

## From geographical indication protection to food sovereignty: Cassava and Gari Sohoui in Savalou, Benin

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### Abstract

Local food is the consequence of a combination of cultural and physical environment conditions. The distinctive qualities of sub-Saharan African local food are threatened by national agricultural policies that emphasize export crops. Protecting local food offers a path to food sovereignty for rural communities. Geographical indication (GI) labeling protects distinctive local food. This case study examines Gari Sohoui, a processed form of cassava, originating from Savalou District (or Commune) in central Benin. Based on fieldwork, the study explores to what extent GI protected Gari Sohoui can foster local communities' food sovereignty. The primary actors involved in this food system,

farmers and processors, were surveyed through in-depth, semi-structured individual interviews and participant observations. Interviews revealed that labor constraints for weeding present the most important challenges to production. In the absence of practical agroecological alternatives to manage weeds, growers use herbicides that are widely accessible because of the country's agricultural development strategy. While GI protection of Gari Sohoui in central Benin promises to foster social cohesion, generate substantial economic gains, and promote transition to agroecological practices, the widespread use of herbicides in the case study villages threatens to undermine the status of Gari Sohoui. GI protection for Gari Sohoui empowers local communities to take control of their food systems, especially women, through preservation

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### Conflict of Interest disclosure

The authors declare that they do not have any conflicts of interest.

and valorization of local knowledge while contributing to their food sovereignty.

### Keywords

Gari Sohoui, cassava, geographical indication (GI), food sovereignty, food system, traditional knowledge, terroir, Savalou, Benin

### Introduction

As food insecurity in sub-Saharan Africa increases, some governments in the region have pursued food security by encouraging agricultural intensification for international trade, promoting cash crops such as cotton and cocoa that are cultivated with chemical inputs (Haggblade et al, 2020). The widespread chemical use has had spill-over effects increasingly impairing food crop quality (Biaou et al., 2003; Eclou & Glèlè Kakaï, 2024). This export-oriented cropping system is based on top-down decision-making that has shifted cropping decisions away from local populations, leaving them with little leverage over what they grow and how and where their produce is sold, thus disrupting their foodways and negatively affecting their cultural identity (Grey & Patel, 2015; Kansanga et al., 2019; Rosset, 2011).

In contrast, a food sovereignty framework has been suggested as a means of democratizing production decision making, giving smallholder farmers choices with their crops and agroecological practices that better align with their distinctive socio-cultural and environmental characteristics (Altieri, 2009; van der Ploeg, 2017). The specificities of local communities are essential to understanding how individuals and groups can democratically interact with each other and their environment to solve perceived challenges such as maintaining stable food supplies.

This article presents data from a study of Benin smallholders who initiated geographical indication (GI) labeling as a means of setting apart their terroir-driven agricultural production of cassava processed into Gari Sohoui, exclusively produced within the boundary of the Savalou District (Commune) (Guidimadjegbe, 2024). Gari Sohoui has become a premium product highly praised, consumed and marketed at all socio-economic lev-

els, nationally and internationally (Barnett, 2020; Gerz & Fournier, 2006).

With the goal of documenting and examining the practices of farmers and Gari Sohoui processors who seek to protect and promote their agricultural production in a way that ties it to a specific origin, and who understand its impacts on communities, this study explores Gari Sohoui in the Savalou terroir and the possible implications of GI labeling on local communities' food sovereignty and Benin's food security. This study thus poses the following questions:

1) Why do smallholder farmers in the Savalou area not strictly use agroecological practices in their cassava cropping system? 2) To what extent does GI protection of Gari Sohoui contribute to a transition to agroecological practices among Savalou area smallholders? Related to these questions, the study explores ways that geographical indication protection is used to promote communities' food sovereignty and well-being.

### Background

The challenges posed by global food production and hunger, especially in the sub-Saharan region, require more than one-size-fits-all agricultural development recipes to be resolved. Local ecological characteristics and socio-cultural identity play a central role in sustainably empowering communities to achieve food self-reliance and well-being.

### *Political-Economic Context of Global Food Production*

Hunger is best understood when assessing the "agri-food systems and their transition and transformation within political ecologies and economies" (Wittman, 2011, p. 89). Following this perspective, McMichael (2014) asserts that repetitive food crises have resulted from a twentieth-century food regime based on the promotion of cheap food, while Rosset (2009) argues that the agro-export development model has a destructive impact on rural communities. The ability of households to achieve food self-reliance has been hampered by the political-economic decisions of postcolonial governments to produce crops for international trade, emphasizing non-food crop commodities rather than food crop cultivation.

The resulting farming programs generally undermine staple food crop production and limit national food availability (Ambalam, 2014; Wise, 2020).

The market-oriented crop production system, while encouraging food dumping and farming environment depletion (Holt-Giménez & Altieri, 2013; Jacques & Jacques, 2012; Watkins & Braun, 2003), denies rural smallholders the right to their own food culture, exposing them to hunger-crisis risks. Consequently, concerned people worldwide have been raising their voices to demand a paradigm change in the agricultural development strategies of developing countries. The global peasants and farmers movement La Via Campesina, the “Peasants’ Way,” that began in 1993 advocates a broader, holistic model of food production that emphasizes food sovereignty (Desmarais, 2007). The movement expanded to the African continent with the Nyéléni movement in Mali (Nyéléni, 2007), which insists on the collective right to food production and demands the decolonization of food production, in contrast to the exploitative nature of the food security framework based on monocropping in which seeds, production targets, and ultimately prices are set by multinational agribusinesses that separate smallholders from decision making (McMichael, 2014).

In the case of Benin, successive agricultural development strategies have supported cash crop systems, especially cotton, with financial incentives and elimination of import taxes for its chemical inputs (Lompo, 2019). The government’s five-year development plan for 2021–2026 included facilitating import of agricultural inputs (Programme d’Actions du Gouvernement, 2021, p. 41). In 2023, Benin imported pesticides valued at 77.4 million euros (Direction Générale du Trésor, 2025, p. 9). Although Benin is not yet a center for the Peasant Way movement, it has supported various associations that advocate food sovereignty, e.g., Actions pour le Développement Durable (AdeD) and Alliance pour la Souveraineté Alimentaire en Afrique (AFSA). Food sovereignty as an ideological model in Benin dates to 1985 with the founding of the Songhai Center in Porto-Novo by Father Godfrey Nzamujo, a Nigerian Catholic priest, who established the agroecological farming center moti-

vated by the belief that Africa could feed its population by drawing from the collective wealth of indigenous farming knowledge in conjunction with the science of ecology. Supported by like-minded international donors, Songhai operates in about a dozen African countries and in several districts in Benin, including Savalou since 1999. Instructors train youth in methods that enhance their local resources by improving production while respecting the environment and the local culture (Songhai, 2021). In 2010, organizations promoting agroecological practices founded the *Fédération Agroécologique du Bénin* (FAEB) and have been lobbying the Benin government to integrate agroecological food production practices into national agricultural policies while reviving disappearing ethnic foods and encouraging young people to reconnect with their cultural identity.

### *Agroecology as a Path to Food Self-Reliance*

In recent decades, agroecological approaches to farming have been suggested by various scholars and organizations recognizing the necessity for an alternative farming model that both improves the livelihoods of farmers and can be sustained by local ecosystems (Bezner Kerr et al., 2018; Food and Agriculture Organization of the United Nations [FAO], 2018; High Level Panel of Experts, 2019; International Assessment of Agricultural Knowledge, Science and Technology for Development, 2009; Pretty, 2003; Rosset, 2011). Agroecological practices aim to increase local resource value, secure biodiversity, and limit reliance on chemical inputs by taking site-specific conditions and contexts—bio-geophysical, socio-economic, and cultural—into account for producing food (Nicholls et al., 2016). These practices have proven capable of preserving local crop cultivars, mitigating the adverse impacts of climate change, increasing the cropping system’s resilience, and increasing yields (Altieri et al., 2012; Bezner Kerr et al., 2019; Gliessman, 2014).

Many agroecological methods promote cropping with the local environment characteristics present in indigenous values and cultural knowledge of food production (Gliessman, 2014; Pimbert, 2006; Solomon et al., 2016). The relationship between local land-use practices, farming, and foods has

long been recognized, notably influenced by early 20<sup>th</sup> century observations of the regions of France by Paul Vidal de la Blache in *Tableau de la Géographie de la France* (1903), and forming the contemporary notion of terroir, Trubek (2008) argues that French journalists and cookbook authors, dubbed “taste-makers,” together with “taste producers” such as those who make cheese and wine “effectively shaped how people tasted wine and food” (p. 21) by drawing a connection between place and taste. The terroir concept contrasts with the traditional neoliberal cash crop system based on privatization, monocropping system, and export-oriented production at the expense of local food (Pimbert, 2006).

By building a sometimes-romanticized agrarian image, small farmers and regional dishes gained the attention of those who sought to protect agricultural practices from being displaced by modern large-scale farms oriented toward global markets. Vidal de la Blache’s characterization of French regions based on their geography, both physical and human, contributed to bolstering regional agriculture and cuisines, and influenced the regulations certifying the geographic origin of wine and foods. The ability of rural communities to raise terroir food, such as Gari Sohoui in Benin’s Savalou district, to national recognition within the traditional local farming system framework indicates the potential of indigenous knowledge to generate steady food production in order to sustain food self-reliance and enhance livelihoods.

### ***Geographical Indication to Empower Local Communities***

Geographical indication (GI), now used in some African countries (Belletti et al., 2017), seeks to guarantee a product’s specific reputation and quality as based on a particular region. Although African countries endorsed the proposed extension of GI protection to products other than wines and spirits through Trade-Related Aspects of Intellectual Property Rights (TRIPS)<sup>1</sup> in 1994, it was not

until 2005 that the African Intellectual Property Organization (OAPI)<sup>2</sup> adopted a declaration creating and installing a special committee for GI in all member countries, that constitutes an avenue for traditional local food systems to reclaim their historical role in fulfilling communities’ dietary, health, and livelihood needs (Akinola et al., 2020; Gerz & Fournier, 2006; Guira et al., 2017). Many African countries have already placed some of their unique products under GI protection—*Rooibos* tea and *Kalahari* melon seed from South Africa, *Obu* white honey and *Penja* white pepper from Cameroon, *Bora Malé* rice from Guinea, and *Violet de Galimi* onion from Niger (African Union, 2019). The richness of the diverse agricultural and food regions of Africa in terms of natural resources, biodiversity, cultural identities, and traditional knowledge makes GI an effective tool to promote African communities’ food sovereignty.

Benin began GI protection for its terroir food products in 2009. The initiative to implement GI protection is an opportunity to increase added value to local food, enhance rural livelihoods, and diversify the national economy while promoting agroecological practices (Bérard & Marchenay, 2006; Videgla et al., 2015). A national committee, Comité national de Mise en Place des Indications Géographiques (CoNaMP IG), was established in 2012 to help accelerate the GI process by identifying potential products and assisting with regulation. Gari Sohoui, highly praised because of its qualities of taste, texture, aroma, and crispiness (Barnett, 2020; Gerz & Fournier, 2006), was the second food to receive a GI protection, in October 2025.

### ***Gari Sohoui Processing***

The processing of cassava into gari is a highly gendered activity. No men in the study area were gari processors, and more broadly across the gari-making and consuming zone in West Africa the activity is carried out by women (Aminu et al., 2017). Gari Sohoui processors stated that processing is tedious and precise work that requires

<sup>1</sup> TRIPS is an agreement among World Trade Organization members that determines the minimum protection standards each member is to provide (World Trade Organization, n.d.).

<sup>2</sup> The Organization of African Intellectual Property (OAPI), established in 1977 with the Bangui Agreement, oversees all GI protection in Africa (Zografos, 2008).

training over time to master. One of its most crucial aspects is peeling all the cassava roots and grinding them on the harvest day or, at the latest, within two days of harvesting. This process is labor-intensive, making it necessary to recruit sufficient laborers. A complete production session could last up to a week depending on the number of laborers recruited, due to availability and cost. Figure 1 illustrates the steps taken to process harvested cassava into Gari Sohoui, a procedure performed to ensure a high-quality product with characteristic taste, texture, and aroma distinct from a more typical gari.

The sourness of Gari Sohoui fluctuates by the number of days that the ground, pressed cassava ferments before the garification or roasting stage (Figure 2). Draining the ground cassava also helps

remove the cyanide compound in the cassava roots, which makes the gari bitter and is hazardous to human health.

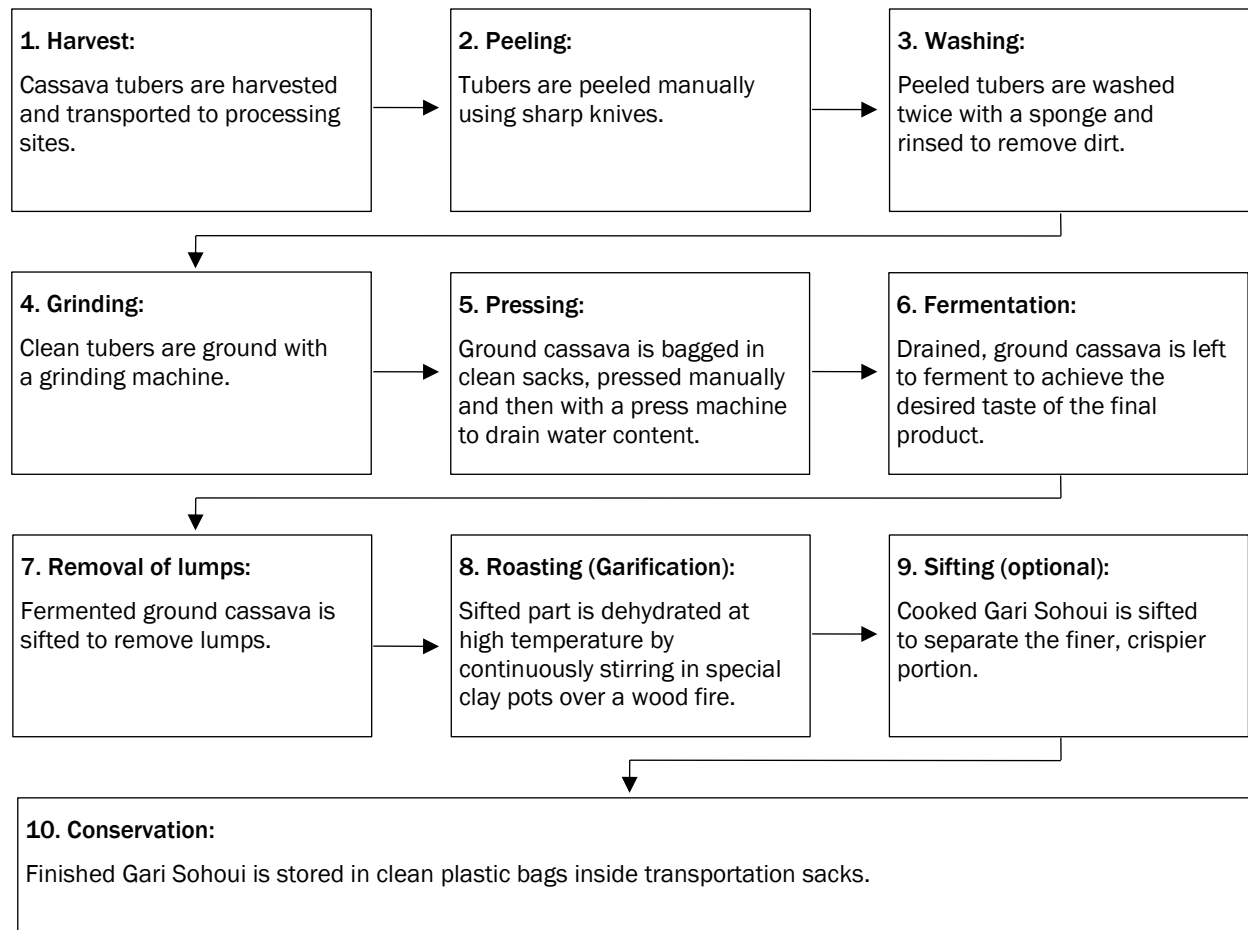
Most Gari Sohoui processors (63%) preferred to avoid the rainy season and start processing in November, while 37% worked year-round. Nonetheless, after the intensive farm work of planting and weeding that follows the first rains decreases, many women start processing cassava (Table 1).

### Methodology

This study examines Gari Sohoui in the Savalou terroir and the possible implications of GI labeling for local communities' food sovereignty and Benin's food security. Savalou presents several characteristics that make it an appropriate location for this study: its location within the historical

**Figure 1. Steps of Gari Sohoui Processing**

Steps 1–10 show the required procedure to meet the Gari Sohoui standards for geographical indication protection labeling.



Source: Fieldwork, 2023

tuber production region band of Africa, its reputation as Gari Sohoui terroir, and author Guidimadjegbe’s knowledge of the languages spoken in the area. In consultation with local extension experts responsible for agricultural development in Savalou, two specific villages, Médétékpo and Kpakpassa, were selected for the fieldwork based on cassava production and the potential access to the primary market in central Savalou.

**Study Area**

Savalou District is in central Benin, West Africa, at an altitude of 120 to 500 meters with ferruginous soil as the predominant soil (Bossa et al., 2012; Capo-Chichi, 2006). The climate is influenced by the annual movement of the inter-tropical convergence zone (ITCZ). The rainfall pattern in Savalou is bimodal with an average annual rainfall of 1,067 mm (Météo Benin, 2023). Cassava is one of the main food crops cultivated, along with maize, yam, and cowpea. Smallholder rainfed agriculture predominates in the region. In 2023, cassava in the Savalou Commune represented 14% of the total area of cassava in Collines Department and 3% of

the country (Ministere de l’Agriculture, de l’Elevage, et la Peche (MAEP), 2024).

**Data Collection and Analysis**

This study used a mixed methods approach centered on empirical ethnographic fieldwork and secondary data. To include experienced growers of cassava and gari processors, the research was carried out with participants who had been active pro-

**Figure 2. Roasting Step of Gari Sohoui Cooking**

In Savalou, Gari Sohoui is cooked in a clay pot to process the distinctive food.



Source: Fieldwork, 2023

**Table 1. Calendar of Gari Sohoui Processing**

Some Gari Sohoui processors start in mid-June, early July, or August and continue work until the rainy season begins in February–April.

Processors	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Spt	Oct	Nov	Dec
37%												
63%						16%						
								20%				
											27%	

Source: Fieldwork, 2023

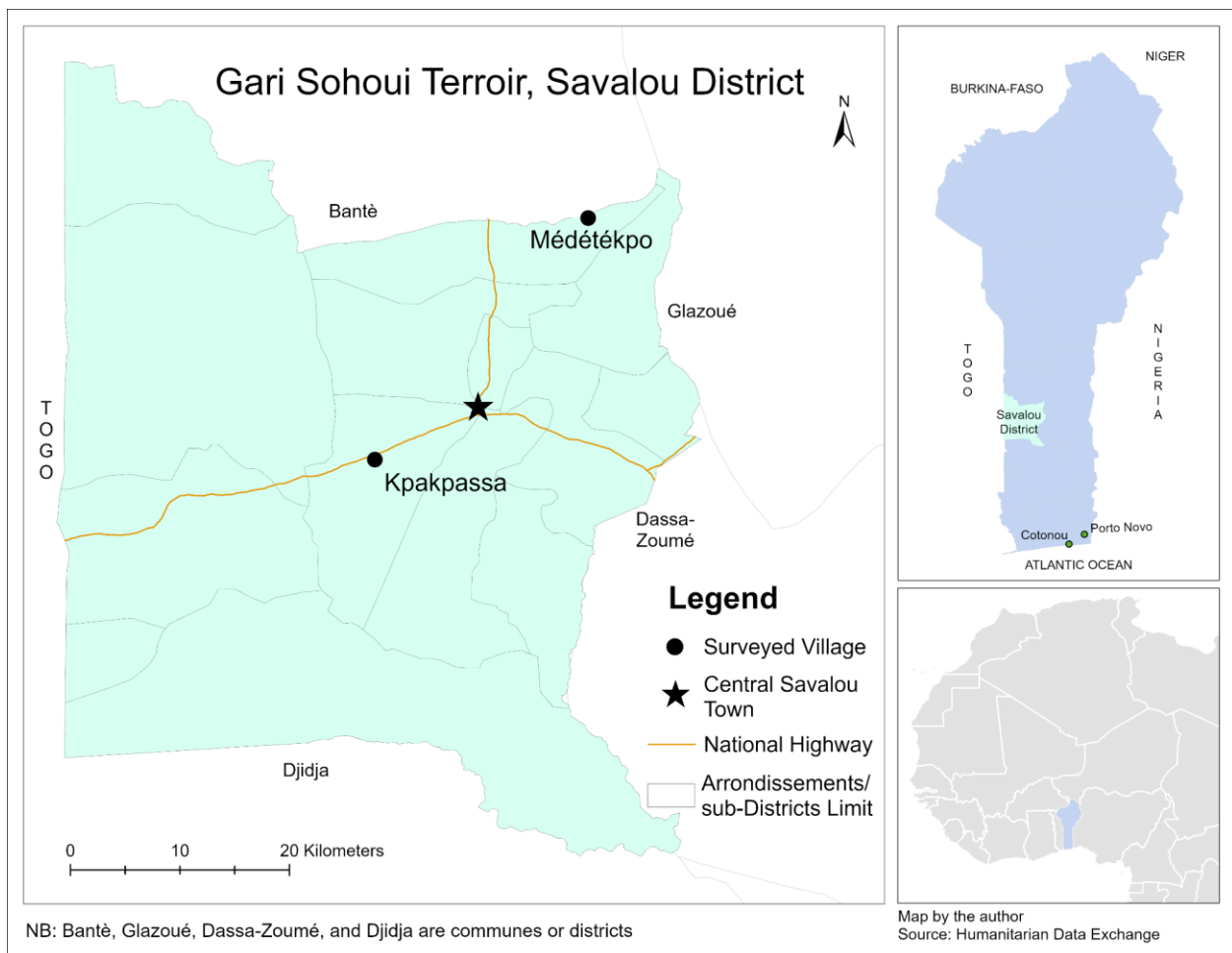
ducers for several years and involved in local groups that interacted with various stakeholders of the cassava value chain. A sample of 50 small-holder cassava farmer households, 25 from each village, and 30 Gari Sohoui processors were selected to participate in the study. Cassava farmers were randomly selected—every third name—from the combination of producer lists obtained at the local agricultural extension office and from producer associations in the two villages, Médétékpo and Kpakpassa (Figure 3). Kpakpassa is a relatively large village with an estimated population of 2,222, and Médétékpo is a smaller village with a population estimated at 1,377 (Unpublished village census, 2023). Kpakpassa is crossed by a national high-

way, and Médétékpo is approximately 15 km from the nearest highway (Figure 3). On the other hand, Gari Sohoui processors were recruited across the district following the snowball approach, with initial contacts through local informants and cassava farmers.

The data collected are based on individual in-depth, semi-structured interviews (45–60 minutes) to solicit participants’ perspectives and experiences regarding farming practices, GI protection labeling, and food self-reliance. Participant observation in the field permitted contextualizing the interview data. The secondary data collected were from official reports (government and non-government) and scholarly works.

**Figure 3. The Gari Sohoui Terroir, Savalou District Study Area**

The Gari Sohoui terroir within the geographical indication-protection boundary includes the two surveyed villages and a central Savalou town where an agricultural extension office is located.



Source: Fieldwork, 2023.

Data analysis utilized the framework of inductive coding to avoid biased conclusions (Thomas, 2006). The categorizations formulated during the coding of the empirical data were triangulated with data obtained through interviews, observations, and reviewing secondary data.

## Results

The following section summarizes the outcome of the data analysis. The findings suggest that agricultural development strategies and various socio-economic circumstances lead smallholders to seek alternative farming practices. Often, these practices use chemical inputs that are expensive and potentially harmful to human health as well as disruptive to the agroecosystem. However, the benefits of protecting local food production through geographical indication labeling hold promise for better living conditions for rural Africa when smallholders are willing and able to adopt agroecological practices.

### *Cassava Farming Choices*

Agroecological principles and practices are an integral part of local, traditional farming knowledge. Smallholder cassava producers interviewed in this study are willing to return to the fundamentals of

those local farming methods they learned from their parents that resonate with their cultural identity, if they address the needs of their households.

### *Limits to Agroecological Practices in the Cassava Cropping System*

Smallholder cassava producers in the Savalou District practice intercropping, rotation, and multi-cropping with cover crop systems, and their efficiency to help regenerate their soil is recognized by the study participants (Figure 4). However, not all farmers use these practices all the time.

Asked why they used herbicides in cassava production, most farmers responded that the use of chemical inputs on their farms for other crops, notably cotton, soybeans, and maize, led to using herbicide to clear plots for cassava cultivation and maintain them free of weeds. About 40% of all cassava producers interviewed applied herbicides to their cassava plots; most of the applicators were from Kpakpassa, compared to Médétékpo (Figure 5). This difference can be explained by the proximity of the highway that offers easy access to agricultural extensions that provides chemical inputs to farmers.

Study participants identified saving time and energy, and in addition expanding cultivated areas

### **Figure 4. Mixed Cropping System: (a) Goussi Melon, (b) Maize, and (c) Cassava**

This illustrates the polyculture cropping system of Savalou cassava growers.



Source: Fieldwork, 2023.

to multiple plots, as the main reasons for using herbicide on cassava plots. At Kpakpassa, 48% of the participants used herbicide to save time and energy while 16% used it to expand their cassava production plots. On the other hand, only 8% of the participants used herbicide for each reason at Médétékpo (Figure 6).

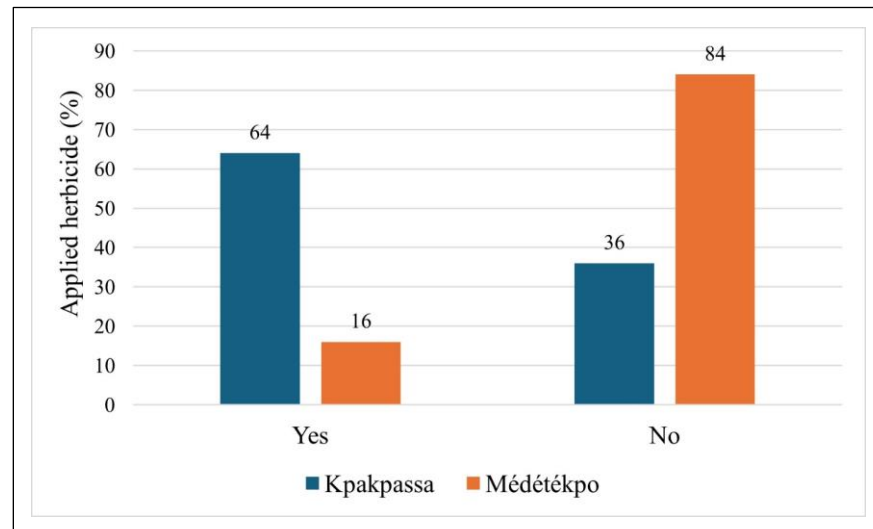
Herbicide use in cassava cropping is one of the ways that farmers mitigate the increasing expense of hiring workers caused by chronic labor shortages. Farmers turned to herbicide applications to minimize farming costs and try to make some profit. Consequently, most cassava producer households appear to be trapped in a vicious circle of herbicide usage. One of the leaders of a cassava producers' group at Kpakpassa stated:

We do not have enough money to face the multiple duties of our time. Before, our parents did not have a strong attachment to money; they did not know money. They did not send their children to school and, therefore, only had a few expenses. The chemical inputs help us a lot with farm work.

Several farmers said that if they did not manage their farm work wisely now, they would later spend all their income at hospitals and would have to go into debt or beg for food to survive. There-

**Figure 5. Herbicide Usage by Survey Participants (N = 25 per village)**

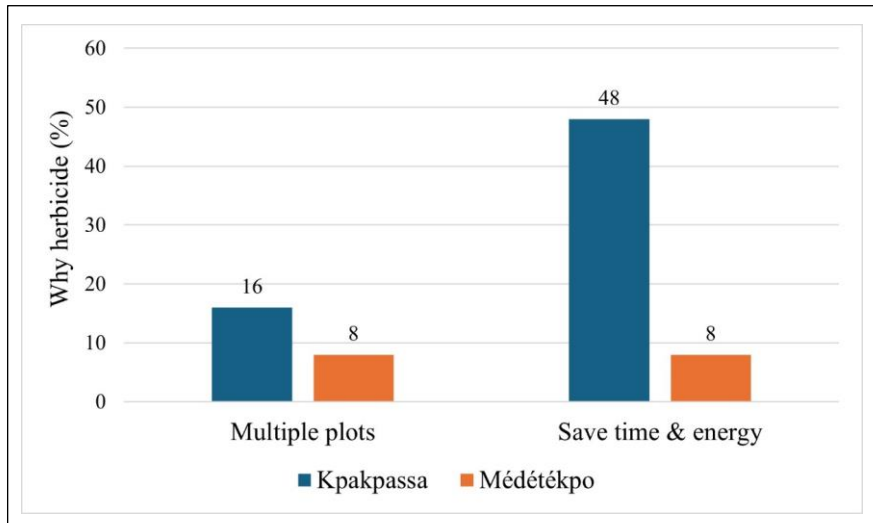
Highway access and proximity to government agricultural office accounts for greater use of herbicides in Kpakpassa.



Source: Fieldwork, 2023.

**Figure 6. Main Reasons for Herbicide Usage (N = 25 per village)**

Herbicides saved time and energy and allowed farmers to expand their crop area.



Source: Fieldwork, 2023.

fore, herbicide use saves both time and energy while enabling cultivating several plots. Figure 7 shows the central role of herbicide use in cassava-producing farming systems. Farmers also noted that recurrent poor weather in recent years has led some to take off-farm activities such as driving *Zemidjan*<sup>3</sup> and regular taxis, or engaging in small-

<sup>3</sup> *Zemidjan* is a local system of moto-taxis that offers job opportunities popular among the unemployed.

scale commerce or craft making, which reduce the usual time allocated to farm work. These off-farm activities are meant to supplement incomes to cover household and herbicide expenses.

Despite these understandable reasons behind the widespread use of herbicide in cassava cropping systems, about a quarter of the surveyed herbicide users stated that they were aware of the negative impacts of the chemical input on their personal health, farmland health, and the quality of the cassava (taste and size). These consequences predisposed the cassava farmers to any alternative practices capable of boosting yield, as well as efficiently preserving the quality of their cassava so as to maintain the reputation of Gari Sohoui.

*Agroecological Knowledge Among Smallholders*

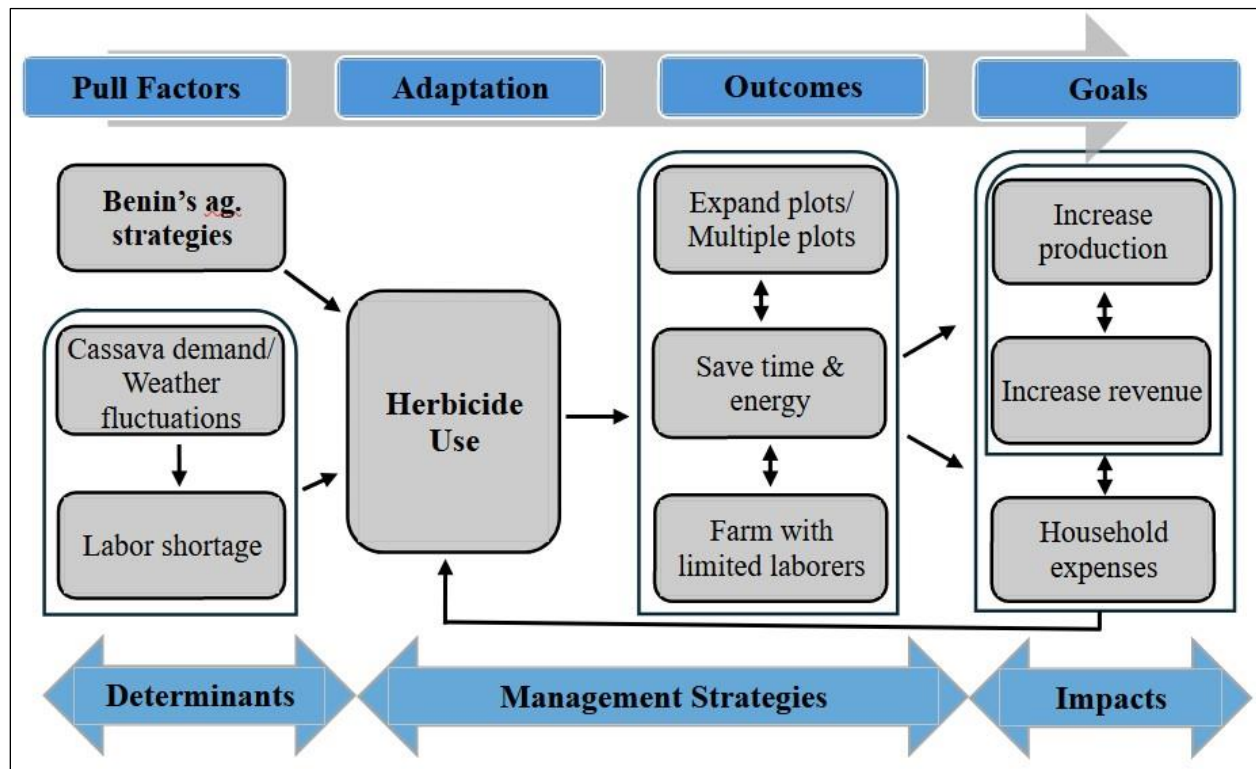
Most cassava producers interviewed (82%) said that they were aware of the potential benefits of chemical-free agriculture as well as expressed their desire to transition to agroecological farming practices,

which they referred to as “organic farming.” While both villages expressed great interest in agroecological practices, cassava farmers at Médétékpo showed a higher interest compared to Kpakpassa, with 88% and 76% respectively. Three reasons explain the attraction of these farmers to environmentally friendly farming practices: 1) negative impacts of chemical inputs on human and soil health, 2) chemical input costs, and 3) experience with agroecological practices in the past. The high cost of herbicides is the leading reason for wanting to transition in Médétékpo, whereas at Kpakpassa it is the negative impact on health that constitutes participants’ greatest concern (Figure 8). This finding can be explained by the accessibility of the herbicides. The long distance between Médétékpo and the highway made herbicides less accessible and more expensive. Farmers thus embraced the more agroecological practices already embedded in their culture because they were less expensive.

There were multiple occasions, during public

**Figure 7. Overview of Herbicide Usage Pull Factors**

This diagram illustrates decision-making frameworks for herbicide applications among cassava producers in the Savalou area.



Source: Fieldwork, 2023.

meetings and farm visits, when interviewees complained about the rapid degradation of their farmland soil, the need to keep increasing the quantity of chemical use, and access to cost-effective alternatives to chemical input. These perceptions are illustrated in the following statements:

Chemical inputs kill our farmlands; because of this problem, farmers work on multiple fields in and around the village. ...

Chemical inputs destroy our farmland's quality, vegetation, and health, but we cannot abandon them except if we have alternative practices to restore our fields.

A cassava producer household would spend an average of 17,500 FCFA (about US\$30) per hectare annually on herbicide when opting for that strategy. While this amount is not only exorbitant for the purchasing power of Benin smallholders, herbicides also expose farmers to toxic glyphosate compounds. Glyphosate-based herbicides are known to be unsafe for human, animal, and plant health. According to the World Health Organization's International Agency for Research on Cancer, glyphosate is carcinogenic to humans (Myers et al.,

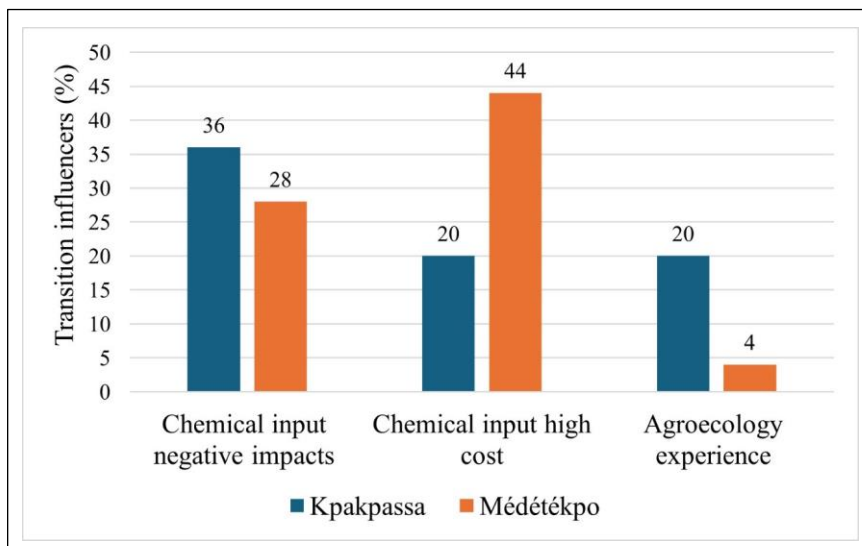
2016). Furthermore, research on glyphosate effects on aquatic life in Benin shows that prolonged glyphosate exposure can result in memory loss, liver, kidney, and cardiac system damage, perturbation in reproduction, growth, and death to fish, aquatic invertebrates, and amphibians (Agbohessi & Toko, 2021).

Because of these potential hazards, glyphosate-based herbicides have been banned or restricted in several countries in the EU, the Americas, and Asia (Alcantara-de la Cruz et al., 2021; Marambe & Herath, 2020; Székács & Darvas, 2018). Nevertheless, sub-Saharan countries have been reluctant to restrict glyphosate because it allows farmers to grow more by saving time and labor costs for weeding (Grabowski & Jayne, 2016; Snyder et al., 2015). The persistence of herbicide use in the study area was a clear expression of the absence of credible environmentally friendly and healthier alternative practices because all farmers interviewed stated that they avoided all contact between chemical inputs and planted cassava cuttings or shoots to preserve the quality of their cassava roots.

*Determining Factors in a Smooth Transition to Agroecological Practices*

**Figure 8. Reasons for Preference to Transition to an Agroecological Approach (N = 25 per Village)**

The graph highlights factors that motivated cassava farmers to prefer agroecological practices.



Source: Fieldwork, 2023.

Most cassava producers interviewed wanted to transition to alternatives, such as the implementation of agroecological practices. However, in both villages, 72% at Kpakpassa and 88% at Médétékpo, interviewees stated that they would transition only with a guarantee of “success.” Two fundamental conditions would enable successful transition to agroecological practices among cassava producers in the study area: (1) efficiency—inhibiting weed growth—of proposed agroecological practices, and (2) accessibility—being affordable and available at village level—of these practices. Efficiency of the

agroecological practices represents a crucial motivation to transition in both villages (Figure 9).

Several interviewees commented that agroecological practices that had been initiated in the villages by the ProSOL<sup>4</sup> project failed due to unprecedented rainfall shortly after their introduction and lack of follow-up from the project promoters. After the misfortune with the project, the few households involved were reluctant to continue implementing these practices or to enroll in new programs. Households that had resisted implementing the ProSOL project before it even started became the most reticent to the idea of abandoning the use of chemical inputs. However, the possibility of natural regeneration of depleted soil fertility and enhancement of crop yields associated with the ProSOL project, combined with the possibility of preserving human health, resonated with the aspirations of the study participants. Cassava growers

in both villages made clear their interest in cost-effective organic practices, even if initial investment may cost slightly more than chemical inputs. Growers were convinced that their initial investment would pay for itself in the long run. One of the oldest and most experienced cassava producers interviewed asserted:

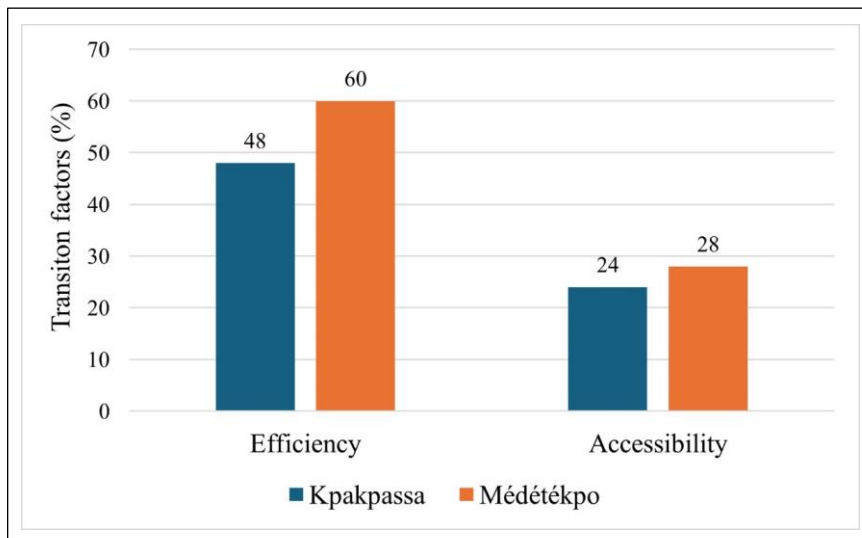
Local traditional practices are better than [chemical] even though they do not yield as much. We are doing the current practices because they make our work easier. If there are organic practices that do not degrade farmland, like chemical inputs, I will take it even if it will cost me a bit more.

### *Geographical Indication (GI) Protection*

Interviewees indicated that when the cassava tubers contact any chemical inputs, they lose the qualities that set Gari Sohoui apart from other gari produced in other parts of Benin and other countries. Therefore, cassava and Gari Sohoui producers ensure that the cassava tubers intended for their gari processing stay as chemical-free as possible. This increasing emphasis by Gari Sohoui processors could provide an additional reason for cassava growers to avoid chemical inputs. GI protection offers a unique opportunity for local communities in the sub-Saharan region to regain autonomy over the farming practices they utilize and the crops they produce. The participants of this study

**Figure 9. Agroecological Practices Adoption Determinants (N = 25 per village)**

Cassava producers emphasize efficiency and accessibility as factors necessary for successful transition to agroecological practices.



Source: Fieldwork, 2023.

<sup>4</sup> ProSOL is the Soil Protection and Rehabilitation for Food Security project co-funded by the European Union and the Gates Foundation, and monitored by GIZ of Germany. The program trained smallholders in agroecological techniques to protect their soil from erosion and to enhance its quality. Among other soil protection practices, the project introduced cover crops such as *Mucuna pruriens* in some villages. ProSOL has been implemented in Benin, Burkina Faso, Ethiopia, India, Kenya, Madagascar, and Tunisia. In Benin, the ProSOL program ended in June 2024 after a decade (Deutsche Gesellschaft für Internationale Zusammenarbeit [(GIZ)], 2023).

expressed their firm intention to leverage the GI initiative to tap into the potential market it represents, as well as to protect the quality of the soil in their fields.

#### *Factors Influencing Women to Become Processors*

Results indicate that diverse factors influence women's decisions to become processors. Half of the interviewees (50%) pursued Gari Sohoui processing to perpetuate their mothers' legacy, and 23% of the interviewees were attracted by the financial independence associated with processing. Additionally, the popularity of Gari Sohoui processing, its contribution to the diets of household members, and the income generated from its sale constitute decision-making factors in the study area for becoming Gari Sohoui processors (Figure 10). Among those women who started processing cassava within the last decade, most were attracted by the possibility of becoming financially independent. However, women who had been processing cassava for more than ten years were motivated by its role in their household well-being. In Savalou, where most women are involved in Gari Sohoui processing, this activity offers financial independence and diet stability to their households.

#### *Foreseen Advantages of the GI Foreseen by Processors*

Interviews indicated that only half of the Gari Sohoui processors who participated in the study knew about the GI initiative for their unique product; the code of practice was validated in November 2017. The low level of formal education of the women contributes to their lack of information about the GI initiative. Among those who had heard of GI, most had learned of it from the radio, from relatives, in village groups, or at the Savalou market. The two interviewees who had finished middle

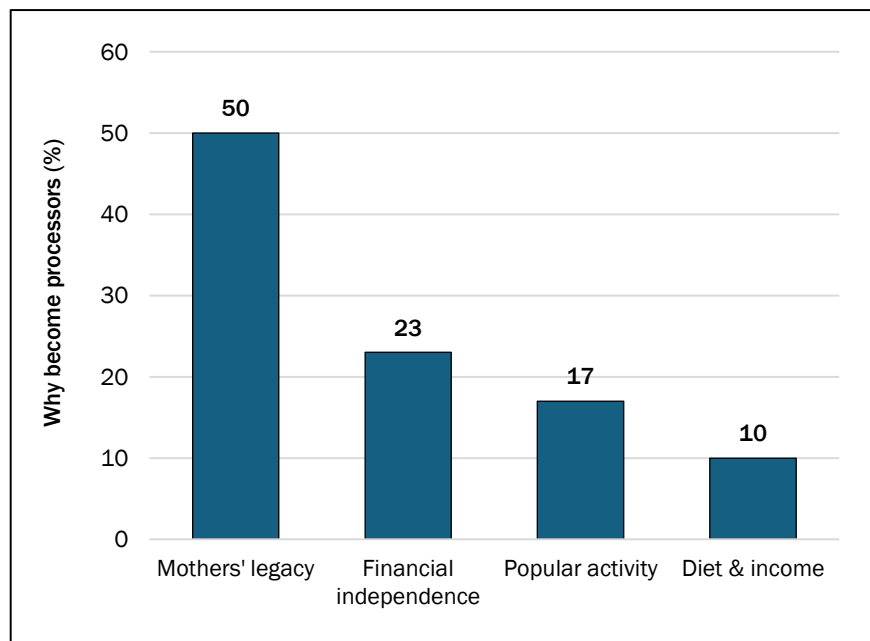
school actively participated in the procedures to enact the GI protection for Gari Sohoui. Nonetheless, all Gari Sohoui processors had enthusiastic perspectives on the potential of GI protection for their local product, perspectives that centered on three major potential advantages of GI protection for their livelihoods and locality: (1) all processors expected an increase in income, (2) about 75% emphasized protecting their gari's reputation, and (3) approximately half stated that their new purchasing power would allow them to participate in the development of their locality and the country.

Discussing the potential of a Gari Sohoui GI, the excitement of the participants suggested that they were eager to see it established, as they predicted its positive impact on their lives. Some participants reported that it would enhance their livelihoods and their people's well-being. These sentiments are expressed by the following excerpts from interview data:

It is a very good influence for us—more and bigger markets for good prices. It means well-being for us.

**Figure 10. Gari Sohoui Processors' Objectives (N = 30)**

Four main factors motivate Savalou women to become Gari Sohoui processors.



Source: Fieldwork, 2023.

This protection will be good as our gari price will increase. It will bring well-being for us, our household, and the community.

#### *Initial Socio-Economic Impacts of the GI*

Even before its official GI labelling in October 2025, the advent of GI protection for Gari Sohoui had already led to the creation of Gari Sohoui processing groups across the Savalou district, where women involved in the practice were coming together for mutual aid and cooperation. While several of these groups have been processing Gari Sohoui in the manner recommended by the GI protocols, others are actively working on meeting the requirements. Although all individuals in these groups did not participate directly in the GI discussion at the district level, they relied on the leaders of their cooperatives to represent them. Being Gari Sohoui processors in the Savalou area does not automatically make them members of a GI cooperative association. A processor who wishes to participate in the GI initiative must request admittance by providing the required documentation and fees. Once accepted, members must pay an annual fee and become guardians of Gari Sohoui GI protection in space and time.

Members must respect the standards and regulations set for the product, or they may be refused

participation in the GI initiative. All standards are written in the organization's approved protocol,<sup>5</sup> which protects Gari Sohoui's reputation and recognizes the Savalou commune as the sole Gari Sohoui terroir. Gari Sohoui can only be GI-protected "Gari Sohoui of Savalou" if all activities related to the processing, from root peeling to cooking, are done within the boundaries of Savalou. Before final marketing, a GI protection control center located within Savalou Commune, seals the packages.

Across the commune, several processor groups have already benefited from modern kitchens financed by donors. Médétékpo village has obtained a kitchen that is equipped to process the cassava at each step, including grinding and pressing machines and a well for water access (Figure 11). Some groups and even individuals have already created personalized packaging for their products, available in private stores and on stands during local, regional, and national fairs. These fairs give publicity to Gari Sohoui and permit processors to connect with potential new clients, allowing them to increase their revenue.

#### **Discussion**

Gari Sohoui was recognized by the Organisation Africaine de la Propriété Intellectuelle (OAPI) and

#### **Figure 11. Modern Kitchen for Cassava Processors at Médétékpo**

In the middle is the main kitchen building, and on the right is the clean water well. It was funded by the United States African Development Foundation and the Benin government.



Source: Photo by authors during fieldwork, 2023.

<sup>5</sup> Document obtained from the Gari Sohoui of Savalou Defense Group.

received a GI label on October 18, 2025. The new status for Gari Sohoui has the potential to empower women processors, as their product will now receive additional governmental support for introduction and expansion into new, bigger markets, both regionally and internationally. The *Ananas Pain du Sucre d'Allada* received similar support after its GI labeling in 2020 and has been introduced to markets such as the EU and China. GI label protection for Gari Sohoui suggests new profitable markets and increased purchasing power for its processors.

The revenue opportunity for women processors bodes well for men growing cassava in Savalou because it also expands the demand for the raw material, fresh cassava. There is potential for cassava producers to participate in and profit from the success of GI as cassava sales to women processors increase over time, increasing their revenue. The growth of Gari Sohoui through GI protection has the potential to enhance the income of actors along the value chain, including traders and retailers.

While my interviews in the two case study villages revealed no opposition to the GI protection for Gari Sohoui, some were more enthusiastic than others. The GI protection label for Gari Sohoui does not prohibit the production and sale of Gari Sohoui without a GI label. Gari Sohoui producers whose gari does not have the GI label will likely also benefit, however, because of the advertising surrounding the GI-protected Gari Sohoui.

The benefits of GI protection for other agricultural products in Africa have been documented in Cameroon (Ingram et al., 2020). Investigating *Oku* white honey from the Northwest region of Cameroon, Ingram et al. found that after GI protection in 2013, its price increased rapidly, accompanied by an augmentation of volume sold. Similar positive impacts of GI were noted in India by Pant (2015). GI protection facilitated access to markets at reasonable prices while supporting local knowledge.

For the GI-labeled Gari Sohoui to yield similar outcomes, farmers and processors need to continue maintaining the quality of their distinctive product, and the government should create a legal

framework with deterrent judicial instruments to discourage counterfeit, theft, usurpation, and profit capturing, and develop an efficient marketing strategy to position the product. With the economic opportunity GI protection offers, local producers gain a reliable source of income to meet the other expenses in their lives—better houses, keeping children at school, and meeting health care costs.

Gari Sohoui GI quality (taste, texture, aroma, and crispiness) is intrinsically linked to the traditional processing techniques, associated with local ecological knowledge. Cassava farmers and processors unanimously insisted that the quality recognized by the GI is guaranteed when cassava tubers do not come in contact with chemical inputs. However, increased herbicide use due to labor shortages in the Commune cropping systems could represent a serious obstacle to GI success, jeopardizing the reputation of Gari Sohoui. GI-protected Gari Sohoui offers an incentive to decrease or stop the use of herbicides. Farmers in the two study villages already would prefer to abandon herbicides, aware of health challenges and costs associated with their use in their fields. This perspective will encourage agroecological practices in cassava cropping systems and may progressively expand to other cropping systems. For example, as a result, farmers using cover crops would save on weeding expenses—herbicide purchase and hired laborers—and increase their revenue and capacity to meet their household needs.

By relying on one another, producers using agroecological practices foster an atmosphere in which processors and consumers are proud of their unique traditional products. This positivity has the potential to bring about constructive outcomes within distinctive GI-protected terroirs such as the Gari Sohoui Commune: social cohesion, employment creation, food self-reliance, and a decrease in rural exodus. Such potential shifts may sway the thoughts of young African people who are considering out-migration to cities and even to Europe, a problem that has increased in the last decade (Hassan & Abubakar, 2024). These foreseen benefits of GI protection align with findings by Samardzic et al. (2013) and Ngo Bagal and Vittori (2011) on the social impacts of GI products. The former found that GI protections are associated with

social cohesion because producers work together; the latter found that GI contributed to preserving natural ecosystems and local knowledge, as well as increasing production, creating jobs, and slowing rural exodus.

Capacity of GI protection to encourage the use of principles based on agroecological practices, such as cover crops, minimal to no tilling, mixed cropping, and organic inputs, promotes and preserves local knowledge, strengthens national identity and cultural pride, and preserves gastronomic heritage. GI protection thus espouses the principles of food sovereignty that advocate democratizing food production, centering local control and local food rights, recognizing local knowledge, and promoting agroecological farming practices. GI can benefit communities in developing countries, particularly in sub-Saharan Africa where local generational knowledge constitutes a significant sense of identity among Indigenous communities.

### Limitations

The sample size of 50 farmers from two villages and 30 processors from the entire district (14 villages) could limit the capture of more detailed data on producer and processor perspectives. The villages were selected because of their cassava production and access to the main market. While their characteristics are highly representative, based on the country as a whole, they are in the end just two villages. The data collected do not try to establish a statistical representation of cassava or Gari Sohoui production in Savalou or Benin. Rather, we have taken care to select them in order to gather insightful qualitative data. Also, as Gari Sohoui has just officially received its GI label, the findings may not fully capture its impact on communities. For Gari Sohoui, the study emphasizes the perspectives of women processors on the GI initiative but does not explore in detail the perspectives of farmers. Nonetheless, these limitations do not decrease the significance of the findings. The ethnographic and triangulation methods that were used seek to assess the diversity of perspectives in the communities.

### Conclusion

Achieving food sovereignty requires protecting culturally significant foods, such as Gari Sohoui, that


people enjoy and that serve as an important source of nutrition. The texture and crispiness of Gari Sohoui produced in Savalou has garnered a reputation that none of the ordinary generic gari have ever received on the African continent, especially in Benin (Fournier, 2010). Since GI protections contribute to conserving and perpetuating the uniqueness of traditional products (Belletti et al., 2017), Gari Sohoui acquiring GI protection is a form of validation of the terroir product, the region's cultural identity, and the cultural landscape the communities have created.

In the present world, where modernity promotes chemical-based farming, especially in sub-Saharan Africa, producing cassava according to principles based on agroecological practices—the use of cover crops, minimal to no tilling, mixed-cropping, and organic inputs—can progressively remove herbicides from the cassava cropping system. The GI initiative for Gari Sohoui of Savalou shows potential to enhance farmers' livelihoods through reducing expenses and increasing the supply of cassava to processors, while allowing them to achieve food self-reliance.

Gari Sohoui processing is a highly gendered activity that daughters inherit from their mothers. About half of the interviewees were processing as their mothers did. In sub-Saharan Africa, where women are often marginalized and without a steady income source, GI protection for distinctive foods such as Gari Sohoui implies empowering women. As expressed by an experienced processor interviewed, GI protection for Gari Sohoui means “more money [through access to new markets] for the well-being of our households and for the country as well.” The generated “gari-money” will not only stimulate the development of the economy at the village level but also help improve the welfare of rural households, from heads of households acquiring capacity to build brick houses, to individuals buying new motorcycles or paying off debts. It also helps women acquire financial independence and participate in their household expenses, as well as with keeping children at school until graduation (Field data, 2023).

The interviews with cassava growers and Gari Sohoui producers found a dilemma created by the use of herbicide in the cassava cropping system

simultaneously with the need to preserve the quality of Gari Sohoui GI. At this early stage of GI implementation, this tension is a signal that all parties need to work together, especially in response to the government's agricultural development strategy focusing on chemical inputs to increase the productivity of cash crops. The local ecological knowledge of cassava farming offers some alternatives capable of limiting the use of herbicide and maintaining the quality of cassava to be processed into Gari Sohoui. Until a radical change in agricultural development policy, local cassava growers and processors may need to strategize together to pro-

gressively eliminate herbicide use from the cassava cropping system and maintain the reputation of their Gari Sohoui. 

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