities of seed yam obtained by farmers from own production for cultivation ranged from a minimum of 0.2 bunches to a maximum of 600 bunches (Table 2). On average, farmers

obtained about 16.1 bunches of seed yam from own production for cultivation with a standard deviation of 39.7. The majority of farmers (84.1%) obtained less than 20 bunches of seed yam from their production. A similar distribution across the study locations was observed among farmers in all the districts.

TABLE 2  
*Quantity of yam sets obtained from own production (100 bunch)*

Yam sets	All (380) %	Kintampo (123) %	East Gonja (133) %	Afram Plains (124) %
<=20	84.1	86.0	83.1	83.4
21-30	10.1	7.2	12.6	10.0
41-60	3.1	2.3	2.6	4.3
61-80	0.8	1.3	0.3	0.9
81-100	0.7	1.6	0.3	0.3
>100	1.3	1.6	1.2	1.2
Mean	16.1	17.2	16.2	15.0
SD	39.7	53.9	37.0	25.1
Min	0.2	0.3	0.3	0.2
Max	600	600	400	300

Source: Field survey, 2015

Furthermore, Table 3 presents farmers' estimation of the value of quantity of seed yam obtained from own production. About 77.9% of farmers estimated the value of own produced seed to be GH¢ 200 or less. The proportion of such farmers was greater in the East Gonja district (94.5%) as compared to the Kintampo municipality (66.1%) and Afram Plains district (70.7%).

TABLE 3  
*Estimated value of seed yam produced from own sources (GH¢)*

<i>Value</i>	<i>All (380)</i>	<i>Kintampo (123)</i>	<i>East Gonja (133)</i>	<i>Afram Plains (124)</i>
<=200	77.9	66.1	94.5	70.7
201-500	18.4	26.1	2.6	28.2
501-1000	2.1	2.9	2.3	1.2
>1000	1.7	5.0	0.6	0.0
Mean	199.2	367.8	79.6	181.9
SD	600.8	1062.7	207.5	125.6
Min	10	10	10	10
Max	12000	12000	3000	600

\*GH¢-1 US Dollar (\$) =3.84 Ghana Cedi (GH¢) at the time of survey, 4/2015

Source: Field survey, 2015

An average value of GH¢ 199.2 seed yam was obtained from own production with a standard deviation of 600.8. In all, an estimated value of seed yam obtained from own production ranged from GH¢ 10 - GH¢ 12,000. Across the study locations, the maximum value of seed yam obtained from own production by farmers in the Kintampo municipality was four times higher than that obtained by farmers in the East Gonja district and 20 times higher than the value of seed yam obtained from Afram Plains district.

*Quantity and estimated value of seed yam obtained from the market and other sources*

TABLE 4  
*Quantity of seed yam obtained from market and other sources*

<i>Value</i>	<i>All (380) %</i>	<i>Kintampo (123) %</i>	<i>East Gonja (133) %</i>	<i>Afram Plains (124) %</i>
<=20	89.9	82.4	87.8	100
21-30	1.9	2.9	2.4	0.0
41-60	1.9	8.8	0.0	0.0
61-80	2.5	5.9	2.4	0.0
81-100	0.6	0.0	1.2	0.0
>100	3.2	0.0	6.1	0.0
Mean	15.2	12.1	22.2	4.2
SD	44.6	21.3	59.6	3.3
Min	0.3	1.0	0.3	0.3
Max	300	70	300	15

Source: Field survey, 2015

Table 4 shows that about 90% of farmers obtained up to 20 bunches of seed yam from the market and other sources such as other farmers and MoFA. With the exception of Afram Plains district where all the farmers obtained up to 20 bunches of seed yam from the market and other sources, the distribution was found to be similar in Afram Plains and East Gonja district. Also, an average of 15.2 bunches of seed yam was obtained by farmers from the market and other sources with a standard deviation of 44.6. The farmers were asked to estimate the amount spent on seed yam obtained from the market and other sources. The results are shown in Table 5.

TABLE 5  
*Estimated value of seed yam obtained from the market and other sources (GH¢)*

<i>Value</i>	<i>All (380)</i>	<i>Kintampo (123)</i>	<i>East Gonja (133)</i>	<i>Afram Plains (124)</i>
<=200	77.9	66.1	94.5	70.7
201-500	18.4	26.1	2.6	28.2
501-1000	2.1	2.9	2.3	1.2
>1000	1.7	5.0	0.6	0.0
Mean	122.3	122.7	63.6	233.7
SD	133.3	112.1	75.6	160.9
Min	10	20	10	10
Max	700	500	600	700

Source: Field survey, 2015

About 77.9% of the farmers estimated the value of seed yam obtained from the market and other sources to be up to GH¢ 200. An average of GH¢ 122.3 was spent by farmers

to obtained seed yam from this source with a standard deviation of 133.3. The average amount spent by farmers in the East Gonja and Afram Plains districts varied markedly from the overall average expenditure on seed yam obtained from the market and other sources. While an average of GH¢ 233.7 was spent by farmers in the Afram Plains to obtain seed yam from the market and other sources their counterpart on the East Gonja districts spent an average of GH¢ 63.6.

*Estimated quantity demanded for seed yam*

An understanding of the quantity of seed yam demanded by farmers is an important decision and policy variable to helps seed entrepreneurs in their decision to participate in seed yam commercialization and also developing appropriate seed yam certification systems. The quantity of seed yam demanded (in monetary terms) was estimated as the summation of the product of the value of seed yam and quantity of seed yam obtained by farmers (equation 1).

TABLE 6  
*Estimated quantity demand for seed yam by farmers and district of respondents (GH¢)*

<i>Location</i>	<i>N</i>	<i>Total quantity Demanded</i>		<i>Market/Other sources</i>		
		<i>Value</i>	<i>Own production</i>	<i>%</i>	<i>Value</i>	<i>%</i>
Kintampo	123	2,141,942.5	2,131,379.5	99.5	10,563	0.5
East Gonja	133	310,883.1	259,696.8	83.5	51,186.3	16.5
Afram Plains	124	532,287.5	508,642.0	95.6	23,645.5	4.4
All	380	2,985,113.1	2,899,718.3	97.1	85,394.8	2.9

Source: Field survey, 2015

The total quantity of seed yam valued at about GH¢ 2,985,113.1 was demanded by respondents for cultivation in the 2014 farming season. About 97% of this quantity demand was from own production with 3% (valuing GH¢ 85,394.8) of it obtained from the market and other sources. While the Kintampo municipality has the highest quantity demand for seed yam (about GH¢ 2,141,942.5), only 0.5% was obtained from the market and other sources. The quantity demand for seed yam in East Gonja and Afram Plains districts was GH¢ 310,883.1 and GH¢ 532,287.5 with about 16% and 4.4% obtained from the market and other sources, respectively (Table 6).

A broader picture of the quantity of seed yam demanded by farmers from the market and other sources is obtained when the results are extrapolated to consider all yam farmers in the study location. Data from MoFA/SRID (2015) estimated the area under yam cultivation in 2014 in the Kintampo municipality, East Gonja and Afram Plains districts to be 18,110, 13,954 and 25,776 hectares, respectively. As indicated earlier the average yam farm size cultivated

by respondents in 2014 was 2.6, 1.7 and 1.9 hectares in the Kintampo municipality, East Gonja and Afram Plains districts, respectively (Table 1). Assuming that each farmer cultivated the estimated average yam farm size as per the respective study locations then it follows that on the average about 6,965 farmers were involved in 2014 yam production in Kintampo municipality. The resultant number of farmers involved in 2014 production in East Gonja and Afram Plains districts were 8,208 and 13,566, respectively. These estimated numbers of yam farmers in the study locations were used to predict quantity demanded for seed yam in the study locations based on ratio and proportions. The results are shown in Table 7.

A total quantity of seed yam valued at GH¢ 597,367.7, GH¢ 3,158,925.9 and GH¢ 2,586,894.0 were obtained by farmers from the market and other sources for cultivation by farmers in Kintampo, East Gonja and Afram Plains, respectively, in 2014. This shows the potentials for seed entrepreneurs and seed companied to take advantage of the existing market demand to participate in commercial seed production and supply system.

TABLE 7  
*Predicted quantity seed yam demanded by farmers in 2014 (¢)*

<i>Location</i>	<i>N</i>	<i>Total Quantity Demand</i>	<i>Own production</i>		<i>Market/Other sources</i>	
		<i>Value</i>	<i>Value</i>	<i>%</i>	<i>Value</i>	<i>%</i>
Kintampo	6956	121,132,943.0	120,535,575.3	99.5	597,367.7	0.5
East Gonja	8208	19,185,928.0	16,027,002.1	83.5	3,158,925.9	16.5
Afram Plains	13566	58,233,970.0	55,647,076.0	95.6	2,586,894.0	4.4
All	28730	198,552,841.0	192,872,861.9	97.1	5,679,979.1	2.9

Source: Field survey, 2015

### Conclusions and recommendations

The study analysed the varieties, source and quantities of seed yam demanded by farmers for cultivation in order to inform policies aimed at ensuring adequate supply of quality seed yam of desirable varieties at an affordable price to enhance yam productivity for improved income and livelihoods. The study identified Pona/Punjo, Lariboko, Asana, Afebetuye, Dente, Olondo and Kparinjo as the yam varieties mainly cultivated by farmers with high market demands. The study finds that own production remains the major source of seed for yam farmers, although all the farmer respondents indicated they purchased some amount of seed yam from other farmers and the market to supplement their own produced seeds. The estimated value of quantity of seed yam demanded by farmers in 2014 amounted to GH¢ 198, 552,841.0 in the study locations. About GH¢ 5,679,979.1 worth of quantities of seed yam was obtained from the market/other farmers.

Based on these findings, it is recommended that commercial seed yam certification system should target the identified yam varieties in this study. The varieties could be the target for yam breeding activities to multiply and increase the availability of quality seed yam to farmers. The study has also demonstrated the existence of market potential for commercial seed production and supply in Ghana. Commercial seed producers could target meeting existing market demands. The market share could be increased overtime if they produce and supply quality seed yam to farmers. This would reduce the proportion of seed yam obtained by farmers from own sources and also make available seed yam for new farmers to enhance productivity.

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