



# NURU NIGERIA 2022 SHORT-TERM IMPACTS

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# NURU NIGERIA

## 2022 SHORT-TERM IMPACTS

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# INTRODUCTION

## OVERVIEW

Nuru Nigeria and Nuru International share a global vision to cultivate lasting, meaningful choices in the most vulnerable and marginalized communities in the world. Fragile states continue to be a source of instability and relative deprivation in the world. Vulnerabilities in marginalized communities are ripe for exploitation by violent extremist groups and ideologies. Nuru believes that if communities can break free of the burdens and vulnerabilities that threaten the stability and resilience of households and communities, people will be able to thrive and exercise their agency.

Nuru International works to achieve this global vision alongside an ecosystem of local changemakers, implementers, and visionary leaders. Nuru believes that building resilient communities is best done by local leaders with the temporary scaffolding support of external experience and resources. Nuru Nigeria, a locally-led, non-governmental organization established in Nigeria in 2017, is the leading implementer of Nuru's global vision in the country of Nigeria. Nuru Nigeria's mission is to build resilience corridors of strong, locally-owned farmer cooperatives driving profitable livelihoods in eight conflict-vulnerable local government areas (LGAs) of Adamawa, Borno, and Yobe states by 2025. Nuru Nigeria's goal is to equip rural, vulnerable households (in the aforementioned LGAs in Northeastern Nigeria) to improve livelihoods and build resilience capacities to cope with conflict, environmental, economic, and social shocks and stressors for stability and prosperity within the program implementation period. Nuru is committed to eliminating extreme poverty through investments in self-sustaining and scalable entities. With this aim, Nuru Nigeria implements livelihood and income-generating interventions through and with farmer-owned organizations.

The Ray Marshall Center (RMC), an organized research unit in the LBJ School of Public Affairs at The University of Texas, has been a partner in providing technical assistance to support Nuru's monitoring and evaluation (M&E) efforts. The RMC's experience and expertise support Nuru's work by demonstrating the effectiveness and robustness of its integrated approach to addressing resilience-building interventions. RMC was brought in before the inception of Nuru interventions in Nigeria, which enabled the co-creation of a highly structured and rigorous research agenda to orient the outlook on the impact of Nuru's work as its vision unfolded in Nigeria.

This report demonstrates some of the high-level results from program implementation from 2019-2022. This report is an interim measurement point nested within a larger clustered randomized control trial running from 2019-2023. This short-term impact report highlights the following high-level findings for the intervention communities:

- Nuru intervention households were able to increase agricultural income per half-acre from \$13 USD to \$114 USD, an increase of \$101 USD over baseline.
- Intervention households increased crop equivalent yield by 291 percent over baseline, against a target of 32 percent.
- The percentage of respondents reporting loss of consumption crops decreased to 48 percent from 63 percent at baseline.
- 17 percent of respondents reported having access to cashless financial transactions, an increase of 9 percent over baseline.
- There has been a notable rebound in savings activities in the past year, as respondents recover from the effects of the COVID-19 disruption.

## CONTEXT

Nuru Nigeria (NN) is currently working in three local government areas (LGAs) of northern Adamawa State, Nigeria. This short-term impact report and the associated four-year randomized control trial on resilience capacities are representative of the first LGA in which NN began activities in 2019. This first LGA is located in northeast Nigeria and bordered on the east by the Republic of Cameroon. The Boko Haram terrorist group seized the LGA in September 2014 in its efforts to create an Islamic state (caliphate). The area was recaptured by the Nigerian military in January 2015. However, locals who fled the area returned to find burned-out houses, destroyed bridges, ransacked banks, ruined schools and hospitals, and desecrated Christian churches and cemeteries. The community is also struggling with the challenge of Boko Haram fighters or sympathizers in the local population and continued sporadic insurgent raids in the vicinity.

Whereas the area is historically marginalized economically and politically, it had been trending positively in economic development. The unmitigated consequences and stigma of recent conflict still weigh heavily on the development of the area. While major hostilities in the immediate proximity have ceased, low-intensity conflict has persisted throughout the implementation period. Critical infrastructure such as essential bridges, roads, electric lines, telecommunications infrastructure, and water sources were

destroyed during the 2014-2015 hostilities. While some of this infrastructure was repaired, it has yet to be fully restored either due to lagging development or out of fears that unsecured infrastructure will again fall target to violent extremist actors. Criminal kidnapping for ransom and seasonal farmer-herder conflict also contribute to instability and insecurity in the LGA. Similarly, commercial interests such as banks have not yet returned to re-establish operations in the LGA. However, agriculture and trading activities, particularly those activities that are seasonal and transitory, have returned strongly. Just as the signs of past conflict are still visible from ruined buildings or still-damaged infrastructure, the stain of conflict still weighs heavily on the psychology of the population.

## PROGRAM IMPLEMENTATION

The overarching goal of Nuru Nigeria is to equip rural, vulnerable households to improve livelihoods and build resilience capacities to cope with conflict, environmental, economic, and social shocks and stressors for stability and prosperity. The organization has also worked towards supporting the creation of farmer cooperatives as a vehicle for market access, revolving funds, and financial sustainability. The ultimate goal is that local leaders and cooperatives develop the capacities and assets to design solutions within their communities to further support Nigerian civil society's self-reliance, build stability, and reduce vulnerabilities within communities.

Nuru Nigeria launched a program planning process in 2019 to design intervention activities with local communities. Initial activities were launched with 500 households (3,000 individuals) in 2019. Nuru Nigeria activities are delivered as a coordinated integrated intervention involving the following activities:

- Community mobilization
- Establishing farmer associations and organizations
- Training for local farmers on best agronomic practices
- Savings groups through financial inclusion programming on a mobile money platform that provides access to digital financial tools that make transactions easier and safer
- Improved input loans to increase crop yield and income through programming such as vegetable permagardens, production of soybeans and groundnuts, and harvest and post-harvest activities
- Income diversification activities such as small ruminants fattening and value addition activities
- Development of sustainable farmer organizations and farmer associations
- Market system strengthening through establishing strong relationships with local and regional vendors and capacity development of FO and FA marketing committees

## METHODOLOGY

The goal of this evaluation is to provide insight into how Nuru programming in Nigeria impacts short-term outcomes. Follow-up data were collected in March and April 2022 from 199 intervention households. This memo sets out the follow-up status of various short-term impact indicators and makes comparisons with baseline values for the same indicators and among the same panel of respondents. The results presented in this short-term impact report reflect the intentionally-sequenced intervention activities implemented from July 2019 to March 2022. Quantitative trends over the four timepoints in the study and reinforced by qualitative responses at the study's midpoint indicate that the COVID-19 pandemic has likely impacted outcomes. As a short-term impact report, this report focuses *only* on the intervention communities.

**Table 1. Sample size by data collection timepoint**

	2019	2020	2021	2022
Intervention	419	234	284	199

This short-term impact report is part of a four-year randomized control trial on resilience capacities running from 2019 to 2023. The full study includes intervention and control groups with group assignments based on clustered randomization. The baseline was gathered in June-July 2019, the midpoint was gathered in 2021, and the endline is scheduled for 2023. In addition, data was collected at interim timepoints in 2020 and 2022 to assess the short-term impacts of the program interventions among the intervention group only. The four-year study design anticipates that increasing impact will be observed among intervention respondents over time.

**Figure 1. Study timeline**



# RESULTS

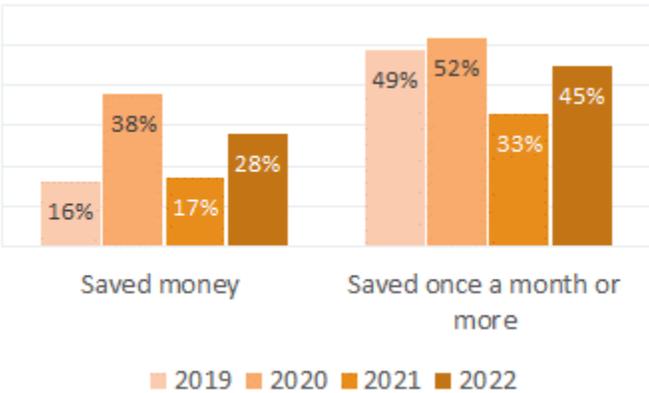
## FINANCIAL SAFETY NET

### *Savings*

The percentage of households that reported saving money as well as the percentage of households that reported saving money once a month or more frequently increased from the baseline in 2019 to the follow-up in 2020 but decreased sharply at the follow-up in 2021 as households dealt with the sustained impacts of the COVID-19 pandemic. However, we also observe sharp increases in 2022, suggesting that households are rebounding from pandemic shocks.

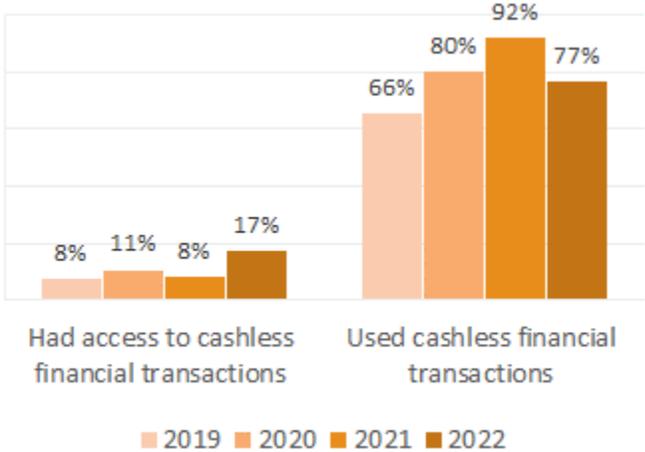
Notably, the percent of respondents reporting that they have enough cash to save increased significantly from 16 percent at the baseline in 2019 to 28 percent at the follow-up in 2022.

**Figure 2. Savings behaviors**



### *Cashless financial transactions*

**Figure 3. Cashless financial transactions**



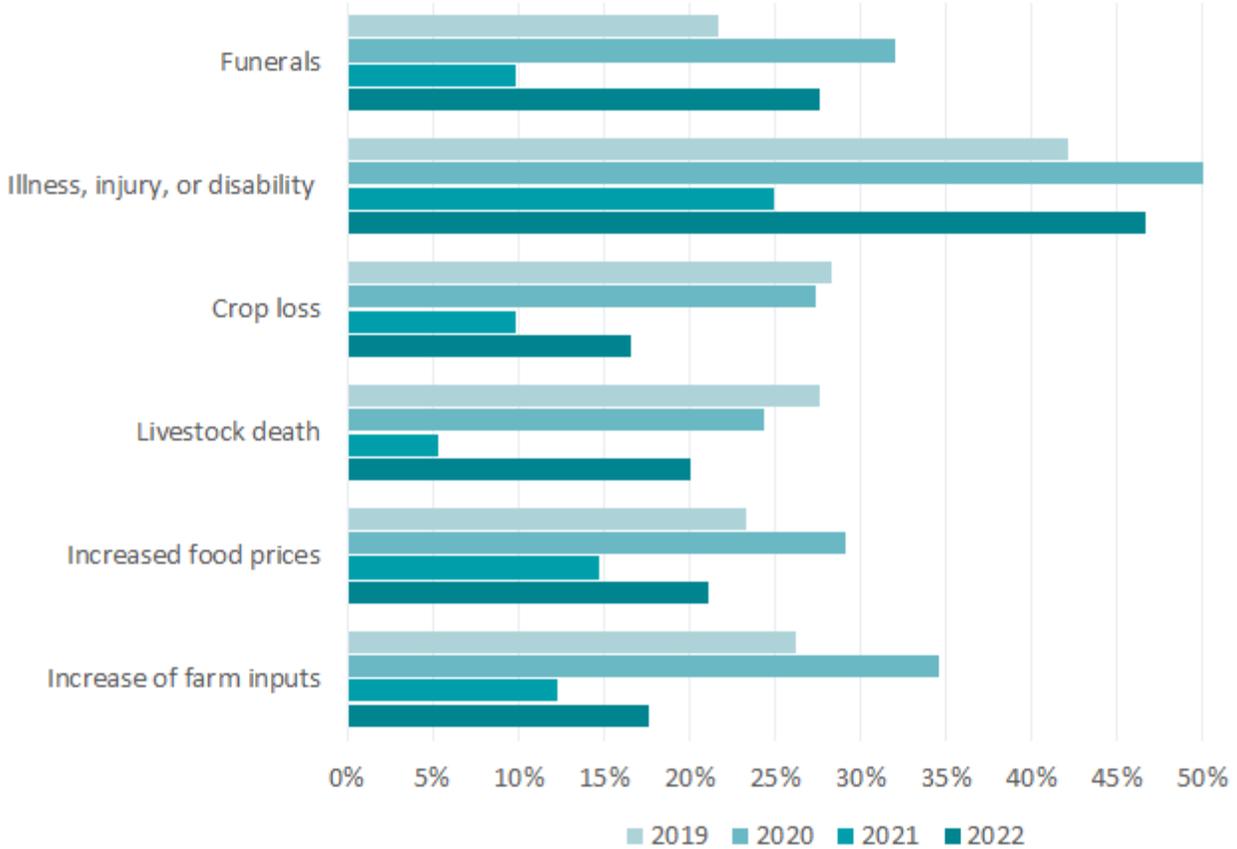
The proportion of respondents with access to cashless financial transactions increased significantly from 8 percent at the baseline in 2019 to 17 percent at the follow-up in 2022. Among those with access, the proportion reporting use of cashless financial transactions also increased. Both metrics increased steadily over the study period with a slight decline between 2021 and 2022 on usage.

Mainstream cashless services, like mobile money and digital wallets, have been very slow to reach northeast Nigeria since the outset of this study. The increase in access to 17 percent is very likely due to the efforts of NN to support an enabling environment for cashless financial transactions in the operating area. For example, the support and coordination provided to the rural agents that convert cashless services into cash and back again are vital to increasing access and usage in rural communities.

*Coping with emergencies*

Respondents’ ability to cope with emergencies such as crop loss, livestock death, and increased farm input prices decreased significantly from the baseline in 2019 to the follow-up in 2022. Trends over the study period reveal a sharp decrease in respondents’ having enough savings to cope with various emergencies in 2021 as households dealt with the sustained impacts of the COVID-19 pandemic. However, the trends also point to sharp increases in 2022, which could be attributed to a slow rebound from pandemic-related shocks, as well as the benefits of sharp increases in crop yields and incomes as indicated in later sections.

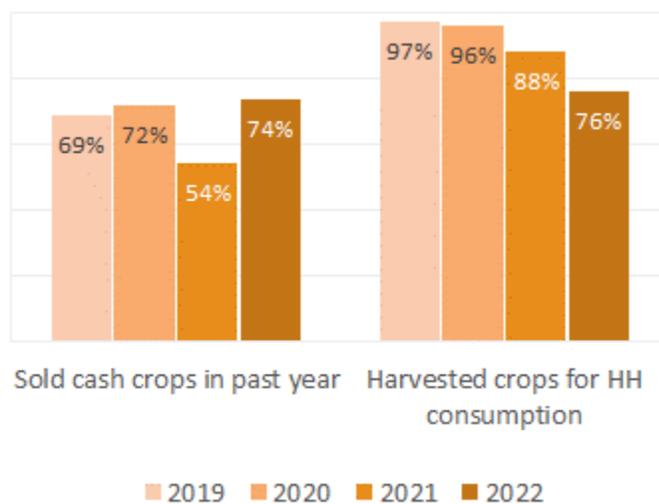
**Figure 4. Percentage of respondents able to cope with emergencies**



## HARVEST

Across the study period, the vast majority of respondents reported engaging in crop farming (97 percent at the baseline in 2019 and 96 percent at the follow-up in 2022). The proportion of respondents that reported selling cash crops in the past year decreased from 69 percent at the baseline in 2019 to 54 percent at the follow-up in 2021 but increased sharply to 74 percent at the follow-up in 2022. This trend likely reflects the disruptions to farming activities during the COVID-19 pandemic in 2020-2021 and the slow rebounding from pandemic shocks in 2021-2022, in addition to increased commodity prices leading individuals to sell more crops instead of keeping them for household consumption.

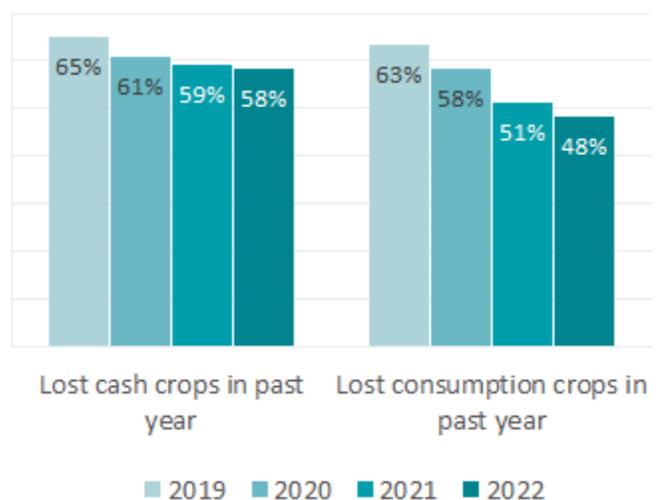
**Figure 5. Crop sale and consumption behaviors**



In contrast, the proportion of respondents that reported harvesting crops for household consumption in the past year decreased significantly from 97 percent at the baseline in 2019 to 73 percent at the follow-up in 2022. This could potentially be explained by a decrease in subsistence farming and an increase in diversified livelihoods amongst farmers, shifting from food production to purchasing with earned income.

The proportion of respondents reporting a loss of cash crops decreased slightly from 65 percent at the baseline in 2019 to 58 percent at the follow-up in 2022. Notably, the proportion of respondents reporting a loss of consumption crops decreased significantly from 63 percent at the baseline in 2019 to 48 percent at the follow-up in 2022.

**Figure 6. Loss of crops**



## CROP YIELD

Nuru uses a crop equivalent yield (CEY) calculation to convert the different yields of multiple crops and their prevailing local market prices into one standard statistical measurement. *One way to interpret this calculation is to ask: If Nuru farmers only grew soybean this season, how much more/less soybean would they have produced compared to the previous season?*

Nuru intervention households have steadily increased their reported crop yields from 2019 to 2021. From baseline to the 2020 agricultural season Nuru intervention households achieved a 65 percent increase in CEY. In 2021, the third season of Nuru-supported production, **Nuru intervention households achieved a 291 percent increase in CEY against a target of 32 percent.**

This sharp increase can be attributed to three NN supported activities:

- Training for local farmers on best agronomic practices and the increased acceptance of these practices
- Improved input loans that provided access to climate-smart seed varieties, enhanced seed treatments, appropriate fertilizers, and better information to amplify their proper application
- Market system strengthening that allowed Nuru intervention households to capitalize on significant global and national prices increases for groundnuts and soybeans

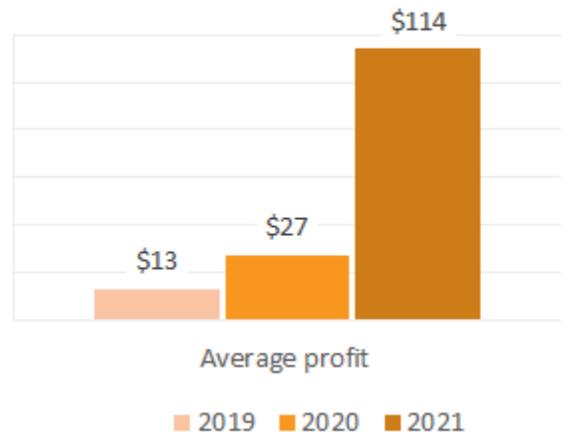
## AGRICULTURAL INCOME

Nuru also uses an income model to estimate increased income. Revenue is calculated by multiplying the average crop yield by the prevailing local market prices for groundnuts and soybeans in NN's operating LGA relevant to this study, adjusted for inflation.

In NN's operating LGA Nuru intervention households harvest their produce from October until late November with the marketing and commercialization activities (i.e. sales) taking place from February to the end of April in the subsequent year. The costs of production for Nuru farmers pre-intervention are based on price estimates from the traditional sources of seed and fertilizer in local spot markets in 2022. The 2022 costs for Nuru farmers are taken as the loan prices for the improved farm inputs (i.e. seed, fertilizer, and other treatments) delivered by NN for production in the 2022 season. Finally, the net gain or loss of income from participating in the NN crop and market linkage activities is calculated by subtracting the costs of production from revenue.

We find that Nuru intervention households increased their income by 770 percent from 2019 to 2021 far exceeding the target of 30 percent. **In absolute terms, participant farmers increased their income from \$13 USD to \$114 USD on a half-hectare plot providing them with an additional \$101 USD of household income per half a hectare<sup>1</sup>.** This dramatic increase is consistent with the prevailing market prices and represents a firm transition from subsistence farming to farming as a business in NN’s operating LGA.

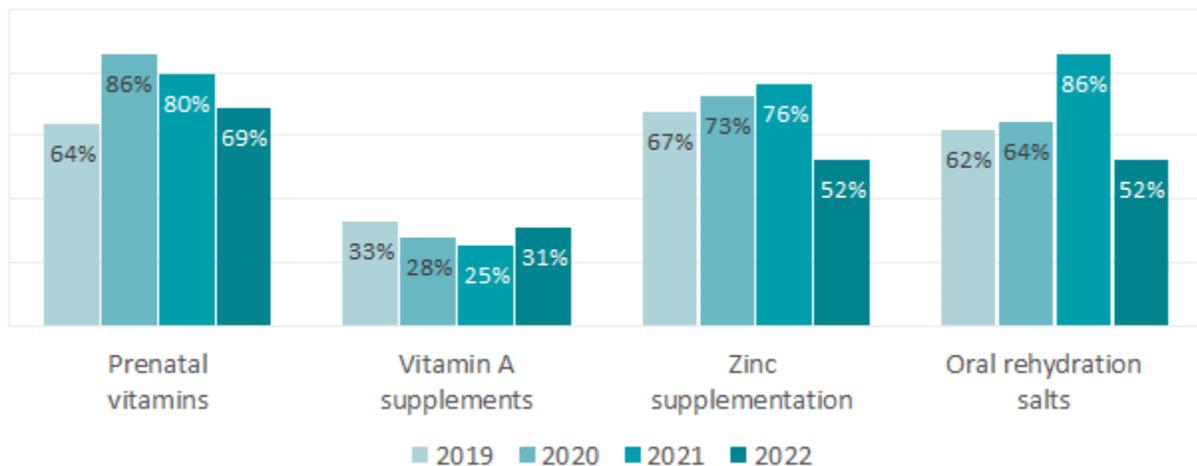
**Figure 7. Agricultural income**



## MICRONUTRIENTS

Among households in which someone had given birth in the past year, two-thirds of respondents reported consuming prenatal vitamins or iron supplements at the baseline in 2019 - this remained mostly unchanged at the follow-up in 2022. About a third of respondents reported taking a Vitamin A supplement in the past six months at baseline - this also remained unchanged at the follow-up in 2022. Among households that had experienced diarrhea in the past six months, the proportion of respondents who reported using zinc supplementation decreased significantly at the follow-up in 2022.

**Figure 8. Micronutrient use**

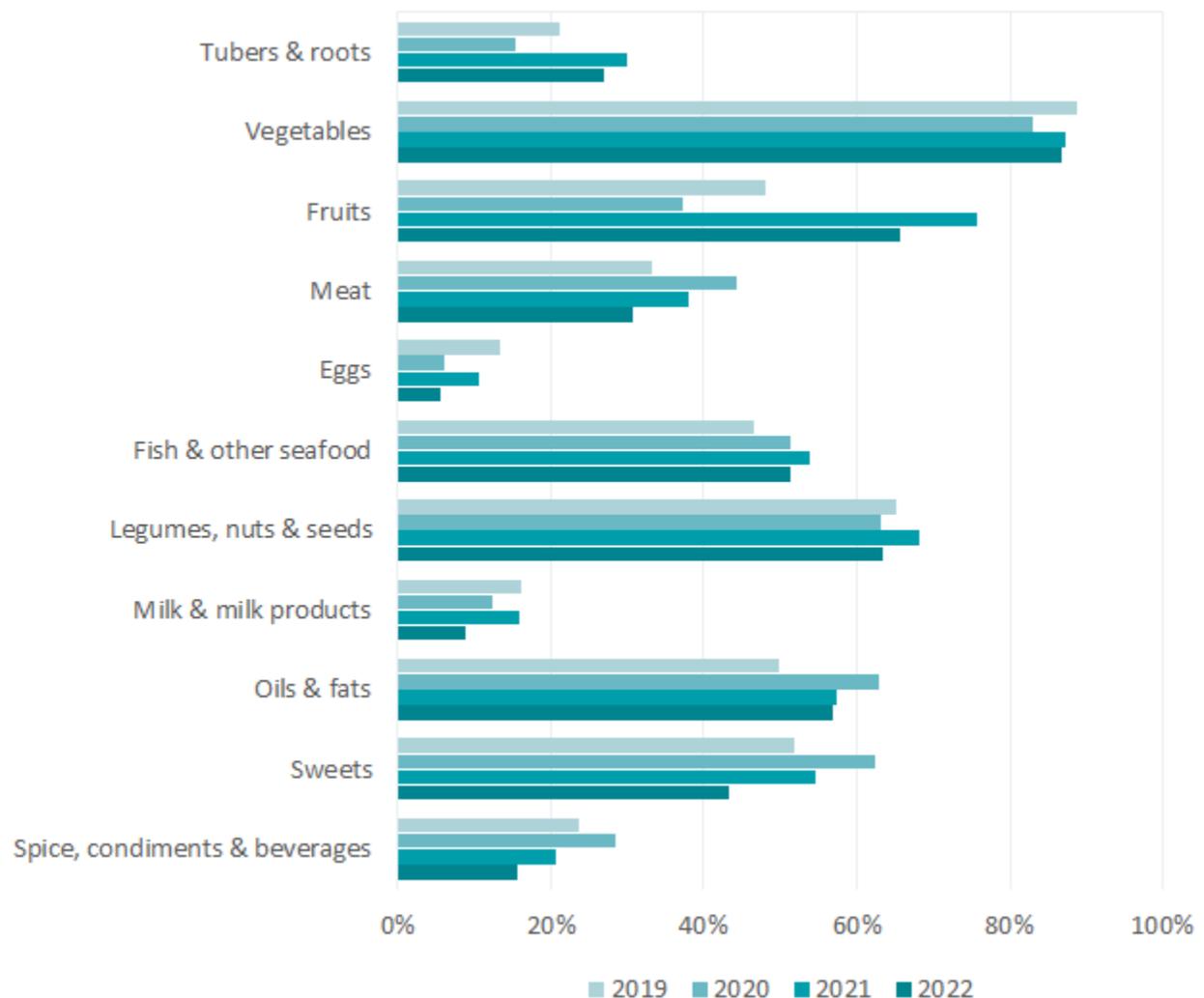


<sup>1</sup>\$101 USD is equal to roughly 41,915 Nigerian Naira at an official exchange rate of 415 Naira per Dollar in May 2022

## DIET & NUTRITION

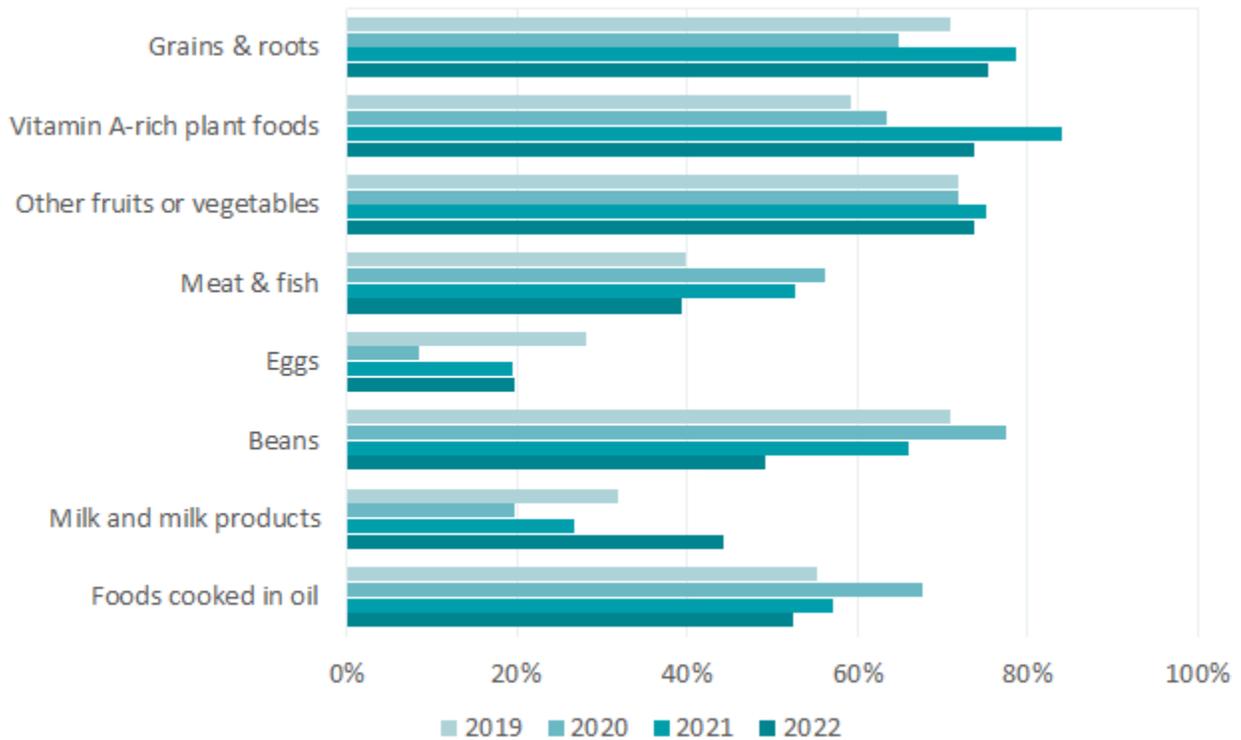
Household dietary diversity is defined as the number of unique foods consumed by household members over a given period and is used to measure household food access. Overall, at the follow-up in 2022, significantly higher proportions of households reported access to fruits, while significantly lower proportions of households reported access to eggs, milk and milk products, sweets, spices, condiments, and beverages.

**Figure 9. Household diet availability**



Children’s diets changed only slightly from baseline to follow-up. Overall, at the follow-up in 2022, the proportion of respondents who reported that their children consumed Vitamin A-rich plant foods increased significantly while the proportion of respondents who reported that their children consumed beans decreased significantly.

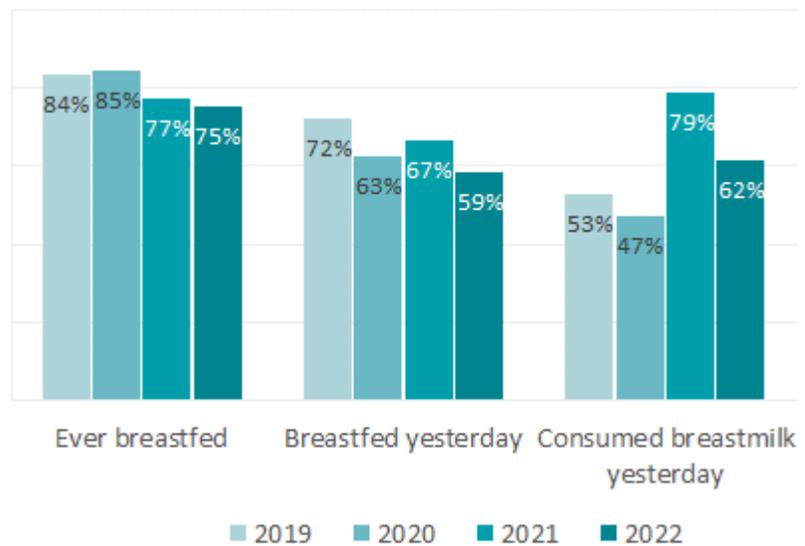
**Figure 10. Children’s diet**



## BREASTFEEDING

Among respondents who reported having a child under 3 years of age in the household, a majority reported that the child had been breastfed - 84 percent at the baseline in 2019 and 75 percent at the follow-up in 2022. However, the proportion that reported that the child was breastfed in the past day decreased significantly, from 72 percent at baseline to 59 percent at the follow-up in 2022.

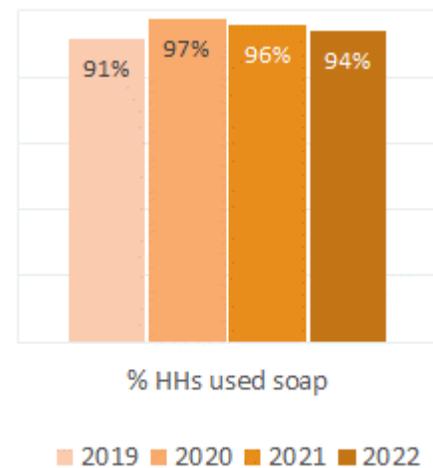
**Figure 11. Breastfeeding behaviors**



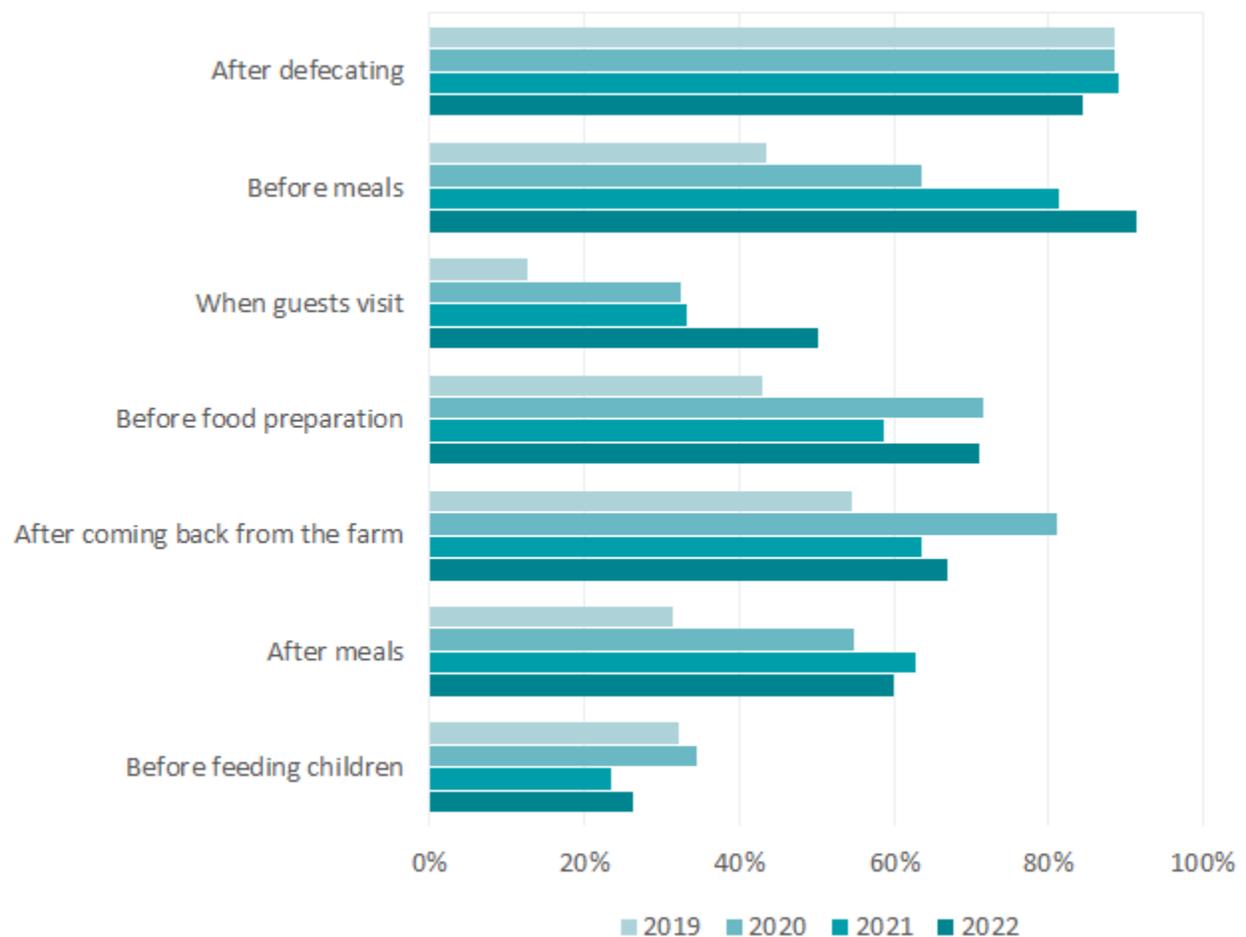
## HYGIENE

The vast majority of respondents reported using soap or ash when cleaning their hands after defecating at baseline (91 percent) – this remained unchanged at follow-up. Compared to baseline, significantly higher proportions of respondents reported using soap or ash to clean their hands before meals, when guests visited, before food preparation, after returning from the farm, and after meals. The proportion of respondents using soap or ash when guests visit saw the largest increase.

**Figure 12. Soap use**



**Figure 13. Soap use by activity**

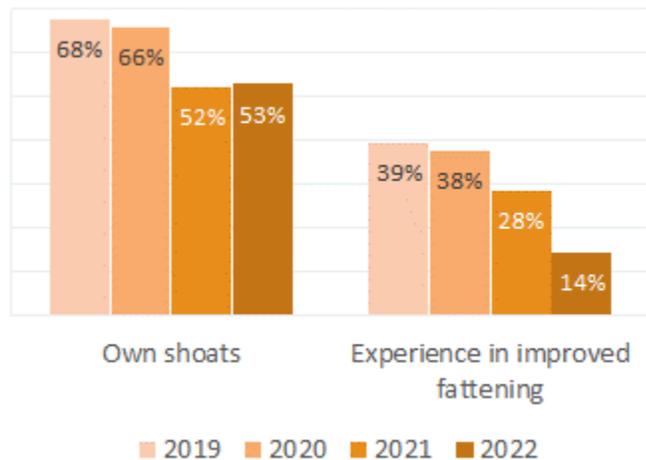


## LIVESTOCK

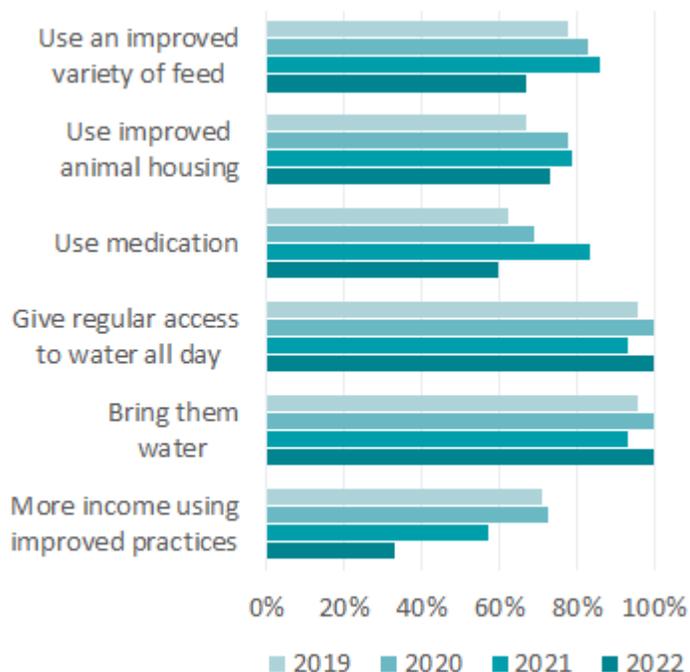
### *Sheep and goats*

The proportion of respondents that reported owning sheep and goats decreased significantly, from 68 percent at the baseline in 2019 to 53 percent at the follow-up in 2022. Among respondents who owned sheep and goats, the proportion of respondents that reported having experience with improved fattening practices also decreased significantly, from 39 percent at the baseline in 2019 to only 14 percent at the follow-up in 2022. These figures reflect dramatic increases in sheep and feed prices, making them unobtainable for much of the intervention group.

**Figure 14. Sheep and goat rearing**



**Figure 15. Sheep and goat improved practices**



There were little to no differences in the proportion of respondents that reported using various improved fattening practices. Notably, the proportion of respondents that reported generating more income from using the improved practices decreased from 71 percent at the baseline in 2019 to 33 percent at the follow-up in 2022. Due to significant increases in the costs of production and decreases in income in 2021, NN discontinued the ram (sheep) fattening activity that was supported from 2019 until 2021 in the operating LGA.

## CONCLUSION

The primary use of this short-term impact report is to help Nuru Nigeria improve the efficiency and effectiveness of its activities. The follow-up results provide the impact team with information regarding progress within the implementation period from July 2019 to March 2022. The findings from this report will inform NN's mid-year review and end-of-year review of activities.

At the core of Nuru's impact activities are the agricultural livelihoods that underpin the economic and rural livelihoods of intervention households. This follow-up survey provides strong evidence that the Nuru-supported households are realizing greater economic security. Nuru intervention households increased their agricultural yield by 291 percent and increased their income by \$101 USD from 2019 to 2021. The proportion of Nuru intervention households reporting crop loss for cash crops and consumption crops has also decreased 15 percent from baseline, likely reflecting NN's post-harvest activities, which include training and extension services in harvest and post-harvest handling techniques that limit spoilage, contamination, and other risks to the quality of agricultural produce. The continued promotion, sale, and training on the use of Purdue Improved Crop Storage (PICS) bags have also likely positively impacted this outcome.

Notably, the percent of respondents reporting that they have enough cash to save increased significantly from 16 percent at the baseline in 2019 to 28 percent at the follow-up in 2022. The increase in agricultural income could potentially have had an impact on this outcome. Access to cashless financial transactions has also increased significantly from the baseline, likely reflecting NN's efforts to increase the access and use of digital financial tools. This rebound in savings activities shows respondents gradual recovery from COVID-19 disruptions.

More Nuru households reported using soap before or after activities such as food preparation, meals, guests' visits, and farm work, likely reflecting Nuru Nigeria's handwashing health promotion efforts. However, there was little to no change observed in other health indicators, breastfeeding, and micro-nutrient consumption. There was a slight increase in vitamin A availability and usage due to an ongoing partnership between Nuru Nigeria and Vitamin Angels, who will continue to support Nuru Nigeria in 2022 through distribution of vitamin A, Albendazole, and multivitamin supplements to children and pregnant women. Many additional results may have been positively influenced by COVID-19 response efforts by Nuru Nigeria, including training videos and brochures on prevention and control, signage for farmers indicating healthy behaviors, and COVID-sensitive distribution of inputs.

In 2023, Nuru Nigeria in partnership with RMC will run the final assessment of this randomized control trial, including both intervention and control groups. Prior to this short-term impact report, the RMC-supported evaluation plan,<sup>2</sup> 2019 baseline,<sup>3</sup> 2020 short-term impact,<sup>4</sup> and 2021 midline<sup>5</sup> report offered Nuru Nigeria the opportunity to understand the impacts of its programming and alter programs to better respond to the noted impacts. The 2023 assessment will be the endline to the 4-year study, and building on previous assessments and resilience research,<sup>6</sup> will help Nuru and RMC measure the absorptive, adaptive and transformative resilience increases in Nuru Nigeria communities. Pivotal to the success of Nuru Nigeria operations, understanding increases in resilience capacities will aid in tailoring future programs to better assist the most vulnerable communities in Northeastern Nigeria, and form corridors of resilience to promote lasting peace and stability in the region.

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<sup>2</sup> <https://raymarshallcenter.org/2017/10/19/nigeria-evaluation-plan/>

<sup>3</sup> <https://raymarshallcenter.org/2019/10/17/2019-nuru-nigeria-baseline-report/>

<sup>4</sup> <https://raymarshallcenter.org/2020/09/22/nuru-nigeria-2020-short-term-impacts/>

<sup>5</sup> <https://raymarshallcenter.org/2021/09/08/nuru-nigeria-2021-midpoint-impact-report/>

<sup>6</sup> <https://nuruinternational.org/blog/monitoring-and-evaluation/nuru-nigeria-applies-innovative-resilience-capacities-index/>