

Full Length Research

African Mysticism: A Worldview that is a Blessing and an Impediment to Technological Change in West African Yam Food Crop Sector

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Accepted 21st June, 2019.

In West Africa yam producers do not remember when any yam production and utilization practice was introduced in their communities. This paper which is based on farm level survey in Nigeria and Ghana uses select farm practices to demonstrate that cultural practices at both production and utilization levels stand in the way of technological change in the yam food crop sector. The practices have their origin in mysticism, an element of African worldview. Peoples' worldviews are fundamental beliefs about reality that are hard to change. The result of slow pace of technological development are high production and postharvest handling costs that place yam at price disadvantage relative to alternative starchy staples. This brought into question in yam research circles in West Africa about the survival of the yam crop as a major food staple. But in spite of the price differentials demand for yam for the cultural purposes has helped to sustain yam production at a rate of growth that is higher than population growth rate and growth rates of some of the alternative staples.

Keywords: Yam, West Africa, Mysticism, Worldview, Technological change

INTRODUCTION

In West Africa the yam food crop sector activities encompass mystical practices in which supernatural forces and beings are at work. Practices in cultural uses of yam which are well documented in literature are part of them, there are others at production level. The practices stand in the way of technological change in the sector. Drawing attention to the consequences of mystical practices in the yam food crop sector, a goal of this paper, contributes towards the understanding of slow pace of technological change in the sector. The paper additionally aims to show that the worldview is a contributory factor in the continuation and even expansion of yam production and utilization in the face of superior price competition from alternative starchy staples such as cassava, maize and rice that are produced at lower costs in the region.

In West Africa, a region with around 400 million people presently yam is a major source of cash income for producing households, a source of foreign exchange for major producing countries, part of the traditional diet of many and it is central in cultural rites that are important for the existence of the people in producing areas. Africa's contributions to global

supplies of grains are modest: maize, about five percent; rice, three percent; and wheat, three percent (FAOSTAT). However, Africa is the lead player in terms of the production of yam: more than 90 percent of about 50 to 60 million tons of annual global yam production happens in Africa. Within West Africa, yam production is concentrated in Nigeria and Ghana. These two countries produce 75 percent of the global yam supply, Nigeria, 65 percent and Ghana, 10 percent.

For the purpose of this paper, yam food crop sector embraces the entire yam value chain beginning with production activities such as field preparation, sowing, staking, weeding as well as use of farm inputs including labor, planting material (seed yam in professional language), stakes, etc. The sector also embodies harvesting; postharvest handling activities such as storage and marketing; and utilization activities including food preparation and cultural usages. For brevity in this paper emphasis will be on seedbed type, source of seed yam and cultural usages of yam; postharvest handling and food preparation have been documented elsewhere (Nweke 2017).

LITERATURE REVIEW

Discussion of mystical practices at the level of production of yam is hard to find in literature. New Yam festivals dominate the discussion of cultural rites in which yam plays a pivotal role in producing areas. D. G. Coursey's review of literature on the subject of New Yam festivals suggests that detailed studies of the festivals is scanty and old (Coursey 1967). Coursey referenced the handful of early detailed studies as those of R. S. Rattray among the Ashanti people of Ghana and those of C. K. Meek and D. Forde among the Igbo and Yako peoples of Eastern Nigeria (Rattray 1923, Meek 1937 and Forde 1964). Introductions in several, more recent, West African yam literatures acknowledge that yam has an important role in the culture of the people in major producing areas (Hahn et al. 1987).

Use of yam in cultural rites other than New Yam festivals is common among major producing centers in West Africa. For example, Dagomba people who live near Tamale in northern Ghana celebrate yam during festivals, chieftaincy titles (enskinning), and sacrifices to the gods (Nweke 2016). In the Igbo village of Ukpo Dunukofia, marriage rite calls for the largest yam tubers available in the market (Nweke 2016). At marriage, a specified number of such yam tubers are supplied by the family of the bridegroom. After the leadership of the bride's extended family confirms the adequacy of the yams in terms of number and size of tubers, the yams are distributed in specified numbers to the oldest members of the bride's extended family. The balance of the yams is cooked, along with accompanying animal sacrifice, such as a goat, for all members of the extended families to share.

DEFINITIONS OF CONCEPTS AND TERMS

Several races of the world are represented in the African continent (Mbiti 1969). The Negroid people are found in every part of the continent, they make up the bulk of human population in the region. The Caucasoid people (any but dark skinned or curly haired people for the purpose this paper) are in the extreme Southern, North-Eastern and Northern Africa; the Mongoloid people are concentrated in the island of Madagascar; the Bushmanoid people are scattered in Eastern and Southern Africa; and the Pygmoid people are found mostly in the Congo region. In this paper African people refer to the Negroid people.

The word yam is used to refer to different crops in different parts of the world. D. G. Coursey defined West African yam by elimination of what is called yam in different parts of the world but not yam in West Africa (Coursey 1967). In the United States of America, yam is commonly understood to be sweet potato. Yams are also often confused with edible aroids such as coco yams, taros, etc. outside of West Africa. In India, the elephant yam is an aroid, which is

related to the coco yam, but not to yam. The word "yam" has also been used for the arrowroot and for several other edible starchy roots, tubers, or rhizomes grown in the tropics. Some leguminous plants that have swollen edible roots are described as yam beans. In the sense that the word is used in this paper, all yams are members of the monocotyledonous Dioscoreaceae family; virtually all belong to the genus *Dioscoreaceae*.

Mysticism has different connotations in different faith traditions such as Judeo-Christian, Baha'i and the African traditions. In African philosophical thought *Mysticism* is about interaction between humanity and supernatural; it is about a fundamental belief that there is more to reality than that which is accessible through empirical investigation (Gale Group, Inc. 2005 and Tanyi. 2002). Mystical practices aim to fulfill human needs in society. The manifestations occur within the structure of religious rites that in the particular case of West African yam food crop sector include seasonal festivals marking the beginnings of planting and harvesting of the yam crop. The manifestations also include rites of thanksgiving, passage, petition, and appeasement in which yam plays central role (Mbiti 1969, Donkor 1998, Brown 2004, Chiorazzi 2015, and Anderson 2002). In African communities there are mystics such as witches, seers, diviners, sorcerers, rainmakers, that have powers of clairvoyance, precognition, telepathy, etc. and concerned with misfortunes that are religious experiences.

Peoples' worldviews, such as mysticism are fundamental beliefs that are difficult to change, they do not lend themselves easily to foreign influence. Western education has produced only superficial impact on the fundamental beliefs of the people of Africa (Tempels 1948). Christianity is old and even indigenous in Africa (Isichei 1995, Kalu undated). Yet experts in the history of Christianity in Africa describe African Christians as superficial because they practice Christianity on the surface and retain and practice the essential elements of the African religions (Tempels 1948, Mbiti 1969, Isichei 1995, Anderson 2002 and Kalu(undated).

SOURCE OF INFORMATION

This paper is based on farm level information collected in the baseline survey of the Yam Improvement for Income and Food Security in West Africa (YIIFSWA) research project of the International Institute of Tropical Agriculture (IITA), Ibadan (Mignouna et.al. 2014). The aim of the survey was to provide the baseline information against which the impact of the YIIFSWA project will be assessed. It was a sample survey of yam producing areas of Nigeria and Ghana; the two countries that account for 75 percent of world yam supply. In either country all yam agroecologies, namely

humid forest, derived savanna and southern Guinea savannawere covered. In each agroecology three communities were selected randomly in Nigeria and two in Ghana making a total of 25 communities, 15 in Nigeria and 10 in Ghana. In each community a stratified random sample of three households was selected. Members of the community were assembled and requested to group themselves into three by size of their yam production operations: large, medium and small; in each group one farm household was selected randomly. The household yam farm size categories were unique to each community and varied across communities. In each selected household, all yam fields were surveyed.

Three structured questionnaires were designed, pretested and administered orally; one at community level, one at household level and one at field level. Respondents to the community level interviews were all yam producers, men and women, in the community who were interviewed as a group. Information collected at this level was such as would not vary with farm household. The head of the household and spouse were interviewed at the household level in their home for information that would vary across households such as characteristics of the household, available resources, yam production objectives. At the field level, the field owner responded to the oral interview for information such as production methods, plans for sale and for home consumption of yams to be harvested, source of seed yam (own produced or purchased), etc. The field level interviews were conducted in the various yam fields. Field area measurement was done with Global Positioning System; yield measurement was based on a sample plot of about 50 square meters harvested close to the center of the field.

Time series information from the FAOSTAT and information from other secondary sources are used to supplement the farm level data. The author studied African religions and philosophy by reading such authors as Basden (1921), Brown (2004), Dike (1966), Donkor (1998), Gbadegesin (2004), Isichei (1995), Kalu (undated), Kutor (2014), Mbiti (1969), Olupona (Chiorazzi 2015), Tempels (1952) and Wiredu (1980).

ANALYTICAL FRAMEWORK

Quantitative analytical framework in which a mystical practice can be used to explain technological change by calculating the degree of significance of relationship between the two is constrained by low and in many cases outright lack of variation in the data. A worldview such as mysticism is a fundamental belief of a people and does not vary among farmers in a given community. Farm practices that are hypothesized to be a function of the worldview hardly vary among the farmers. Yam was planted in mounds in all fields surveyed and every farmer aspired to produce the largest yam tuber possible. So in the cases of seedbed type and tuber size the analytical procedure is to state the observed practices and explain farmers' reported rationale for the practices.

Some farmers purchased seed yam and others did not, there was sufficient variation in the data for a regression analyses. Farmers were asked for each yam field what percentage of seed yam planted was own produced and what percentage was purchased. The information ranged from zero to 100. Ordinary Least Squares (OLS) regression model was used to estimate a regression function in which specified variables are presented in Table 1.

Table 1: Definition of variables specified in the regression functions of percentage of seed yam per field purchased.

Variable	Unit or Type	Explanation
Dependent Variable		
PSEED	Percentage	Percentage of seed yam purchased.
Field Variables		
FSIZE	Ha	Field size in ha.
PSALE	Percentage	Percentage of yam harvest designated for sale.
Household variables		
HHSIZE	Discrete	Household size in number.
AGEHH	years	Age in years.
Village variables		
VILMKT	Binary	1 if periodic market is in village, else 0.
DISTURB	Kilometer	Distance to urban center.
Country Dummies		
NIGERIA	Binary	1 if Nigeria, else 0.
GHANA	Binary	1 if Ghana, else 0.
Agro-Ecology Dummies		
HFFREST	Binary	1 if humid forest, else 0.
DSAVA	Binary	1 if derived savanna, else 0.
SGSAVA	Binary	1 if southern guinea savanna, else 0.

Source: Mignouna 2014.

Seedbed Type

In virtually all cases, yam is grown in mounds in both Nigeria and Ghana; the exception, as observed in the YIIFSWA Baseline survey, was a relatively small niche along the banks of the River Niger with light and deep alluvial soil where yam is planted on the flat seedbed. Farmer groups were asked to list the five most common seedbed types they use for yam and about what year each was introduced to their area. In all groups only mound was listed and each farmer group reported that they did not know when planting yam in mounds started. Making of the yam mounds is laborious and backbreaking (Figure 1). Mound making labor, 33 person days per ha, is considerably higher than ridging labor, 24 person days per ha (Tshiunza 1998).

Empirical evidence is that planting yam in ridges produces a higher aggregate yield per unit area and per unit of labor input because it permits higher plant population that is positively and significantly related to yield per unit area (Figure 2). Planting yam in ridges would facilitate mechanization not only of the seedbed preparation but also most of the other farm tasks because ridges are laid out in lines. Specific mystical practice with respect to planting yam in mounds was not observed or reported in the baseline survey. But the universal reliance on mound seedbed for yam production because that has been the practice over time defies objective reasoning.



Figure 1: Yam mound making, Abakaliki, Eastern Nigeria. Courtesy: Louise Fresco.

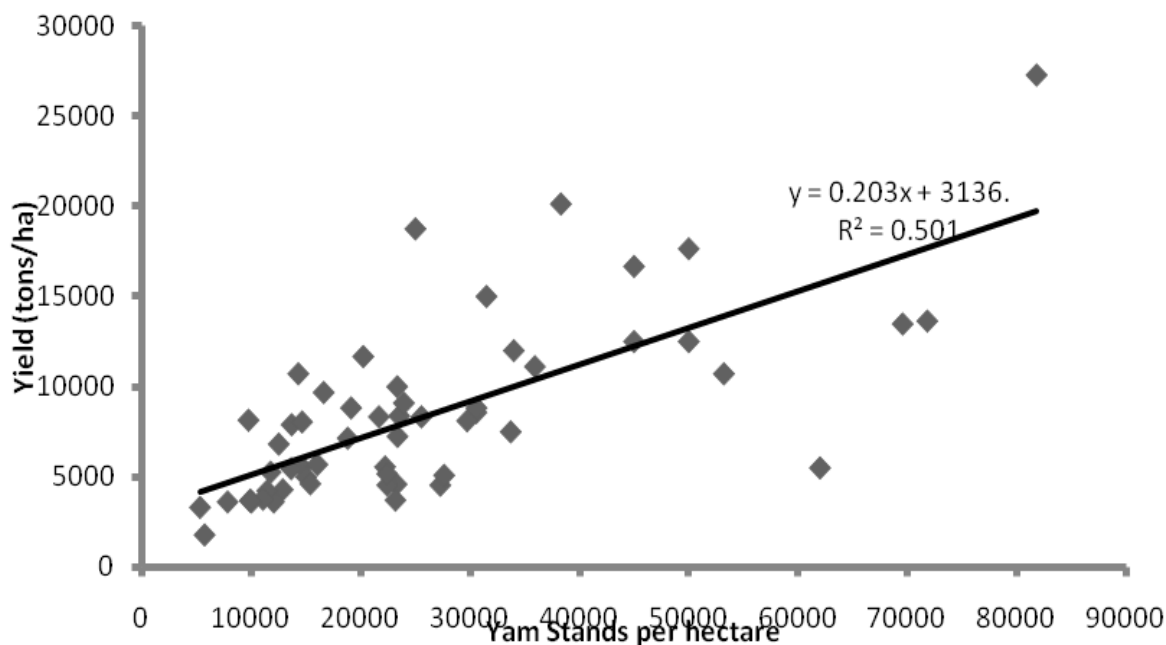


Figure 2: Nigeria and Ghana: Relationship between yam yield (tons/ha) and the yam stand density (stands/ha), 2013.

Source: YIIFSWA Baseline survey.

SOURCE OF SEED YAM

Crop seed systems are formal or informal. Under formal seed system national organizations or companies, under national legislation, provide farmers with seed of superior genotypes appropriate to the farmer's purposes; in an appropriate physiological state, vigor and health; in sufficient quantities; at the right time; and at an affordable price (Gibson et al. 2009). Under informal seed systems, farmers function, without public regulation, to provide seeds for their own planting or for exchange, sometimes through the market mechanism. In both Nigeria and Ghana the yam seed system is informal. Since the informal system is not publicly regulated, the quality in terms of health and varietal purity of seed, which the system provides is not guaranteed. Necessary conditions for transition from informal to formal seed system are effective seed quality standards and public regulatory instruments, continuous flow of high quality seed from certified seed producers to farmers, farmer ability to pay for the seed and farmer willingness to buy the seed. Financially and administratively, the first two of these essential conditions are virtually impossible for third world countries such as Ghana and Nigeria to meet. The alternative is to seek ways to make the informal system perform better. For this reason farmers are advised to buy new seed every season and avoid recycling their own produced seed to reduce the

tendency to recycle seed borne diseases (Gibson et al. 2009).

In Nigeria and Ghana, yam farmers produce seed yam, most of them as part of their overall yam production operation. The informal seed system that this method of production supplies delivers low quality and insufficient seed to the yam production system. In both Nigeria and Ghana demand for seed yam exceeds supply. Every planting season, farmers commonly use cassava to fill empty seedbeds in yam fields created by shortage of seed yam (Nweke 2016).

The baseline survey data reveal that in Nigeria most farmers do not buy seed yam at all and in Ghana most buy just a fraction of what they need (Mignouna et al. 2014). As a purchased input, it is expected that commercial yam producers will buy seed yam more than non-commercial producers. The result of the regression analysis suggests the contrary to be the case. The statistical relationship between percentage of yam harvest per field designated for sale and percentage of purchased seed yams planted in the field is negative at a high probability level (Table 2). Furthermore along with country and agro-ecology zone dummies, specified variables explained less than 50 percent (Pseudo $R^2 = 0.4792$) of the variability in the probabilities of a farmer buying seed yam.

Table 2: Nigeria and Ghana: Estimates of parameters of explanatory variables of probability of use of purchased seed yam in yam production, 2013.

Variable Name	Variable Level			
	Field	Household	Village	Combined
Intercept	114.6887 (4.10)***	77.1965 (2.53)***	99.3006 (3.89)***	238.5976 (6.18)***
F SIZE	-1.3414 (-0.51)	--	--	0.7673 (0.32)
PSALE	-1.0536 (-2.21)**	--	--	-2.0915 (-5.05)***
HHSIZE	--	0.2693 (0.36)	--	-0.0020 (0.00)
AGEHH	--	-0.1800 (-0.45)	--	-0.8683 (-2.13)**
DISTURB	--	--	-0.5223 (-0.49)	0.3868 (-0.35)
NIGERIA	-33.6840 (-2.90)**	-35.8575 (-2.97)**	-62.6033 (3.89)***	-71.4172 (-4.62)***
HFREST	-2.8819 (-0.51)	-7.3258 (0.33)	-11.0606 (-0.52)	-5.8731 (-0.35)
DSAVA	-13.4084 (-0.72)	-13.4370 (-0.68)	-10.4288 (-0.58)	-26.6384 (-1.78)*
Statistics				
No. of Obs.	60	61	43	43
Chi ²	3.00	1.91	3.14	5.83
Prob.>Ch ²	0.0184	0.1066	0.0250	0.0001
Adj. R ²	0.1449	0.0701	0.1696	0.4792

Notes: Figures in parentheses are t-ratios in the case of Linear and z-ratios in the cases of Logit models. ***denotes $P \leq 0.01$, **denotes $0.01 \leq P \leq 0.05$, and * denotes $0.05 \leq P \leq 0.10$

Source: YIIFSWA Baseline survey.

The conclusion is that important factors that influence farmers' decision to buy seed yam are not specified in the regression equation. In Nigeria, Dr. C. C. Okonkwo, a former international yam trials manager at IITA, reported that one reason a farmer would not sell or buy seed yam was that selling seed yam could mean selling one's good luck and buying seed yam could mean buying someone else's bad luck.

This farmer attitude towards buying and selling seed yam has a rational origin; seed yams available in the market are not quality declared and buying poor quality seed yams which can result in poor crop performance can be seen as buying bad luck. On the other hand, selling high quality seed yam can rightly be interpreted as selling good luck because the high quality seed yams will lead to good performance of the crop which could be envied, especially if the seller and the buyer are in the same vicinity. This attitude has serious implications for effort towards improving the informal yam seed system. Improved yam seed system is market driven and it depends on, among other conditions, farmer ability to pay and willingness to buy

seed yam. The observed negative attitude means that some farmers who have ability to pay for seed yam may lack the willingness to buy for fear of bad luck. Similarly the observed negative attitude means that there are farmers who would not produce seed yam for sale because of the fear of selling good luck to other farmers.

Mr. Suleman a government extension officer in the Ejura district of Ghana reported that in the same country, ritual objects prepared in clay or calabash pots were commonly sprinkled on seed yam before planting. After planting, the pot is left in the field to protect the yield of the crop from enemies because the farmers believe that, through ritual, a farmer could transfer a good crop of yam in another man's field to his own. Crop failures are blamed on the enemy next door and solutions to poor performing crop because of pests, diseases, poor soil, or bad weather are sought in mysticism. Farmers who engage in mystical practices are unlikely to be open to new technologies that would be viewed with suspicion.

Yam Tuber Size

In Eastern Nigeria, farmers have three categories of yam—namely seed yam, table yam, and ceremonial yam. In the Otuocha area of Eastern Nigeria, farmers have a name for each category: *awaji* for seed yam and *nnukwuji* for ceremonial yam; the residual, i.e. if it is not seed yam and not ceremonial yam, is table yam (Nweke 2016). Within a variety, the three yam categories differ in tuber size; ceremonial yam is the largest and seed yam is smallest of the three.

Production methods differ considerably, ceremonial yam is produced with the largest seed yam, mound, and stake, while seed yam is produced with the smallest seed yam, mound and materials. Therefore compared with table and seed yams ceremonial yams are more expensive to produce.



Figure 3: Women arrive at a wedding reception bearing gifts in Ukpo, Dunukofia, Eastern Nigeria, September 2010. Courtesy: Jeffry Oliver.

Growing yam size categories as independent crops is common only in Eastern Nigeria and surrounding areas. Elsewhere in the West African yam belt yam is sorted into size category at harvesting. In a yam crop field, tubers produced vary in size depending on micro environmental variations within the field. In addition, occasionally, a yam plant produces multiple tubers of varying sizes. At harvest, tubers are sorted by size, small ones for seed yam, medium ones for table yam and the very large ones for ceremonial yam. Different size categories of yam have different uses besides consumption. Before ceremonial sized yam

ends up on the dining table, it must have performed an intermediate function of ceremonial use.

In most cases the various mystical rites of thanksgiving, passage, petition, and appeasement are performed with ceremonial yams. Uses of yam in those rites are well documented in literature (Nweke 2016 and Coursey 1967). How large is the ceremonial yam market? The farmer groups interviewed in the baseline survey pointed out that each year the numbers of marriages, births, and funerals the rites of which require ceremonial yams, in both rural and urban settings were high. These are in addition to a litany of

heathen shrines in each community that demand and receive tributes of ceremonial yams daily for thanksgiving, petition, and appeasement. The farmer groups call to testimony the point that rites of passage, thanksgiving, petition, and appeasement are also performed in Christian churches. They point at the number of ceremonial yams presented in each church every Sunday and some other days for purposes of petition and penitence and for thanksgiving following marriages, births and funerals as well as numerous other events.

What about the sustainability of such a market over time, i.e. are the cultural practices sustainable

In the future? A peoples' worldviews die hard; African Christians are described as superficial because they readily revert to their traditional African religious practices under a threat of evil (Anderson 2002, Isichei 1995, Kaluundated, Mbiti 1969 and Chiorazzi 2015). The ceremonial yam market is therefore sustainable because the cultural rites whose origin is the peoples' worldview are sustainable. The baseline survey revealed that consumers pay premium price for large tubers (Figure 4).

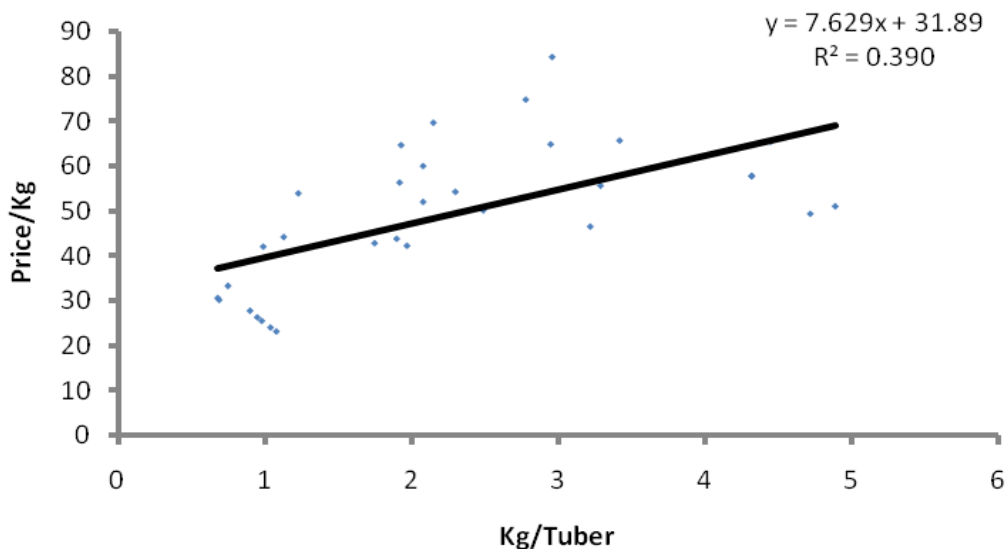


Figure 4: Nigeria: Wholesale price of yam by tuber weight in Shaki market, May 2013.

Source:Nweke 2016.

Is there a conflict between yam production technology development and emphasis on producing the largest possible tuber size? Yam farmers in West Africa define yield in terms of tuber size and adopt agronomic practices likely to produce large tubers, overlooking scientific evidence that planting yam in ridges produces a higher aggregate yield per unit area, that it is labor saving, and that would be easier to mechanize. Additionally, the larger the tuber size the higher the wastage at food preparation. It is unusual for a housewife to buy ceremonial yam for home consumption because of the problem of wastage. Growing demand for yam outside of West Africa provides hope for an increase in demand for non-ceremonial yams. This is because yam importers

outside of West Africa may not have ceremonial value for large tubers.

Is the need to produce large-sized tubers responsible for farmers' dogmatic adherence to planting yams in mounds? Is there a relationship between yam seedbed type and the size of the tuber produced? Does the difference in price per unit weight which is in favor of ceremonial yam tubers compensate for additional costs of ceremonial yam production. Would higher demand from consumers outside producing areas discourage farmers in West Africa from dogmatic adherence to production methods adapted to generating the highest possible tuber-sized yams? These are some empirical questions that are begging for investigation.

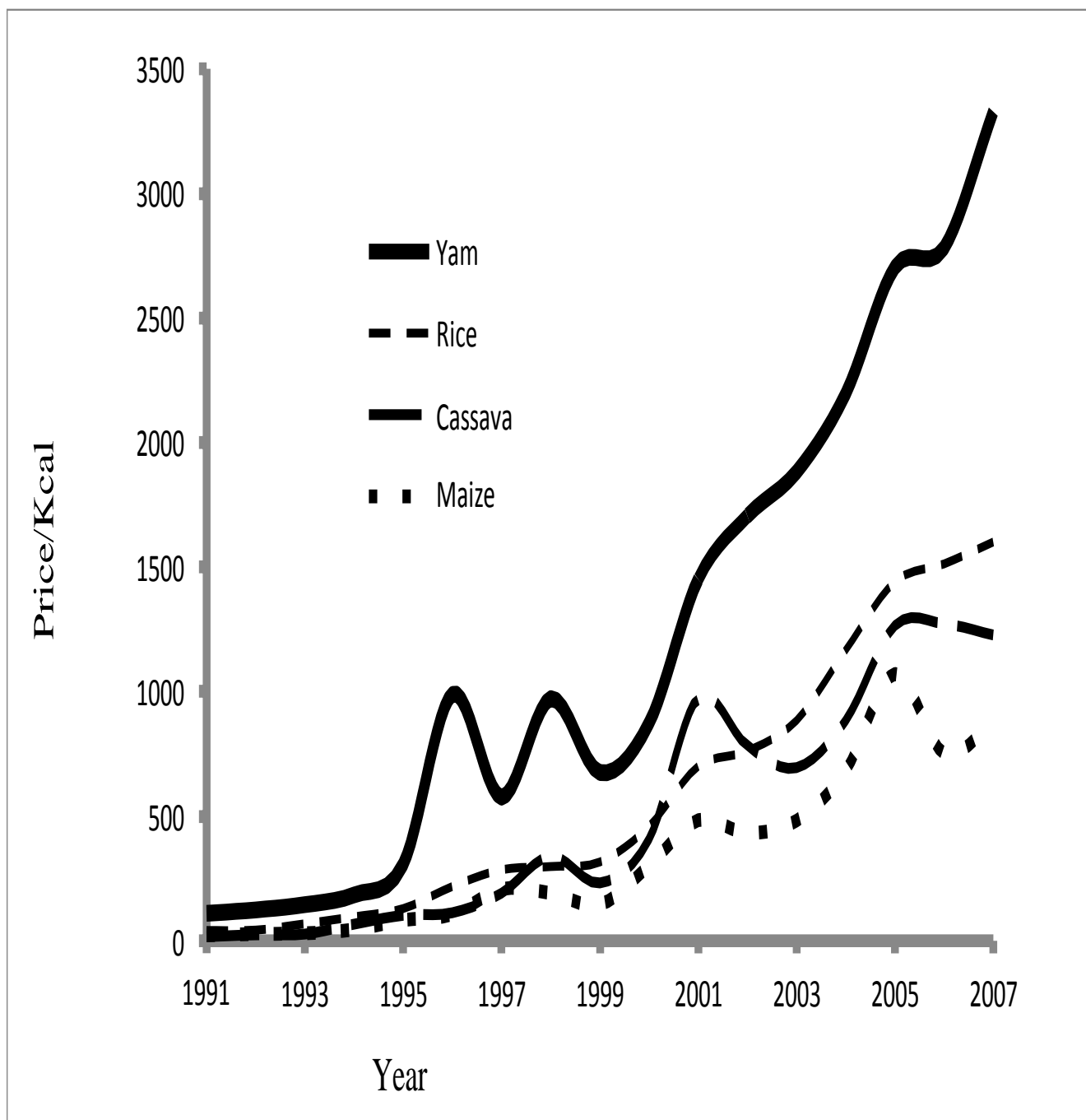


Figure 5: Ghana: Retail market prices (at current prices) of yam, cassava, maize and rice, 1991 to 2007. Source: FAOSTAT.

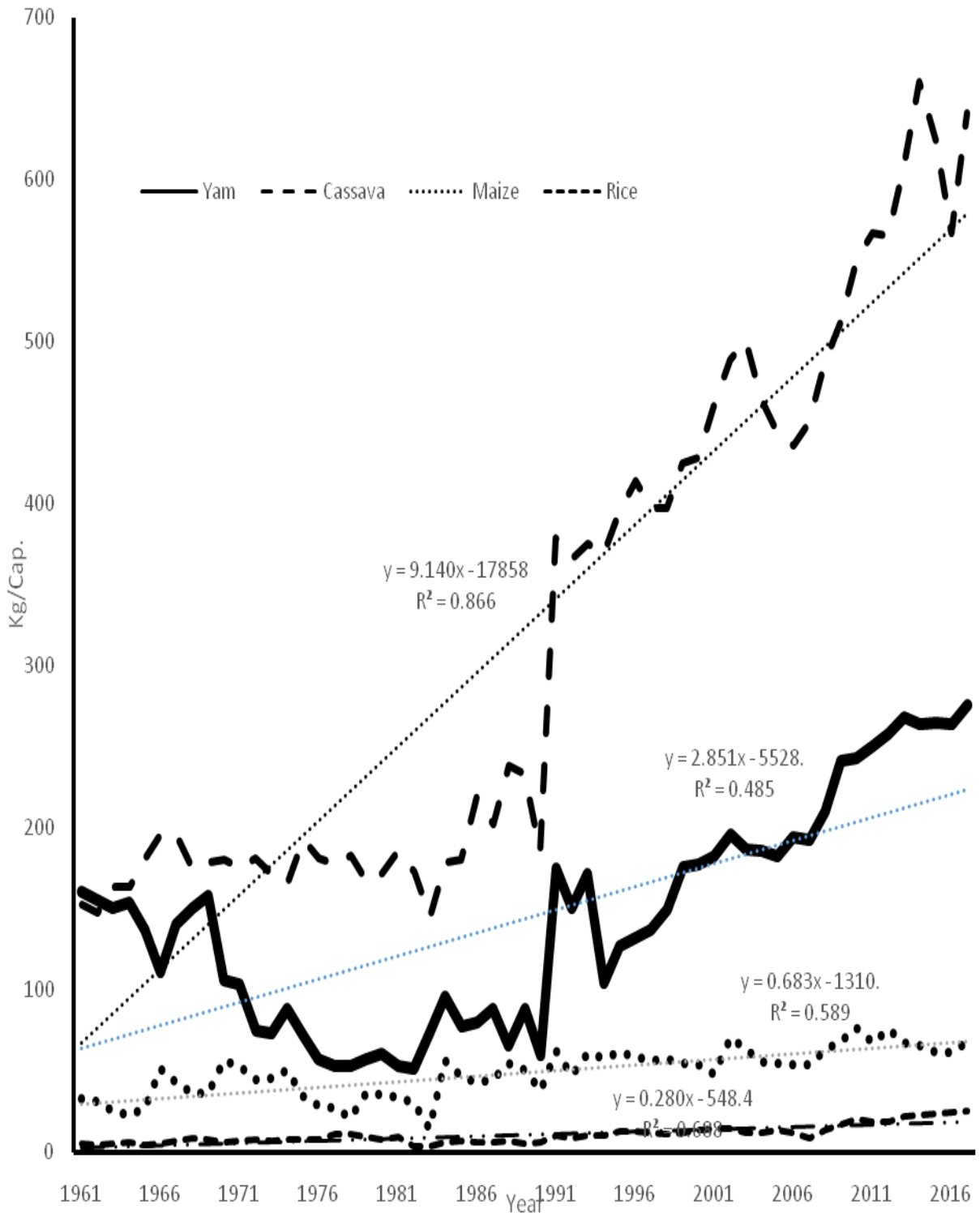


Figure 6: Ghana: per capita productions of yam, cassava, maize and rice, 1961 to 2017.

Source: FAOSTAT.

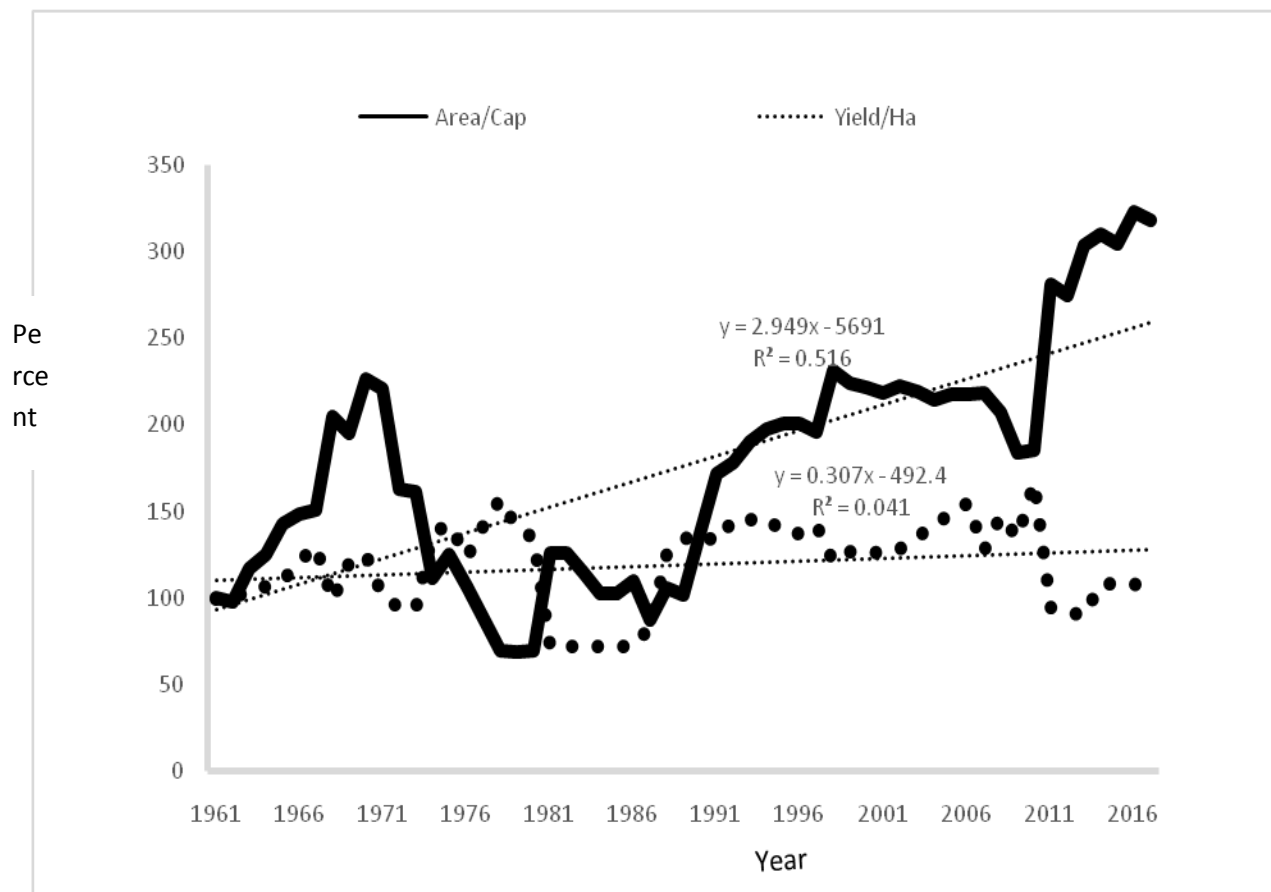


Figure 7: Nigeria: Indices of yam land area per capita (0.01 ha=100) and yield (tons per ha 77778 tons per ha=100), 1961 to 2017.

Source: FAOSTAT.

The Blessing of Mysticism for West African Yam Food Crop Sector

In the 1970s concern began to be expressed in the yam research circle in West Africa about survival of yam as a major food crop because of non-price competitiveness with alternative starchy staples that are produced at lower costs (Figure 5). This concern was the subject of a panel discussion entitled “The Future of Yam and the Yam of the Future” at the First Triennial Root Crops Symposium of the International Society for Tropical Root Crops-African Branch held in September 1980 at the IITA, Ibadan, Nigeria (Terry, Oduro and Caveness 1981). The objective was to identify measures that could save the crop from extinction by making it price competitive with alternative food crops.

The conclusion reached at the meeting which was that as long as yam consumers exist yam would continue to be produced proved to be prophetic; although the price gap has widened over time production of yam (along with cassava) has expanded faster than population while productions of maize and rice have not kept pace with population expansion (Figure 6). The source of the yam production growth is expansion in land area

planted to the yam crop. In Nigeria, from 1961 to 2017 the land area planted to yam expanded at about the same rate as population, around 3.0 percent per year while yield per unit of land area hardly changed during the same period (Figure 7). Yield per unit area stagnated because production technology did not improve. This scenario confirms that in West Africa yam has values that are beyond money calculations, namely cultural values that are mystical in origin. Mysticism is a blessing to the yam food crop sector in West Africa because the cultural values have helped to sustain yam production in the face of superior price competition from alternative food crops. Growth in yam production based on land area expansion has a limit determined by available farm land suitable for growing the crop especially in the face of high population growth rate in the West African sub-region. The evidence of increasing shortage of suitable land for yam production is showing in Ghana where the crop is produced under shifting cultivation system (Nweke 2016 and Mignouna et al. 2014)..

Synthesis

The pace of technological change is slow in the West African yam food crop sector. Yam producers do not know when any yam production or utilization practice was introduced in their communities. This paper uses select farm practices, namely seed bed type, source of seed yam, and desired yam tuber size to demonstrate that mysticism stands in the way of technological change in the sector. Farmers throughout the sub region plant yam in mounds in spite of scientific evidence that planting in ridges generates higher yield, is labor saving and facilitates mechanization not only of the seed bed preparation but also most of the other tasks. Specific mystical practice with respect to mound making or planting yam in mounds was not observed in the baseline survey. But the universal practice of planting yam in mounds because that has been the practice over time defies objective reasoning. Farmers are advised to buy seed yams every season and avoid recycling own produced seed to reduce the tendency to recycle seed borne diseases. But most farmers do not buy or sell seed yams because they believe that selling seed yam amounts to selling their good luck and buying seed yam amounts to buying bad luck. The implication is that most farmers lack willingness to buy seed yam. Because of high demand for large yam tubers for ceremonial uses farmers aim at largest tuber they can get although scientific evidence is that large tubers do not translate to high aggregate yield per unit land area or per unit of labor input. These practices have their origin in mysticism, an element of African worldview. Mysticism is a blessing to the yam food crop sector because the cultural values have helped to sustain the yam production through land area expansion in the face of superior price competition from alternative food crops. Growth in yam production based on land area expansion has a limit determined by available farm land suitable for growing the crop especially in the face of high population growth rate. Export trade in yam from West Africa is growing; since consumers outside major producing areas do not have need for ceremonial yams trade in yam could help speed up technological change in the yam food crop sector. This paper does not have any other suggestion for improving the pace of the technological change because peoples' worldviews such as mysticism which sustain the practices are fundamental beliefs about reality that are difficult to change. Highlighting the mystical practices and their consequences will help to explain the slow pace of technological change in the West African yam food crop sector.

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