



NATIONAL BUREAU OF STATISTICS



Yam Consumption and Production in Nigeria

Yams are starchy tubers grown predominantly in West Africa and have become an increasingly integral component of the Nigerian diet in recent years.¹ Nigeria is the largest yam producer in the world, contributing to two-thirds of global yam production each year; and, based on previous estimates, approximately half of all Nigerian households consume the crop regularly.²

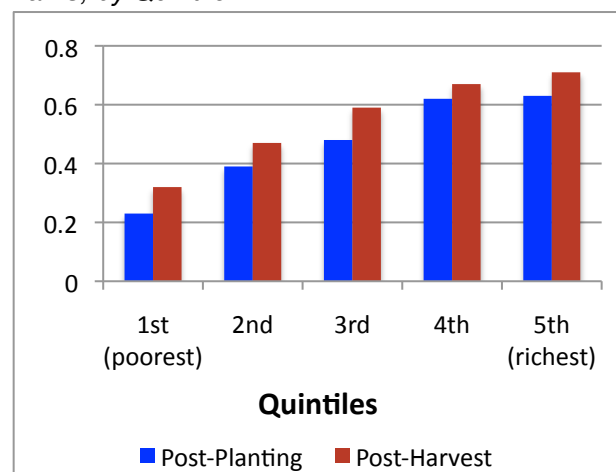
Data collected from the 2010-2011 Living Standards Measurement Study- Integrated Survey on Agriculture (LSMS-ISA) was utilized to further explore the landscape of yam production and consumption in Nigeria. The survey was conducted in two visits over a 12-month period, on a nationally representative sample of 5,000 households. The first visit of the survey was administered during the post-planting season, from August to October 2010, and the second visit in the post-harvest season, from February to April 2011.

Profile: Yam Consumers in Nigeria

According to the LSMS-ISA, 46 percent of households in the post-planting season, and 53 percent of households in the post-harvest season, reported consuming yams in the week preceding the interview. And, Table 1 shows that yam-consuming households are on average “richer”. We used household-level consumption to create welfare quintiles. The poorest households are grouped into the 1st quintile and the richest households fall into the 5th quintile.

In Figure 1, we look at the proportion of households in each welfare quintile that consume yams. Twenty-three percent of households in the poorest quintile consume yams, compared to 63 percent of households in the richest quintile. The share increases steadily as we move up the quintile ladder. Note that this pattern is consistent in both post-planting and post-harvest seasons. However, as we might expect, yam consumption is higher in the post-harvest season.

Figure 1: Proportion of Households Consuming Yams, by Quintile



Types of Acquisition

There are three primary means of acquiring food: through purchases, production (i.e., agriculture), or as a gift or in-kind donation. The second is particularly germane for a country like Nigeria, where the agriculture sector employs approximately 60 percent of the labor force and contributes to over 40 percent of the country's GDP.

Post-planting season, we find 75 percent, 20 percent, and 3 percent of households consume yams coming from purchases, production, and gifts, respectively. This shifts slightly post-

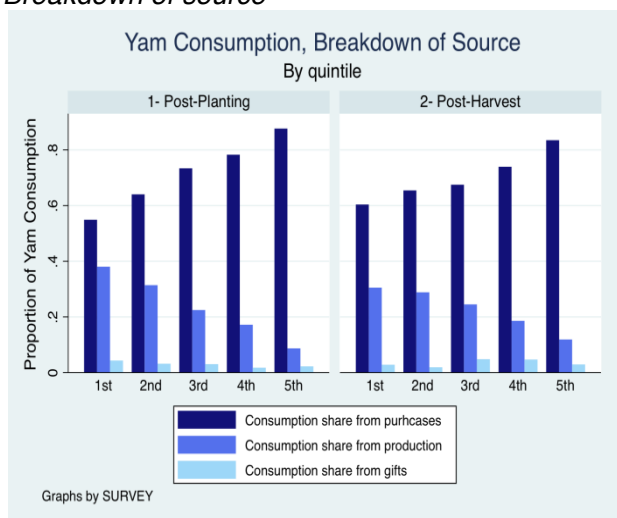
¹ Obayelu, A., Okoruwa, V., & Oni, O. 2009, "Analysis of rural and urban households' food consumption differential in the North-Central, Nigeria: A micro-econometric approach", *Journal of Development and Agricultural Economics*, Vol. 12, No. 2, pp 18-26

² Kleih, U. et al. 2012, *Yam improvement for income and food security in West Africa: Nigeria- scoping yam value chain analysis*, Yams for Livelihoods,

harvest, when yam consumption from purchases drops to 72 percent. As might be expected, urban households are more likely to consume purchased yams, while rural households are more likely to consume yams that they produced themselves.

Figure 2 shows how households are obtaining yams, across welfare quintiles. Post-planting season, the share of yam consumption coming from production drops from 38 percent among those in the poorest households (1st quintile), to 9 percent among the richest (5th quintile). The inverse is true for purchases; yam consumption from purchases rises from 55 percent in the 1st quintile to 88 percent in the 5th quintile.

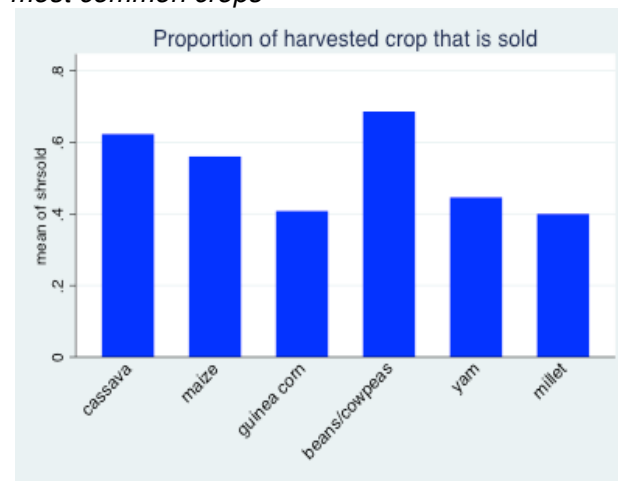
Figure 2: Yam Consumption by Welfare Quintile: Breakdown of source



Yam Production

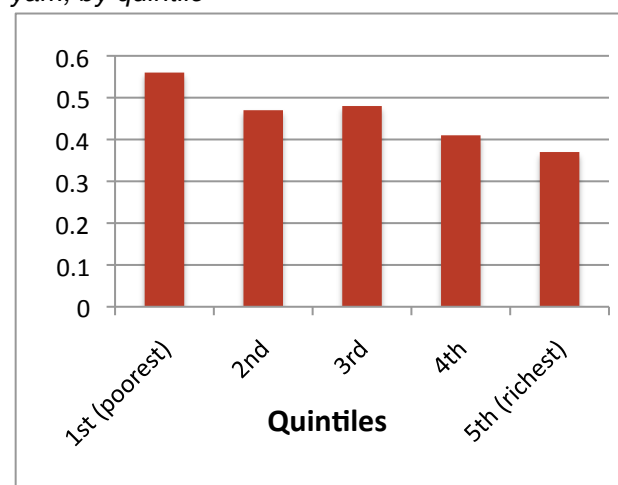
Yams are the fifth most widely harvested crop in Nigeria (following cassava, maize, guinea corn/sorghum, and beans/cowpeas); and, after cassava, the most commonly harvested tuber crop. However, LSMS-ISA data show only 45 percent of households harvesting yam sell any share of the production. In Figure 3, we compare the selling patterns for Nigeria's staple crops, and find households are much more likely to sell harvested cassava, maize, and beans/cowpeas (62, 56, and 69 percent, respectively).

Figure 3: Proportion of harvested crop sold, for most common crops



The data also indicate that harvested yams serve different functions for the least well off versus those in the highest quintile. As Figure 4 shows, over 56 percent of yam-growing households in the 1st welfare quintile (poorest) sell any of their harvest, compared to 37 percent from the 5th quintile (richest). On average, the five other staple crops do not exhibit this distinct pattern.

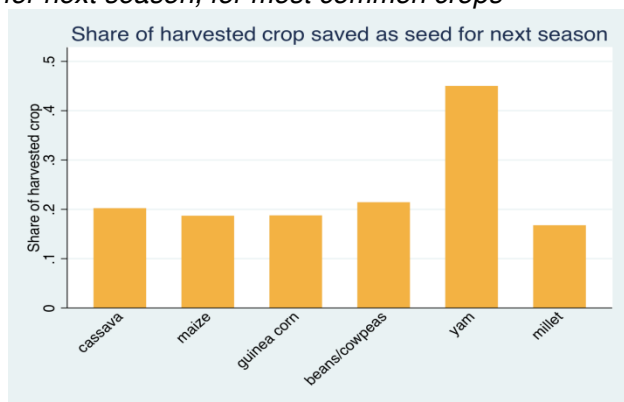
Figure 4: Share of households selling harvested yam, by quintile



Yams are one of the most expensive crops to produce; the planting and harvesting processes require significant labor input, yam seeds are expensive, and the supply of seed is limited. Research indicates that households may save up to 30 percent of harvested yam tubers for the

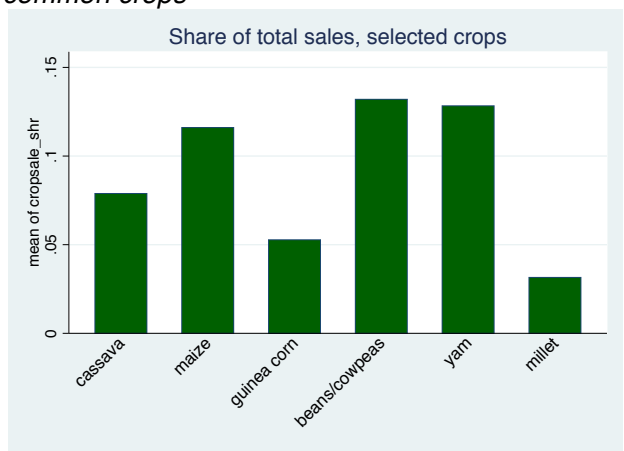
next planting season.³ The LSMS-ISA data indicate that approximately 45 percent of harvested yam seed is saved for the next planting season. This starkly contrasts with other staple crops, for which approximately 20 percent of harvested yields are saved (see Figure 5).

Figure 5: Share of harvest crop saved as seed for next season, for most common crops



Even though households are more likely to save their yam seed than sell the harvests, yams still represent a valuable component of farmers' agriculture income. For each of the six main crops, we looked at the crop's contribution to total crop sales. Yams and beans/cowpeas each represented over 12 percent of total agricultural income. As seen in Figure 6, these two crops comprise a significantly higher portion of agricultural income than the remaining four staple crops.

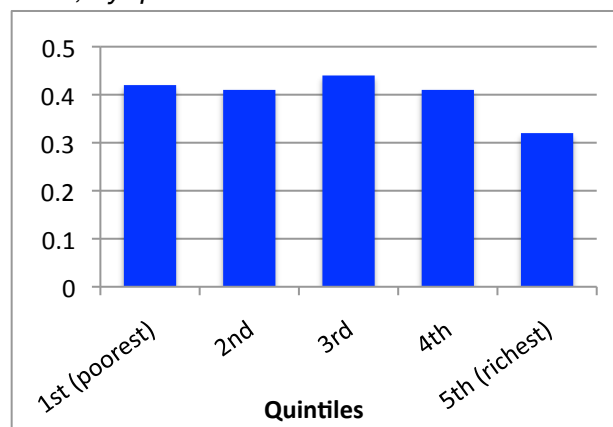
Figure 6: Proportion of crop sales, for most common crops



³ Aido, R., et al. 2011, "Economics of small-scale seed yam production in Ghana: Implications in commercialization", *Journal of Sustainable Development in Africa*, Vol. 13, No. 7

However, we find that the "richest" households are somewhat less dependent on yam sales as a source of income. Among households that harvest yams, those in the first four welfare quintiles generate more than 40 percent of their agricultural income from yam sales, compared to 31 percent for households in the richest quintile (Figure 7).

Figure 7: Yam's share of households' crop sales, by quintile



Conclusion

Yams are an integral component of food consumption and agriculture sales in Nigeria. However, analysis of the LSMS-ISA data shows that the crop's role differs for the poor and nonpoor. Relatively better off households are consuming more yams (particularly those acquired through purchases), but selling less harvested yam than poorer households. Poorer households consume fewer yams, but depend more heavily on yam sales and income than their richer counterparts.

Yam production in Nigeria is constrained by the high costs and limited availability of yam seed.⁴ Farmers save almost half of their yam harvests for next season's yam seed. Consequently, these households are not able to capitalize on the potential value of their harvests. Relaxing the bottlenecks to production of yams has great potential to increase the value of production, particularly for the poorest of farmers.

⁴ European Initiative on Agriculture Research for Development 2013, 2013, *Healthy Yam Seed Production*, Swiss Agency for Development and Cooperation, Bern, Switzerland