

ORGANISATIONAL INNOVATIONS IN GHANAIAN FOOD SYSTEM: APPLICATION OF THE “SYAM” CONCEPT



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Abstract

The SyAM concept was developed to characterize value chains organization that are intermediate in size in terms of the number of actors involved and the quantity of products farmed. They involve actors from short and long supply chains, and they reveal hybrid organizational forms and values. It has been mobilized by a French group of researchers and practitioners and some reflections have been initiated from 2020 to explore to what extent this concept may renew our understanding of food systems' dynamics in Sub-Saharan Africa. This report presents results on research conducted in Ghana: (1) an inventory of diversified organizational initiatives that could be analyzed with the SyAM concept, based on secondary data, and applying a simplified analysis grid. (2) the results of three contrasting case studies, based on interviews with several stakeholders of the initiatives. The SYAM concept shows the activities of SMES in Ghana go beyond the value chain, by including NGOs and community actors. This concept therefore shed light on the values of actors implementing transactions, which can be related to environment, health, or religion. The Ghanaian cases studied in this report are mostly based on entrepreneurship and less on collective efforts for common interests or a local authority that wants to support innovative value chain organizations as an instrument for the local policies to relocalize agriculture and food. But it is a medium-scale and national entrepreneurship, unlike what we see in modern value chains, and it clearly hybrids some social and environmental values to business objectives. The social values promoted mostly takes the form of women's entrepreneurship and economic empowerment, while the environmental ones are related to uncertified organic agriculture. Bilateral oral or written agreements observed in the Ghanaian cases studies move away from traditional forms of value chains' governance. Yet, it remains less innovative than the governance modes based on collectively negotiated agreements involving at least three segments of the chains that have been observed in France and conceptualized through the SYAM concept. These case studies enable a first discussion of the usefulness of the SyAM concept to analyze organizational innovations in sub-Saharan Africa. The SyAM concept seems therefore enriching other alternative food systems concepts by emphasizing on the hybridization of objectives and governance modes and the social and environmental values of actors. Further case studies should be conducted to continue testing this hypothesis.

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1. Introduction

In 2020, a group of researchers from CIRAD, SupAgro and ISRA explored hybrid modes of governance in food systems in Sub-Saharan Africa using the concept of "SyAM" for "Systèmes Alimentaires du Milieu" (Bon, 2020). This concept was developed in France and the United States to describe food chains halfway between short and long supply chains. It promotes transparency of information on the origin of supplies, new forms of governance between food chain operators usually from different spheres and which convey economic, social, and environmental values that contribute to the viability of operators and the development of territories (Chazoule et al., 2015; Fleury et al., 2016; Chazoule et al., 2018). This reflection was made possible by CIRAD's funding of a CRESI-type project (Creativity and Scientific Innovation)

A review of the literature and a preliminary inventory of case studies in West Africa highlighted the existence of organizational innovations like the SyAM concept. The activities conducted in 2020 led to the following results (Bon 2020)

1. The key principles of the SyAMs echo the major issues in the African context and some of the initiatives inventoried have characteristics like the SyAM concept documented in France
2. The operationalization of this concept will have to consider the main issues and specificities of the modes of organization present in Africa
3. There is a need to renew studies of food systems in Africa based on this concept.

The activities conducted in 2020 provided interesting elements on the relevance of further exploring these innovative modes of governance. However, the literature reviews alone have shown some limitations (biased, incomplete, outdated information...). In 2021, the focus was on the modalities of functioning of the SyAMs in Sub-Saharan Africa and the conditions favorable to their development and sustainability. To this end, inventories and case studies were conducted in two countries with different socio-institutional trajectories: Senegal and Ghana.

This report presents results on research conducted in Ghana: (1) an inventory of diversified organizational initiatives that could be analyzed with the SyAM concept, based on secondary data, and applying a "simplified" analysis grid; (2) the results of three contrasting case studies, based on interviews with several stakeholders of the initiatives. Section 2 details the method used to identify the initiatives and to carry out the case studies. Section 3 presents and discusses the main results and section 4 concludes

2. Method

2.1. The SYAM concept

A SyAM is defined as "a network of institutionalized interactions between localized actors aiming at the perpetuation of a strategic partnership for the relocalization of production / processing / distribution chains" (Chazoule, 2020).

The SyAM concept has been mobilized by a French group of researchers and practitioners and has emerged using an inductive approach. Indeed, they observed that many organizational innovations within food chains in Rhône-Alpes' (a region in France) were neither short nor long circuits, but rather hybrid forms with characteristics from both and engaging heterogeneous actors not used to collaborate (Chazoule et al, 2015). Based on the extended analysis of eleven innovative circuits in Rhone Alpes, they identified some key principles of SyAM, which were analyzed and summarized by Bon (2020).

SyAM mobilize actors from alternative circuits but also actors from conventional circuits (Le Velly and Dufeu, 2016; Le Velly et al, 2020). The number of intermediaries is greater than in the short circuits, which are usually characterized by one or zero intermediaries. In some cases, horizontal relationships (between peers) within the value chain allow the consolidation of vertical relationships with the rest of the chain (Chazoule et al, 2018).

From a geographical point of view, these systems are supplied on a territorial or regional scale (i.e. subnational) and spread on a regional or even national scale (Brives et al, 2017). While the location of production is not always used as a differentiation criterion on the markets, the SyAM concept can be defined as belonging to the "Food From Somewhere" Regime (Campbell, 2009), where products remain linked to a territory, even if geographical proximity between actors is not the key driver of value chain organization. Thus, these systems differ from conventional channels in that they are localizable.

Although these initiatives often include a leader organization (which varies a lot in the French context: processors, producers' organizations, supermarkets, local authorities...), they advocate democratic governance at the multi-stakeholders' initiative scale (Chazoule et al, 2016; Chazoule et al, 2018). Indeed, where in conventional systems, contracts are made two by two between actors located at the up or downstream level, the SyAM's partnership involves a wider part of the value chain (if not the entire one) (Le Velly et al, 2020). According to Le Velly et al, this collective construction of the partnership makes it possible to structure the collective action (discussing and agreeing on repartition of roles, conditions of production and value distribution), and to make it sustainable. In this sense, this partnership can be described as "strategic" (Chazoule, 2020). It establishes and is established by a participatory governance of the chain.

The SyAM partnerships are the result of a qualification process (Le Velly et al, 2020), meaning the establishment of rules that ensure the final quality of the product. It often includes one or more specifications considered as "complete" in the sense that they characterize both the food item (e.g., sanitary, organoleptic, social, and environmental qualities) and the way to exchange it (relational value) (Chazoule et al, 2020). Through a pricing process, the value added of each actor is transparent and fixed with the group so that the economic value produced is equitably distributed. This process of partnership creation requires transparency and a strong inter-knowledge between the different actors. This partnership makes it possible to establish rules that aim to make "simple, safe and efficient commercial buying and selling operations" (Le velly et al 2020). Le Velly et al refer to this as a fluidification process. This fluidification allows, among other things, to improve the logistics of the entire circuit, which can thus handle larger volumes than short circuits (Chazoule et al, 2015; Brives et al, 2017). It is facilitated by relational proximity between actors. This relational proximity is also based on the sharing of common values between actors. Lequin (2018) speaks of a "community of values". These shared values result in the implementation of product differentiation processes that add value to the product.

Indeed, SyAM actors are developing approaches that consider environmental, social, and territorial development issues, most of time without official qualification (as organic) but often promoting environmentally friendly production conditions, social benefits linked to participatory governance, territories and fair remuneration for each actor. These values are sometimes communicated to consumers. This creates added value by differentiating the product from conventional products on the one hand, and the whole partnership from conventional channels on the other. They are the result of a learning process.

During their gradual construction, SyAMs face many uncertainties and barriers (Fleury et al, 2016; Chazoule et al, 2018): about the outlets for their products, the choice of partners, pricing, and the

approach to differentiation, the legal form to adopt (Chazoule et al, 2018). Other difficulties are potential competition, difficulties in creating trust between actors and in setting up efficient operating modes. The actors in the chain must learn, sometimes quickly, new knowledge and skills (Chazoule et al, 2018; Le Velly et al, 2020). In this respect, the role of support organizations, particularly public organizations, is crucial (Chazoule, 2020). They play both a mediating role in the creation of the partnership (Le Velly, 2020) and make it possible to pay part of the learning/transaction costs (Chazoule, 2020).

Reflections on the hybrid character of food chains seeking to increase sales volumes while better distributing the value created to the benefit of the upstream (Bloom and Hinrichs, 2011; Le Velly and Dufeu, 2016) resonate research on “agriculture of the middle” (Let et Stevenson, 2011; Brives et al, 2017) and value-based food supply chains (VBSC) in the Anglo-Saxon literature (Hardesty et al., 2014). In the United States, VBSCs are characterized by a so-called “win-win” strategic partnership between the operators in a food chain, as it allows for a hybridization of objectives, a governance based on balanced partnership and a better distribution of the value created. Considered as hybrids, these VBSCs allow (often regional) value chains to structure themselves in an innovative way by modifying the relationships usually constructed.

In short, SyAMs are networks of actors sharing a common activity and common values. They are hybrid forms in their functioning, situated between short and long circuits. They are also hybrid in the diversity of actors they include. They are intermediate in terms of volumes produced and scales of action. Their operation is based on the construction of a strategic partnership that establishes the rules of operation and allows for collective action. This partnership integrates, among other things, a learning process achieved during the processes of pricing, gaining fluidity and qualification. During these learning processes, support from external actors (often public) is fundamental. Finally, it should be emphasized that although the SyAMs have the similarities described above, they are in fact very diverse. In this respect, our position is to study this diversity and to confront this framework to case studies rather than to try to give a precise and common definition of what a SyAM is. Rather, it is a matter of studying the processes that make up SyAM. Focusing on Sub-Saharan food systems, we propose to explore the diversity of food value chains organization between so called “modern”, “traditional” and “niche” value chains. Precautions are required since the African and French contexts differ, in terms of prevailing value chains organization, funding context (with many projects supported by international aid and limited public funds), growing but still limited middle class/higher purchasing power population, or very young population which aspire to leave agriculture.

2.2 Identification of SyAM initiatives

2.2.1. Description of the identification method

The inventory of initiatives that could be analyzed with the SyAM concept has been carried out through either meetings or phone calls with key informants and literature review. These sources of information i.e., phone calls and meetings with ten actors (managers of private companies and the Head of the food evaluation and registration department of the Ghana Food and Drugs Authority) and, grey as well as scientific literature reviews allow to fill the grid used for the inventory. The literature review approach used is selective in that it does not involve a systematic and comprehensive review of all documentation on the topic. The goal was to identify what had been written on the topic without generalizing or building cumulative knowledge from what was reviewed (Cf. Paré et al., 2015).

The databases mobilized to search for scientific articles and grey literature were: ScienceDirect, Google and Google Scholar. The latter is recommended for academic information review (Friend, 2006).

The inventory also required the mobilization of grey literature, which corresponds to the set of diverse and heterogeneous documents that are made public outside of the traditional review processes by researchers from universities or research centers, and that are not subject to these peer review processes (Cf. Adams et al., 2017). The grey literature was more useful than the peer reviewed one to identify case studies because the scientific literature about value chain alternative to traditional and industrial value chains is scarce.

The keywords used for the study were first listed and then discussed during a meeting with the researchers involved in the Ghana research. The main keywords mostly referred to initiatives, clusters of actors from all sectors of agriculture and the food system in general, and indicators of differentiation. They were:

- ✓ "Food System" + "Ghana"
- ✓ "Agriculture" + "Ghana" + "Initiatives"
- ✓ "Agriculture" + "Ghana" + "Organic"
- ✓ "Agriculture" + "Ghana" + "Aggregator"
- ✓ "Agriculture" + "Ghana" + "Cooperatives"
- ✓ "Agriculture" + "Ghana" + "Farmer's Based Organisations (FBOs)"
- ✓ "Agriculture" + "Ghana" + "NGOs"
- ✓ "Agriculture" + "Ghana" + "Innovative value chain-s"
- ✓ "Agriculture" + "Ghana" + "Alternative value chain-s"
- ✓ "Participatory Guarantee System" + "Ghana"
- ✓ "Service Companies and Farmer Organizations" + "Ghana"
- ✓ "Protected Geographical Indication" + "Ghana"
- ✓ "Processed Foods" + "Organic" + "Ghana"

Several characteristics of the SyAM concept were used as criteria of inclusion of an initiative in the inventory when information was available. These include criteria such as the (i) types of actors involved in the initiative, (ii) scale of production, (iii) scale of commercialization (iv) functional structure of the value chain, (v) products qualification and differentiation. In addition, several criteria were used to exclude initiatives that did not fit into the inventory. These were initiatives:

- X related to non-food sectors
- X technological
- X with a larger marketing scale, i.e., exporting internationally, outside the sub-Saharan area and not targeting the diaspora or the regional market
- X that use imported products in their production
- X Targeting only domestic niche markets
- X Initiatives for which there was not enough information related to the SyAM concept
- X without intermediaries (producer-consumer)

2.1.2. Analysis grid

Several key factors were used to identify and list initiatives, when information was available, that could be analyzed with the SyAM concept. These include mainly general information about the initiative (name, status ...), structure and functional analysis of the value chain(s) of the initiative, scale of action, product qualification and differentiation. Table 1 presents details about those factors considered for the inventory of initiatives that could be analyzed with the SyAM concept.

Table 1. Analysis grid used to identify initiatives that could be analyzed with the SyAM concept

Initiative	Name	What is the name of the initiative?
	Status	What is the status of the initiative (company, project, association...)?
	Initiator	Who is/are the initiator(s)?
Visions, triggers, and trajectories	Visions	What are the main objectives sought by the actors of the initiative? They can be objectives of means (e.g., search for logistical efficiency) and/or results (e.g., equity, affordable prices...); objectives of economic/commercial efficiency or "advocacy"
	Triggers and trajectories	
Structure and functional analysis	Type of actors involved	Who are the actors involved in the initiative? The economic operators of the initiatives and the indirect actors must be considered
	Functions of the actors involved	What are the functions of the different actors in the initiative?
	Functional organization/flow	Functional organization of the value chain(s)
	Type of products	What are the products (and possibly co-products) concerned by this initiative? Raw, processed, perishable, seasonal?
Action scale	Production scale	What is the geographical positioning of each of the activities (up to the final markets)?
	Consumption scale	
Product qualification and differentiation	Differentiation and labelling	Are the products differentiated and by what means is this differentiation signaled on the market? It can be official differentiation (external certification, labels, and brands) or signaling (brand, communication, dedicated marketing platform, signs...)
	Values and criteria for differentiation	What are the quality values (criteria) defined and promoted by this differentiation?

2.2. Case studies

2.2.1. Method description

“A case study is an empirical inquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries between phenomenon and context are not clear” (Yin, 2014).

The choice of the four potential case studies in this project was mainly based on the diversity of the forms of governance in the value chains (between loose and integrated forms) and their ex-ante capacity to be analyzed with the SyAM concept, in particular the differentiation of the quality of their products and the potential beneficial effects for producers and consumers. The associated agribusinesses were Mawutwueni Ghana Limited, Delchris Africa Limited and Agro Kings Limited. We stopped the Yaa Baby Rice case study since the raw material (rice) of the initiative was not organic as it is written on the packaging online. Also, their rice is collected from many collectors and not farmers.

The three case studies were carried out through face-to-face interviews. A total of 8 respondents (2 initiators, 3 managers, 2 producers and 1 retailer) were interviewed. The objective of the interviews is

to review in 1h-1h30 the characteristics, functioning and the expected performance of relevant initiatives that could be analyzed with the SyAM concept. The aim was to identify the:

- Triggers of the initiative and its objectives,
- Structure and functioning of the value chain in which the structure in question is anchored,
- Scale of action
- Governance of the value chain approach
- Values and processes of differentiation of the products
- Expected or recognized performances and issues and future evolution

2.2.2. Methodological difficulties

We faced several challenges when carrying out the case studies. First, some informants were either too busy or not inclined to participate in the interview without financial incentives. The time lapse between the first contact and the interview could be up to one month. Moreover, interviewing with wholesalers can be complicated as they are usually very busy, we did not get the chance to ask all the questions we would like to.

In addition, we observed that a stated commitment to sustainability issues is not always followed by concrete actions such as verifying producers' real agricultural practices. Finally, there is a lack of transparency in the sense that some actors did not want to give us the contacts of their suppliers, which puts the doubt on the fact that all their products might not be organic as claimed.

3. Results

3.1. Inventory of SyAM initiatives

In Ghana, 23 of the 27 identified initiatives are led by private companies and are mainly processors and distributors. Despite the diversity of these companies, the inventory revealed some common features among them. These companies are mostly local: the financing and entrepreneurs are from Ghana, and production and consumption take place in the country as well. They supply raw agricultural products or processed products, and emphasize product differentiation through packaging, branding, and labelling of production areas. They also emphasize the ethical quality of their products, due to their so-called social activities, in particular the support of youth and women's economic activities, and the protection of the environment. All these companies are certified by the Ghana Food and Drugs Authority (FDA) and/or advertised as organic. The Ghana FDA certification guarantees that the products follow consumption sanitary standards. It is mandatory for all food products that are imported, advertised, sold, or distributed in Ghana¹. Ten companies advertised that their products are organically produced, although they do not use external certification.

The list of the inventoried initiatives in Ghana are presented in the Appendix.

¹ <https://firmusadvisory.com/2018/06/21/how-to-register-food-products-in-ghana/>

3.2. Case studies

3.2.1. Mawutwueni Ghana Ltd (ML)

ML is a private and medium size company processing cereals. Its products are packaged, branded, labelled with the sanitary standard set by the Ghanaian government, and marketed as organic. Its business model is based on relational proximity and values related to health, environment, and religion. ML also conducts training for small businesses manager, using its own processing activity as an example. In both activities, ML works in priority with women. The information used for this case study was gathered from four interviews with ML's manager and three of her main suppliers.

Triggers for the emergence of the company

ML is was founded in 2018 and was legally registered in 2019. It is an Agro-processing company located in Pokuase (Greater Accra region) using Ghanaian raw materials to process Food, Home, and Personal Care products to consumers. The company also provides trainings, in partnership with, usually, NGOs, and advocacy.

It all began when the manager of the company started to mix nutritious cereals used to prepare "Tom Brown"² porridge for her daughter who liked the taste very well. She then made some to sell to the people around her. The company then gradually grows, especially with the money (5,000GHS) of the very first award the manager won from the British Council Ghana, which is the United Kingdom's international organization for cultural relations and educational opportunities.

Organization of the initiative: activities, capital, and resources

The manager introduces ML as "a social enterprise focusing on agri-business to impact women and youth in communities to improve livelihoods, inclusive training (to impact female led businesses to attenuate poverty, post-harvest losses and to strengthen food security) and advocacy". The company's main activities are food processing and support to small businesses through training. These activities are managed independently but the processing activity is often used as an example during the training. This processing activity is indeed successful, which does good communication for the trainings. The manager said both activities are independently financed and sustainable.

In addition to the 5,000 GHS award from the British Council, the company got a four-month loan (8,000 GHS) to rent a shop in November 2021. The interest rate was 8%. ML builds its human capital by hiring through mainly social media, local markets and by word of mouth. The number of employees at ML is about 10: 4 permanent women employees and 6 under part time/seasonal contracts. These contracts include youth as well as women. According to the manager, "the company consciously targets female owned businesses and even female suppliers [3 women suppliers] in order to transact business daily with at least 80% females, including consumers".

The company does not have a factory yet but has its own agro-processing space (Rented). The processing and the packaging are done manually. The equipment for the processing includes a sealing

² Tom Brown is a popular Ghanaian breakfast porridge made from a mix of cereals (maize, millet, wheat and/or rice), groundnut, beans, etc.

machine, bowls, a scale, measuring cups, metal sieves, and an oven. The raw material is brought to the processing location using rented public transportation.

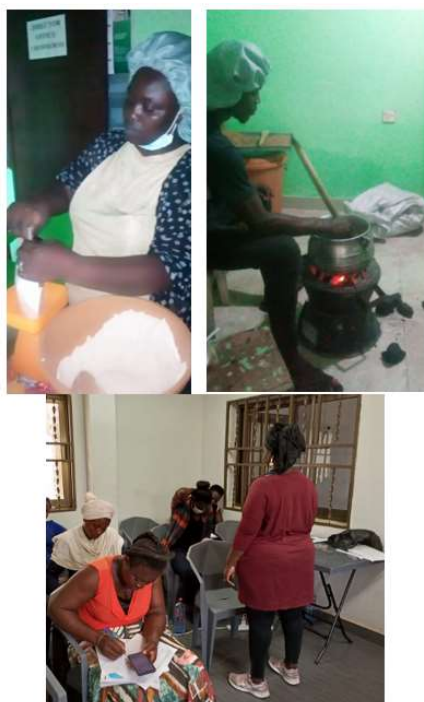


Figure 1. Some pictures of Mawutwueni Ghana Ltd (ML)'s processing and training activities.

Organization of supplies and sales and position of the initiative in the value chain

ML is a processor and a retailer. The actors who work with ML include small holder farmers, a commercial mill, and wholesalers in local markets, retailers, and consumers.

- **Suppliers**

ML's products are from local farmers from the Volta, Eastern, upper West and the Greater Accra regions (Figure 3). The main suppliers with who ML gets its products from were interviewed during the case study. Usually, ML works with the same suppliers under, as she stated, a "cash and carry" basis i.e., there are no written contracts with the suppliers. All the transactions are based on verbal agreements. The company's main supplier is a medium size wholesaler in term of volumes located in a medium size market in the northwest of Accra (Pokuase). She declared selling only organic cereals (rice, maize, soya, millet...). She does not have a certification and the organic aspect of her products is based on trust. She gets her products from the city of Wa in the upper west region of Ghana. She also sells the Avalavi variety which is known for its high quality, according to both suppliers and ML. The wholesaler stated that "We use this variety of rice because of the taste and the quality". ML's wholesaler works with two beans farmers, one maize farmer and one rice farmer. She also works with three processors who own small millers. She declared having verbal agreements with the farmers in the sense that she pays them to grow her products, after they pay the balance. Also, she provides them a small part of their production costs.

In addition to this wholesaler, ML has two smallholder farmers as suppliers. The cassava farmer, who is the ML manager's mother, is in the Accra region (Pokuase) and the rice farmer in Wheta (Volta Region) (Figure 3). The cassava farmer produces around 50 bags of 100kg of cassava a year on her own land. She also dries the cassava for ML. Her products are not certified yet by the FDA. In the other hand, ML orders only large quantities of the Avalavi rice (over 20 bags of 100kg) from the rice producer located in Wheta. The rice producer work on 10 acres rented land. He declared having only a verbal agreement with his purchasers including ML. The rice is transported to Accra using rented public transportation.

- Retailers and consumers

ML does Business to Business provision to shops, mini-super markets and its own wholesale and retail branded shop. The company also does Business to Consumer provision to busy working employees in cooperate institutions and the general public through direct sale at ML shop or delivery. The company does not have the equipment yet to meet the demand of the distributors like big supermarkets nor to provide a certain quantity on a regular basis. The retailers and consumers are in the Greater Accra region.



Figure 2. Mawutwueni Ghana Limited (ML) supplies and sales locations. Source: ghanamissionun.org/map-regions-in-ghana

ML's products: Quality and Differentiation

ML products are advertised as organic. The company produces 5 variety of cereal mix (called M cereal mix) composed of millet, maize, rice, beans, soybeans, and wheat for "Tom Brown" porridge preparation. ML's products also include Chilli pepper powder, Palm Kernel Oil and Groundnut paste. Around thirty thousand (30,000) packs of M Cereal mix are sold by the company within a year. The quantities sold and purchased for the other products are variable. However, the company processes around 5 bags of 100kg of rice and 2bags of 100kg of pepper powder a month. All the products used

by the company are from Ghana except for wheat which is imported. According to a cereal wholesaler and retailer and one of ML's suppliers, the wheat she sells is from other wholesalers in Tema which is a city with the largest port in Ghana. The wholesaler did not know the exact origin of the wheat.



Figure 3. Images of Mawutwueni Ghana Limited (ML)'s products

In terms of product quality, the company's brand name is "Mawutwueni" and its products are FDA (Ghana Food and Drugs Authority) approved. The products are differentiated from those on local markets because of the packaging on which the brand name and the FDA certification are visible. The information on the FDA labelling includes, among others, (i) the list of the active ingredients, where applicable, showing the amount of each present in a dosage unit, (ii) the net content of the container, (iii) the date of manufacture and best before/expiry date, (iv) the name, postal address and premises address of the manufacturer and Distributor, etc. (WACOMP Ghana, 2020).

Moreover, ML's suppliers testify that their products are organic. The wholesaler declared selling only organic cereals (rice, maize, soya, millet...). She said she can differentiate organic cereals from conventional ones based on the price. Organic products are more expensive on the market. She believes ML buys from her because of "the quality and the taste" of her products. ML's cassava supplier, who is also the mother of ML's manager, stated that her cassava is "sweeter and organic" because she does not use any chemicals but only manure to grow her products. She also mentioned that ML has requirements about the quality of her products and often asks her to dry the cassava. She believes she meets all ML's requirements because, according to her, "using chemicals does not help the land. It changes the products and kills the good mushrooms that grow besides the crops".

Accordingly, ML's rice supplier claimed producing one of the best varieties of local rice, the "Avalavi variety". He argued that his cropping process makes his rice relatively more nutritious. The reason he pointed out for avoiding using fertilizers is that the chemicals stay in the rice even after processing. Also, he avoids those that reduce the taste and perfume of the rice. According to him, he uses only those that are necessary and use them at the very beginning of the cropping process i.e., before the rice grows. He argued that "I see some farmers, who aim at getting the maximum quantity possible, putting many types of chemicals in their rice. For instance, products that help the rice grow even if there is not enough water. All these products reduce the quality of the rice [taste and perfume] and cause many postharvest losses during the processing because of the bad quality". Moreover, he declared limiting the use of chemicals because of his beliefs (religion) "I cannot sell harmful products

to people because of money. I am cautious about the food I eat; I try to eat healthy to treat well my body. In addition, my family and I consume the rice I grow. As my parents are elderly, they need healthy and nutritious food. I value elderly in my community, they deserve good quality food”.

Control of quality of the products and enforcement are implemented through relational proximity and the values of suppliers, related to health, environment, and religion. The wholesaler we interviewed did not give us a precise procedure about how she controls the agricultural practices of the smallholder farmers from whom she gets her products from. Also, ML’s suppliers do not have a certification and the organic aspect of their products is based on trust. Even though the FDA certification is obtained through quality tests, it does not inform about whether the products are organic or not. The manager of the company stated however that “we ascertain that our agro-products are chemical-free, we make sure that there are no foreign particles or insects, and we sort agro-products before processing. We know the quality based on the taste and price and we always ask for a sample to inspect and taste before buying. Also, the rice is FDA approved”. To the question “why do you think your supplier produce quality and chemical-free rice?”, the manager argued that “the farmers produce that way based on the facts that they consume what they eat, the demand for quality and tasty rice is increasing and they get more benefit because of the high price”.

Vision and hybridization of objectives of ML: using agribusiness as leverage for training and dissemination of information

ML's main objective is to do agribusiness in a way that its activities generate income and at the same time have a concrete impact on communities. ML selects its suppliers based on gender, relational proximity and their values related to health, environment, and religion. In doing so, the company tries conciliating economics, social and environmental objectives.

ML uses her experience gained through the development and management of her agribusiness to guide and train women who wish to enter entrepreneurship. For instance, ML does the Agro-processing training, teaching women and youth on how to turn agro products into powder for a longer shelf life. In addition, in partnership with *Social Enterprise Ghana* and *Reach for Change*, ML has impacted over fifty women with support information on economic rights and access to finance. A policy dialogue was organized with various stake holders Finance, Government and Business development for these females led businesses to leverage on how to grow their businesses (see the Box above for more details). Also, ML just started, in partnership with *MDF Training and Consultancy West Africa*, training up to three hundred women across three Regions, Volta, Eastern and Greater Accra, with business development lessons, digitization, access to market and finance, and will award a grant of 5,000 GHS to the best female business.

ML aspires to diversify and develop a variety of innovative products such as a new way to grow mushroom from the plantain skin and other organic wastes. Also, the Company declared working with research institutes on mushroom generation from natural waste. “We can only comment effectively after research is completed,” said the manager. Finally, ML plans to start farming to produce its own inputs to control the quality of the raw materials to be sure that they are 100% organic and to reduce cost.

A Training session untitled “Policy Dialogue on Economics Rights and Access to Finance for Women-Led and Youth-Led Businesses”

The training session took place in Pokuase on February 17, 2022. It was supported by ML in partnership with *Social Enterprise Ghana* (SE) and *Reach for Change*. The first one is a network for research, innovation, advocacy, and funding, managed by Ghanaians and the latter, a Swedish NGO, created in 2010 and operating in 18 countries. *Reach for Change* supported around 1000 social businesses.

There were at the event, in addition to ML staff:

- About 10 women attending as trainees
- 7 dignitaries and stakeholders from different institutions:
 - Banks: GA Rural Bank and Ecobank who talked about their financial products available for female businesses
 - A member of Parliament and the deputy minister for Fisheries, The Assembly Man for Abensu who talked about government initiatives for female entrepreneurs and development issues for business and Ghana Enterprise Agency formally NBSSI Nation Board for Small Scale Industries.
 - P20 Consult and Nabco, talked about procedures such as business registration, advertisement, contract letters, business advertisement, business certificate renewals, ...

Four women and one man business holders talked about the impact of ML’s training on their activities. They participated at the demand of ML and made a clear link between the trainings and the success of their activities:

1. One woman who sells soap and bleach. The training helped her to access funding
2. One woman who sells cereals. The training helped her increasing the volumes of activity by obtaining the FDA certification.
3. One man who had business ideas and the training helped him to structure them. He started processing maize and onions and developed his own brand.
4. One woman who sells roasted pork. She got a website and developed packaging.
5. One woman who is in sewing and developed a business plan after the training.

After the session, the third woman provided more details about the impact of ML’s training on her activity. She reported that the ML training she enrolled at was called “the digitalization program”. It helped her creating her own business website. She said that after creating her website, the demand of her products increased. She argued that the main challenge she is now facing is to meet the growing demand: “I sell two boxes of 10kg of pork meat per day. Also, there are no land in Pokuase, I would like to get a land to start my own pork farm”.

ML’s founder reported that “We use our one experience in the agribusiness to train other entrepreneurs”. ML’s trainings are sponsored by donors (such as NGOs). ML develops them as prototypes, free of access, and then the participants must pay around GHS 100 per training. ML is renting a two-story building where the trainings take place. For large groups, the company host the training in a larger room in the same neighborhood in Pokuase.

3.2.2. Preliminary information on the Delchris Africa Limited (DC) case

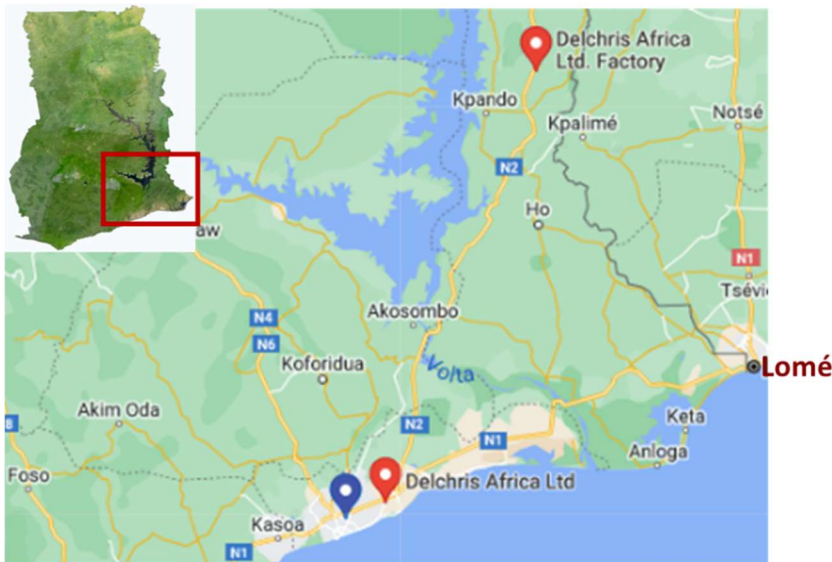
DC is small size company processing, packaging and selling healthy (gluten and sugar free) snack bars in Ghana. The company's suppliers are women associations and smallholder farmers in the Volta and Oti regions. DC's products are approved by Ghana FDA. The information and data used for the Delchris Africa Limited (DC) initiative preliminary case study were collected during one interview with the founder and manager of the company.

Triggers for the emergence of the company

DC's activities started in 2013. The company produces, packages, and sells snacks. According to the manager, DC came about when she came out of failed marriage with a new baby and needed to cater for her baby. She declared realizing that a lot of women and youth in her community were going through similar challenge so she started the business to help other women and youth who cannot stand on their own like her. She turned into the snack business because, according to her "local snacks on the market did not seem in good hygiene conditions or nutritious (high proteins, a lot of conservatives). As a consumer, I would not buy such products". Hence, she declared getting the necessary to start her own snack business (certification, how to develop her products in good hygiene conditions with processing and packaging to meet the standards, etc.). According to her, she started with her own capital which was 20 GHS.

Organization of the initiative: activities, capital and resources

DC's main activity is food processing (into snacks) and packaging, making 5000 snack bars minimum per month. The company got a 30 000 GHS loan from a bank at an interest rate of 35%. The company is sourcing through three channels: (i) The company works with twenty-five women in charge of cropping and harvesting the products in seasonal rented lands in the Volta and Oti regions. All the women are among three associations. (ii) DC gets its maize from seventeen women living in four communities in the two regions. (iii) DC gets the other products (groundnut, millet, ginger, brown rice, cassava, coconut (for the candy), local spices, Chili pepper, salt, and sugar...) from other local farmers. The organizational innovation concerns maize, as DC purchases other products to farmers. Whatever they belong to harvesting associations or maize producer associations, according to the manager, these women are hired with the help of a traditional leader "based on their situation as they are facing many issues (e.g., access to land and markets, combining farm work and house shores, postharvest losses...)". She stated that "some women farmers also started to join when they heard about the community of women in precarious situations DC wants to build". Moreover, "some men farmers wanted to join as well. The company however made it clear to them that the payment always goes to the wives", she said.



Source: GISGeography and Google Maps. gisgeography.com/ghana-map/

The processing activity is done at DC's factory in the city of Hohoe (Volta region). The equipment used at the factory include a packaging machine, a cornmeal, the machine that takes out the groundnuts' shell and peel. The packaging is done manually by fifteen of the seventeen women who do the farm work for DC. These women are paid daily. In addition, an extension officer works for DC, he does the follow up of the farm activities. The company also hires youth part time, after school or during vacations.



Source: Delchris Africa Limited's (DC) photo gallery and the manager of DC. delchrisafrica.org/gallery/

DC's products: Quality and Differentiation

DC's snacks are made of maize, groundnut, millet, ginger, brown rice, cassava, coconut (for the candy), local spices, Chili pepper, salt, and sugar. Only the sugar is imported. Some of the products are sugar and gluten free. According to the manager, all the products are chemicals-free (additives, conservatives, and fertilizers) as the company aims to detain an organic certification. She stated that "we provide our suppliers with some inputs (ex. a particular maize grain developed by the crop institute, seeds, chemical free weed control products...) to have nutritious, good quality and agricultural practices. There is also an extension officer who does a follow up on the farming activities and teach the women farmers how to properly use the inputs for the end product to meet the

standards". DC is FDA approved. Its brand name is Delx and the products are packaged in order to fit the supermarkets shelves (see Figure 4).



Figure 4. Commercial and customized snacks made by Delchris Africa Limited (DL). Source: the manager of DL

In terms of quality, DC's packaging makes its products different and more attractive from those found in local markets. In addition, some of the snacks are sugar and gluten-free: the "Sugar free" and the "Millet" Delx bars, respectively. As indicated on the packaging, the first one is composed of maize, groundnut, chili pepper, ginger, salt, local spices, and cinnamon. The gluten-free bar is made of millet, groundnut, chili pepper, ginger, salt, sugar, local spices, and cinnamon. Accordingly, the manager pointed out that the Delx cassava bread is known for its nutritious benefits.

The packaging does not mention whether the products are organic or not. However, the manager claimed that she chose to process only organic product because the company aims to detain an organic certification. Consequently, DC's manager declared they do not provide chemical inputs to the women farmers. The quality control of the products is carried out by one extension officer for all the four communities. The officer does the control through visiting the farms and verifying the right use of the inputs provided by DC. DC's manager stated that the company has only one extension officer because the Volta and Oti regions are close in terms of distance.

Organization of supplies and sales and position of the initiative in the value chain

DC is a processing company that gets its raw material (mainly maize) directly from women smallholder farmers in exchange of inputs such as seeds or herbicides. The company's products are directly distributed to retailers (shops or supermarkets) or end consumers.

- Suppliers

According to the manager, DC's suppliers are 17 women farmers from 4 communities in the Volta and Oti regions. DC also hires around 25 other women during the harvest season. The company buys its maize from these women farmers. All the women are among an association. There are 3 associations in total. DC has a verbal contract with the women farmers: the company provides the farming inputs (seeds, weed control products...) and a premium health insurance for an amount of around 300 GHS (around 37 €). The farmers prefer a verbal contract because "they do not like

paperwork and do not trust the written contract systems”, said the manager. The company provides the inputs directly to the associations. The value of the inputs is based on the market price. The women farmers pay back DC in raw product (maize). However, according to the manager, some farmers try to sell the harvested products to some buyers knowing DC provided the inputs (side selling). In such situations, these women farmers pay workers to harvest for them. DC’s strategy to prevent the side selling is to regularly follow up the crops (by the extension officer) and harvest them before the women farmers do so. Accordingly, for the women farmers to respect the verbal contract, the manager stated that “as these women get the credit (in terms of inputs) as a group, so, the company does not pay the group until the indebted farmer reimburses. With this system, the contract is quite respected”.

The other ingredients used to make the Delx bars are also from local smallholder farmers located in the same area. Only the sugar is imported and bought by DC in Ghana. The company brings the farm products to the factory using public transportation.

- Retailers and consumers

The Delx bars are directly sold to supermarkets or end consumers. The products are sent from the factory location (Hohoe) to Lashibi (Accra) via public transportation. The company has contracts with those supermarkets which makes the disposal of the products much easier, the manager said. However, she mentioned that “the challenge is that [supermarkets] do not pay directly. They pay later after the supply. They say they will pay in a 2 weeks’ time, but they call to pay only when they are running out of the products”. DC sells as well directly to individuals. The products are used as gifts during weddings, funerals... People usually customized the packaging for these events. DC also sells to some shops in Nigeria. According to the manager, out of the 5000 bars produced monthly, 30% are marketed for social events (funerals, weddings ...), 50% to supermarkets and 20% to individuals (ex. when some people are travelling, gifts using assorted snacks ...).

Vision and hybridization of objectives

The main reasons mentioned by the CEO of the company during the interview that brought her to start this business are: (i) helping women going through hard time accessing to land and markets, combining farm work and house chores, postharvest losses and (ii) local snacks hygiene conditions. The company’s CEO stated approach is “My concept, therefore, seeks to utilize backward integration process to offer ready market for the women involved in the cultivation of maize, groundnuts, brown rice, millet etc. (food waste management) and also provide employment for the youth in the area through the production and attractive packaging of our healthy indigenous Ghanaian foods and snacks to meet global standards”. In the future, The Company plans to build a village on a vast land to welcome any person going through a hard time.

Because the manager did not provide the contact of its suppliers, the way the company implements its vision was not observed on the field.

3.2.3. Preliminary information on the Project Betelgeuse case

The Project Betelgeuse (PB) was initiated by Agro Kings Limited (AKL), specialized in the production, processing and marketing of agricultural products including rice, hot and spicy sauces, fresh, ground, and flaked chili pepper, sweet potatoes... The project allows the general public to engage in a virtual or direct farming:

- Virtual farming: the individual is called a “satellite farmer”, the farming is fully managed by AKL.
- Direct farming: the “self-service” farmer manages her or his own farming activities and AKL provides the land and proposes to sell the final agricultural products.

There are three products cultivated in the PB which are rice (Nana Rice), sweet potatoes and chili pepper. The chili pepper and sweet potatoes are advertised as organic by AKL. The information in the following sections is from an interview with AKL’s general manager and the investor relations and partnerships.

According to the interviewees, the main goal of the PB is to make agriculture more accessible and more appealing to people, creating more jobs for people. The manager stated that “the PB aims at getting people to know that they can easily get into the agribusiness because they see a lot of constraints. For instance, they might think it is labor intensive, it isn’t as interesting as it looks...” They believe that once people get involved, they feel more concern about the issues around agriculture: contributing more in food security, creating more jobs...

Triggers for the emergence of the company

According to AKL’s general manager, the company did a lot of advertisements and people were interested in seeing the farms and to do farming in Ghana. The PB started with the creation of an online application (App) for the general public. At first the App was used only by friends and family members. The manager stated that “we had people who invested in PB, but we did not open the App to the general public yet. The PB started in the beginning of 2020, but we opened the app for the general public last year (2021)”. The manager’s stated objective was that “PB aims to propose a set of services that would allow people to farm from wherever they are e.g., people that do not have time to do the farming e.g., office workers”.

Organization of the initiative: activities, capital, and resources

The project offers two types of farming to the general public:

- Satellite farmers: Fully managed service where AKL is more involved in the sense that it provides the inputs, workers (including the services of an agronomist and farm managers), access to irrigation.
- Self-service: the individual part of the PB fully manages her or his own farm i.e., by hiring workers her or himself, bringing her or his own inputs, harvesting her or himself. AKL provides only the land in this case

There are around 10 to 20 satellite farmers enroll in the PB a year. Also, the self-service and the satellite farmers rent, from AKL, an average of 2 hectares a year. The rented surface can go sometimes up to 10 hectares or more.

Most of AKL farm managers are women. There are around 45 permanent workers of which 60-70% are women. AKL has around 300 permanent, seasonal, and activity-based employment contracts. According to the manager “while we have small holder farmers outside our farm that work with us, we also have permanent workers (farm managers) and farm hands (directly employed by AKL). She stated that the company has contracts with the farm managers. The farm hands and the small holder farmers outside the farm, they are more like casual workers. They come when the company needs them. AKL does not have any contract with them. The company does not have a factory but has a warehouse that

is still under construction. According to the manager, AKL uses containers for environmental and recycling concerns.

PB's products: Quality and Differentiation

The products cultivated in the PB are rice, sweet potato, and chilli pepper. These products have all been approved by the Ghana FDA. These products are not “fully organic” even if they are displayed as so on the project’s website. According to the manager, AKL reduced the quantities of the chemicals they use. For instance, she stated that “the Nitrogen (N), phosphorus (P), and potassium (K) input is supposed to be 15%-15%-15%, AKL applies instead something like 10%-10%-10% or 8%-8%-8% and then supplement it with organic manure or compost”. The manager explained that “our rice farm is a little big and we are just starting, so we do not have yet enough organic inputs such as compost”. However, she stated that “AKL is creating a compost farm to generate the compost, and, in the meantime, the company is reducing the quantity of chemical inputs”.

The manager stated that AKL employs an agronomist to control the company’s 4 000 hectares farm and to indicate which fertilizer to use, how to use it and how to avoid long term harmful ones. The company has farm managers, approximately, one for every 5 hectares. These farm managers are frequently trained by the agronomist before the season starts. The training session is for everybody who is involved in the PB. The session can also be set up during the season. The farm managers do a follow up of the farmers’ activities to verify their agricultural practices.



Figure 5. The Project Bitelgeuse crops. Images: projectbitelgeuse.agrokings.io/crops

Organization of the sales and position of the initiative in the value chain

The PB involves any individual willing to start farming either by leasing AKL farms and (i) letting the company carrying out and managing her or his farm activities, and then selling her or his harvested crops (a satellite farmer), or (ii) doing the farm work by her or himself (a self-service farmer), in compliance with PB agricultural practices. They are either satellite or self-service farmers, have the option to sell their raw harvested crops to AKL as it is a ready market. AKL’s manager stated that “AKL pays them cash at the market price. The arrangement stops there. AKL then does the processing and packaging of the raw materials to sell its final product. According to AKL’s investor relations and partnerships, the company has written contracts with the farmers which includes the terms and the price AKL wish to sell the paddy at. AKL already knows what to expect in terms of products quantity at the end of each season. The company gives the expected and harvested product quantities at the end of the season, then cut the price. The manager also stated that AKL has an arrangement called the

“base harvest”, which corresponds to what the farmer should expect from her or his farm in case anything happens.

AKL’s products are mainly sold in Accra by around 200 independent retailers. The company also sells in Kumasi and Takoradi. The manager declared that “we deal with third party stores, schools, institutions for their workers or getaways and individuals. We also have an online website. The retailers are a mix of big supermarkets (e.g., Marina mall in Accra), small and medium sizes. We also export in USA, UK, Belgium, Germany, and Ivory Coast for the diaspora mainly”.

3.3. Analysis of the case studies according to the characteristics of the SyAM concept

The three case studies carried out involve local private companies: Mawutwueni Ghana Ltd (ML), Delchris Africa Limited (DC) and Agro Kings Limited (AKL)’s Project Betelgeuse (PB). The results of the last two cases are preliminary in the sense that they are based on information collected only from the companies themselves. ML and DC were established by Ghanaian women who mobilized their own savings. They offer processed products made from cereals: in 2021, ML produced 18,000 tons of Tombron (flour made from several cereals that is consumed once mixed with hot water) and DC provided 60,000 flavored cereal bars. AK was created by a Ghanaian couple from their own resources. It supplied 6,000 tons of vegetables in 2021. The agricultural products used by these three companies are produced by communities located in regions close to their main consumption area (the Accra region): the Volta, Eastern and Accra regions. These three companies organize their supplies in different ways. AK has put in place two options for supporting producers: access to land for producers who take care of the other stages of agricultural production, and support in the form of input supply, irrigation, and technical advice, with the mobilization of digital technologies. DC obtains its supplies from 17 women located in 4 communities, to whom it provides seeds and sometimes gives technical advice. ML buys its products mainly from a wholesaler, whom it trusts for the organic aspect of its products (relational proximity and reputation).

In all three cases, the agreements are defined by the entrepreneurs and there is no collective decision on the rules. Only AK has written contracts. These three companies have the FDA standard (which is obtained following a health test of the product) and have brand strategies. ML and DC emphasize the organic quality of their products and their support for women entrepreneurs. In addition to grain processing, ML conducts entrepreneurship training for women and men, with support from two NGOs. It seems that the NGOs do not support cereal processing, but this economic activity is often used as an example during the trainings. The manager, however, questions the organic aspect of the cereals she buys from the wholesaler supplying her, and has begun to establish more integrated relationships with two producers (rice and cassava). The DC manager did not want to share the contacts of her suppliers, which leaves some doubt as to the beneficial effects claimed by the company. AK also points out that its suppliers are mainly women.

Table 2. Cases studies analyzed according to the SyAM concept characteristics.

SyAM criteria		Mawutwueni Ghana Ltd (ML)	Project Betelgeuse (Agro Kings Ltd)	Delchris
Actors	Activity of the company	ML is an Agro-processing company using Ghanaian raw materials to process food, home, and care products. The company also provides trainings and conduct advocacy, in partnership with NGOs.	Agro Kings Ltd is a producer, processor and trader that implements innovative business models.	Delchris is a processor of snacks
	Types of actors involved	Producers (rice, cassava), 1 wholesaler, ML (processor, retailer), millers, modern and traditional retailers Supporting actors: 2 NGOs and the British council	Producers, Agro Kings Ltd (producer, processor, and trader), traders and millers, 200 modern and traditional retailers	Producers (women farmers), Delchris (Processor), modern and traditional retailers
Supply chain	Number of intermediaries in the value chain	3	3 or 4	1 or 2
	Volume and product types	Products: (i) 5 variety of cereal mix (ii) Chilli pepper powder, (iii) Palm Kernel Oil and (iv) Groundnut paste (50 bottles) 30,000 packs of 600g in a year for the cereal mix and 2bags of 100kg of chilli powder.	Products: Rice, sweet potatoes, and chili peppers 500 tons a month (all product types).	Products: diverse types of snacks Around 5,000 bars of snacks per month
	Location-Scale	Production: Volta (City of Weta), upper west region (City of Wa), Eastern and the Greater Accra regions (Pokuase neighborhood). Consumption: Greater Accra region	Production: Eastern region, in Asutsuari. Consumption: Accra, Kumasi, Takoradi. Exports in USA, UK, Belgium, Germany, and Ivory Coast for the diaspora	Production: 4 communities in Volta and Oti regions. The factory is in Hohoe in Volta region. Consumption: mainly in Accra
Process and emergence of the initiative	Vision and hybridization of objectives	ML's objective is to generate income and have positive impacts on communities. The company works with women in priority, and select suppliers with health, environmental and religious values. ML implement training to strengthen women capabilities ML's processing and training activities are managed independently, but the agro-processing business is often used as an example during the training.	Agro Kings has economic objectives and implement few ecological and women-friendly practices AKL implements two business models to get its supplies (i) self-service: its supplier manages the farm. Agro Kings Ltd provides only the land. (ii) fully managed: Agro Kings provides the inputs, technical advice and access to irrigation	DC shows economic objectives and select women as suppliers
	Originality of the initiative	Local and medium size company developing an inclusive socio-economic business model to supply quality products	Local and medium size company developing an informal contractual scheme with low inclusion restriction	Local and medium size company including women in its business model and supplying quality products

Governance	Forms of governance ³	Relational governance with an organic wholesaler and four producers benefiting from informal contracts. Kindship with one supplier.	Captive governance through written contracts with farmers	DC implement a captive governance with relational aspects through verbal agreements with women. DC is captive from supermarket, through written contracts. It implements market governance with traditional retailers
	Decision of the rules of governance	Negotiation with the wholesaler and producers No collective decision of the rules, except with the supplier sharing kindship relationship.	AKL is the governance driver and decides the rules, which lets room for inclusion. No collective decision of the rules	DC decides the rules for transactions with producers. No collective decisions
	Format of the rules of governance	Spot transactions rooted in long term relationships with the wholesaler Verbal contracts specified ex ante with producers, except for the price that is based on the market one at harvest time Close relationship with one supplier (mother-daughter)	Written contracts with farmers (decided by Agro Kings Ltd) and verbal agreements with the inputs' sellers	Verbal agreements with women farmers. Written contracts with supermarkets
Differentiation	Modes of differentiation	Ghana FDA approved, Packaging and Branding, Reputation (organic and gender), neither third-party nor participatory organic certification	Ghana FDA approved, Packaging and Branding.	Ghana FDA approved, Packaging and Branding. neither third-party nor participatory organic certification
	Values and criteria of differentiation	Ethical attributes of products: the company works with women in priority, and select suppliers with health, environmental and religious values. ML supports with 2 NGOs policy dialogue and implements trainings on SMEs business management for women Organoleptic and sanitary attributes: organic production and taste.	Extrinsic quality attributes with some ethical components (ecological and women-friendly business practices)	Extrinsic quality attributes with some ethical components (women-friendly business practices) DC products are claimed to be organic

³ Based on Gereffi, Humphrey, et Sturgeon. « The governance of global value chains ». Review of International Political Economy 12, n° 1 (2005): 78-104.
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4. Conclusion

This study identified and examined initiatives that can be analyzed according to the criteria of the SyAM concept. The SyAM concept was developed to characterize value chains organization that are intermediate in size in terms of the number of actors involved and the quantity of products farmed, they involve actors from short and long supply chains, and they reveal hybrid organizational forms and values (Chazoule et al., 2015). Based on literature review and key informants' interviews, we identified 27 initiative and conducted three exploratory case studies.

Among the inventoried initiatives, 23 out of 27 were led by private local SMEs producing differentiated and packaged products with some social and environmental dimensions in their activities. The inventoried initiatives are approved by the Ghana FDA and/or advertised as organic. The social and environmental ethical attributes of their products are informed by most of the companies themselves, without third-party certification.

Three initiatives led by Ghanaian processing SMEs were retained as case studies. The first one, ML, is a medium size company that manages two different activities: food processing of organic products and training for SMEs management. The company works in priority with women, and its business model is based on relational proximity and values related to health, environment, and religion. The second initiative led by the processor DC produces quality snacks and implement women-friendly business practices. The third initiative initiated by Agro Kings develops an informal contractual scheme with low inclusion restrictions for producers, in particular women.

These case studies enable a first discussion of the usefulness of the SyAM concept to analyze organizational innovations in sub-Saharan Africa. The strength of this concept was to highlight innovations in value chains that could not be analyzed under the traditional" vs "modern" typology. The concept sheds light on the domestic origin of SMEs, their different degrees of capitalization and intermediate volumes, their innovative business models that include ethical values, and the fact they target domestic mass markets with quality-products. This concept shows that, sometimes, the activity of SMES go beyond the value chain, by including NGOs and community actors. The SyAM concept takes also into account a hybridizations of SMEs objectives, which may include food related and non-food related activities. It also emphasizes on the fact that SMEs have ethical objectives, that they try to valorize with product marketing. This concept therefore shed light on the values of actors implementing transactions, which can be related to environment, health, or religion.

In some aspect, the SyAM concept is therefore different from other concepts characterizing alternative food systems. While it shares the relational governance feature of short value chains, it focuses on value chains having more than one intermediary. Furthermore, it characterizes alternative food systems in which the territory is not the scale of activity and the form of governance. The SyAM concept seems therefore enriching other alternative food systems concepts by emphasizing on the hybridization of objectives and the social and environmental values of actors. Further case studies should be conducted to continue testing this hypothesis.

The market associated with the SyAM concept differs from the so-called "traditional", "modern" or "niche" markets. The originality of this type of market is that it is often initiated by NGOs, producer organizations, processors, or local authorities. The actors in this system operate within a territory with different degrees of capitalization and intermediate volumes. The system integrates social, equity, revaluation of producers in the relations, rebalancing of negotiations, and support for territorial development.

The Ghanaian cases studied in this report are mostly based on entrepreneurship and less on collective efforts for common interests or a local authority that wants to use the SYAM concept as an instrument for the local policies to relocalize agriculture and food. Bilateral oral or written agreements observed in the Ghanaian cases studies move away from traditional forms of value chains' governance, but remain less innovative than the forms observed in France and conceptualized through the SYAM concept, which are based on collectively negotiated agreements involving at least three segments of the chains. Related to this, while ensuring agreement on 'the ways of connecting to each other' is an important part of the French SYAM innovations, this is not so much emphasized in the Ghanaian cases. But it is a medium-scale and national entrepreneurship, based on environmental and social values, unlike what we see in modern value chains.

Sometimes environmental objectives are also targeted in the market associated with the SYAM concept. The ethical attributes of the products are also often put forward i.e. "food from somewhere": identities of the actors, the territory etc... Governance in SyAMs is based on non-market coordination for product quality. It is based on transparency and a relationship of trust. The rules of governance are discussed and known by the actors in a "complete" set of specifications (including rules on the exchanged good and on the relationship). There is no recourse to external standards and third-party certification in this type of market (self-certification or brand strategies without certification).

The three cases are relatively recent, and their functioning is still evolving, suggesting that it is not stabilized. Yet, the SyAM concept also gives insight on the conditions favorable to the development and sustainability of the initiatives. It takes into account hybridizations as in the case of ML for example, which, through a classic economic activity, has a real impact within a community (mainly women) through training and dissemination of information on how to start an agribusiness. This system also allows rethinking of the systems of actors for a more structured and equitable food system that considers sustainable development. If well implemented, the SyAM system allows consumers to consume quality local products. In the other hand, there may be a high level of uncertainty in the system due to the relational proximity and reputation that surrounds the transactions. Most agreements observed in the case studies are verbal. Moreover, the partnerships can be used as a marketing tool with no means or real commitment behind it.

In addition, women's entrepreneurship and economic empowerment are promoted in the different case studies. Both companies ML and DC were founded and are managed by women. With financial support from partners (e.g., Social Enterprise Ghana (SE) and Reach for Change), the owner of ML uses her own experience to train and inform women about agribusiness. DC's business model is based on the personal experience of the owner. Even though, for instance, several women made a clear link between the trainings provided by ML and the success of their activities, it is not always clear to what extent these arrangements really benefit the women. In contrast to the women empowerment promoted as a key social benefit of these Ghanaian organizational innovations, the French SYAM initiatives mostly promote family and extensive farming and local know-how.

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Appendix

Inventory of initiatives that can be analyzed using the SyAM concept in Ghana

Structure and functional organization				Scale of action						Differentiation and product qualification	
Name	City	Status	Visions Triggers and trajectories	Initiator	Type of actors involved	Functions of the actors involved	Product types	Production scale	Consumption scale	Differentiation and labelling	Values and criteria for differentiation
Ghana Green Label (GGL) Certification Scheme	Nationwide	Certification	The Ghana Green Label Scheme is aimed at promoting safe food production, postharvest handling and distribution using good and environmentally sustainable agricultural practices. Farmers, transporters and traders (wholesale and retail) subscribing to this Scheme must implement such practices.	Ministry of Food and Agriculture	Farmers, or group of farmers; A number of stakeholders have contributed to the attainment of this GGLS. Key among them are the Ministry of Food and Agriculture, Ghana Standards Authority, and the Deutsche Gesellschaft für Zusammenarbeit (GIZ) GmbH Market Oriented Agriculture Program (MOAP), which provided funding for the work. Others include Quin Organics, Christian Aid, Agro Eco Louis Bolk and Ghana Veg (now HortiFresh).	Depending on the food system. Producers, aggregators, Processors, Traders, Retailers, consumers	Fresh fruits and vegetables	Ghana	Ghana	Organic products, label. It is to also serve as a stepping-stone for producers towards other certification schemes like the GlobalGap and Organic certification.	The certification scheme is modelled to certify farms that comply with the requisite production and distribution systems that ensure that safety and environmental sustainability are not compromised until produce reaches the consumer. The implementation of this scheme should facilitate the eventual transition of the Ghanaian horticultural industry to sustainable agriculture.

The Participatory Guarantee Systems of Ghana	Nationwide	Certification	PGS Ghana seeks to generate awareness on the importance of organic agriculture for healthier food production. PGS aims to add value to products and for farmers and processors to increase their income, by offering opportunities to broadly market their products and services.	In working with the objective of "Linking producers directly to local customers by setting up and promoting Participatory Guarantee Systems (PGS), an affordable alternative to third party certification for domestic markets" of the Organic Movement for Development (OM4D) project (funded by the Dutch Government and implemented by IFOAM – Organics International and Agro Eco), PGS has been selected as the means to drive this.	Farmers, restaurants, supermarkets, processors, ...	Depending on the food system. Producers, aggregators, Processors, Traders, Retailers, consumers	Local Organic Vegetables and fruits, Meat, Mushroom	Ghana	Ghana	Organic certification to producers and processors of all kinds in the agriculture value chain. This gives credibility to what is produced and labeled as organic.	Participatory Guarantee Systems (PGS) is a peer to peer review of farming practice within a community subscribing to organic/agro-ecological principles. The PGS Group agrees to adhere to a Standard of Production which is transparent to all members within the community. The community agrees on processes for record keeping and review. They will also all agree on how they will conduct themselves which uphold the principles of organic agriculture, namely health, ecology, fairness and care. Annually, each farmer is visited by the PGS team made up of member farmers, consumers and technical experts (if needed). The farm visit is both an opportunity for the farmer to highlight his/her work during the year and for the PGS auditing team to view the farm in relation to the agreed upon Standards. The team assesses farms against standards and agrees/disagrees that the farmer may carry the seals and logos of the PGS Group. These visits are conducted in the spirit of trust and transparency to support the farmer but ensuring that the declared organic standard is upheld.
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Organic Markets for Development (OM4D)	West Gonja district	Project: Nov 2017- Jan 2022	Damongo, a farming community in the West Gonja district in the Savannah Region of Ghana where women are being trained to produce over one thousand tons of organic cassava flour in the next three years. Mr. Bo van Elzakker, Director of Agro Eco, "the vision for organic cassava in the project is that, if the cassava food system is improved, it will enhance rural development and raise incomes for producers, processors and traders. Organic cassava can also contribute to household food security when farming families include it in their meals." Farmers increased their sales from 4 to 16 bags of cassava	funded by the Dutch Government and implemented by IFOAM – Organics International and Agro Eco	Women smallholder farmers, Dutch Government, IFOAM – Organics International and Agro Eco, USDA Organic, Mole Organic Landscape Enterprise, UE Organic	Not specified	Cassava	West Gonja district	Ghana	Organic cassava	Most of the smallholder women farmers involved, are part of a Community Resource Management Area (CREMA). Community groups that manage natural resources and practice sustainable agriculture often evolve into a social enterprise and generate income for participants.
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Project Betelgeuse	Kasunya around the Akuse – Asutuare township	Project	Betelgeuse is a 4- fold project of Agro Kings which seeks to enhance the overall agricultural experience for various stakeholders. Betelgeuse hopes to see agriculture become more affordable to the farmer, with greater potential to scale. Again, it does not only seek to contribute towards meeting increasing food demands but also add value to food supplies. This project allows every citizen to experience agriculture in a practical but fun way. It goes to support the overall vision of Agro Kings to feed the future, empower smallholder farmers and innovate using technology.	Agro Kings (Collector, processor and retailer)	Smallholder farmers (i: A Satellite farmer is an individual willing to lease farm land(s) and financially subscribe to all added services and resources Project Betelgeuse provides. Services available to a Satellite farmer include but are not limited to complete and automatic set up of farmlands on farm management software, access to farm management cloud platform, option to have Project Betelgeuse sell their produce on the market and many more; ii: A self-serviced farmer is any individual with resources including time, capital and labor to manage leased farmland(s) and perform necessary farm activities without the interference of Project Betelgeuse. Also, all farm activities by the self – serviced farmer must strictly fall within the Project Betelgeuse farm compliance); various	Smallholder farmers (self- serviced farmer), satellite farmers, Agro Kings (Collector, processor and retailer), retailers, consumers. (i: A Satellite farmer is an individual willing to lease farm land(s) and financially subscribe to all added services and resources Project Betelgeuse provides. Services available to a Satellite farmer include but are not limited to complete and automatic set up of farmlands on farm management software, access to farm management cloud platform, option to have Project Betelgeuse sell their produce on the market and many more; ii: A self-serviced farmer is any individual with resources including time, capital and labor to manage leased farmland(s) and perform necessary farm activities without the interference of Project Betelgeuse.	chili pepper (paste, flakes, powder), sweet potatoes and rice	Nyapiena – Kasunya	Greater Accra region, Ashanti region, Volta region and Western region	Organic products, Packaging, certification (approved by Ghana Food and Drugs Authority (FDA))	The Agro Kings's social commitment includes: (i) Sustainable Water Provision, (ii) Sanitation for Improved Health, (iii) Climate Action (the company is utilizing renewable energy sources like the sun and water resources to drive the operations through its solar powered facilities and recyclable water systems which is safer for the environment than other alternatives), (iv) Women Empowerment, (v) Rural Employment
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					stakeholders including citizens, insurance companies, retailers, supermarkets, ...						
Future Farmers Rural Programme (FFRP)	Sirigu, Yua, and Natugnia	Program	The Future Farmers Rural Programme (FFRP) seeks to improve crop productivity through innovative and organic farming techniques. It focuses on young farmers and women throughout the region. The core of FFRP is the farmer group, a self-organized group of 15 farmers from a local community. Each group meets twice per month to plan and execute activities. These can include trainings, communal labor welfare assistance, or assistance in	Sirigu Ecological Initiative for Sustainable Development (SEISUD)	There are twelve active farmer's groups across three (3) communities (Sirigu, Yua, and Natugnia) including four very new ones which we intend to develop and work with them also.	Not specified	Organic products	Sirigu, Yua, and Natugnia	Not specified	Organic products	N/A

			solving domestic problems.								
Mawutwueni Ghana Limited	Accra	Social Enterprise	To improve the livelihoods of women and youth entrepreneurs in communities in a sustainable and profitable way. The company engage local farmers in the procurement of raw material for production as well as employing marginalized women in their community to improve the economic life of these women.	Mawutwueni Ghana Limited (Processor and retailer)	Smallholder farmers, retailers	Smallholder farmers, Processor and retailer (Mawutwueni Ghana Limited), retailers, consumers	Processed foods	N/A	All over Ghana	Products approved by Ghana Food and Drugs Authority (FDA)	N/A
Masara N'arziki	Tamale	Contract Farming	(i) The theory of change underlying the intervention of Masara N'arziki was that by increasing crop yield and at the same time providing farmers with a market, income would increase and enable the households to move out of poverty and food insecurity. (ii) The establishment of Masara N'arziki was also intended to help the companies, who launched the	Wienco, Yara (agribusiness companies, partly foreign owned) and the Masara N'Arziki Farmers Association (MAFA)	Smallholder farmers (The Masara N'arziki Association - MAFA), Technoserve, Wienco and Yara (agribusiness companies, partly foreign owned), Ministry of Food and Agriculture of Ghana, The RMG Group	MAFA (Producers), Wienco and Yara (Processors, Traders, retailers), consumers	White and yellow maize	Northern Ghana	N/A	Packaging, traceability	To support maize farmers to enhance productivity and quality through the use of improved inputs, improved technology, capacity building and access to markets

			initiative, expand their market for inputs and fertilizers and maize procurement and at the same time contribute to agricultural development in the North.								
GHATBI	Takoradi	Portfolio companies including: Etumpong Poultry Farms Ltd, Pamela's Mushrooms and +233 Foods Limited	GHATBI's vision is to transform the country's diverse raw materials and create industry out of Ghana's plentiful natural resources. GHATBI invests in and supports agro businesses that meet at least one or more of the below highlighted criteria: (i) Women-led and/or women-owned, (ii) Value-add to raw materials for domestic consumption, (iii) Alleviates youth unemployment, spurs job creation (iv) Skills development, skills transfer	GHATBI	Strategic partners: Ghana's top universities and technical institutions such as Kwame Nkrumah University of Science and Technology (Kumasi), University for Development Studies (Tamale) and Takoradi Technical Institute; Local government (Sekondi-Takoradi Metropolitan Assembly); Lemonade Stand Ltd; Gratis Foundation	N/A	Fruit juice, meat, eggs, fresh and dry mushroom, mushroom kebab, and mushroom drink, processed food (mainly export for the diaspora overseas by the company +233 Foods Limited)	Ghana	Ghana, diaspora (by the company +233 Foods Limited)	Packaging, organic products	GHATBI's mission is to optimize the linkage between agriculture and industry by developing healthy, organic, quality products for the benefit of everyday consumers in Ghana.
Pamela's Mushrooms (PM)	N/A	Company	PM is a (i) Woman-led and/or -owned that (ii) process mushrooms for domestic consumption in Ghana. PM's vision is to become the country's primary and reliable mushroom	PM (producer, processor, marketer)	GHATBI (business incubator), PM	PM (producer, processor, marketer), retailers, consumers	Fresh and dry mushroom, mushroom kebab, and mushroom drink	Greater Accra region	Greater Accra region	Food and Drugs Authority (FDA) Ghana	N/A

			supplier by producing high-quality product and educating the public on its numerous health benefits.								
Amaati Group	Tamale	Company	Works with farmers, particularly women in producing and processing Fonio. The enterprise was formed with an idea of creating sustainable livelihood for women farmers whose lands are degraded due to their excessive usage and creating land management systems where the lands can be regenerated and used to grow Fonio and other crops. They started with ten (10) landless women in the 2014 production season and today they work with over 2000 farmers. Mission: to build sustainable communities through the use of Fonio, which nourishes the land, people and society. The group's passion to achieve and promote sustainable production and consumption of Fonio for global nutrition has	Amaati Group (Processor)	Farmers; Amaati Group; Retailers. Also, the group has collaborated with government institutions, researchers, NGOs, IGO's, public and private institutions to build a community, where people can thrive on indigenous foods that are already existing in their food basket and do not disrupt the environment.	Producers, Processor (Amaati Group), retailers, consumers	Fonio	Northern Ghana	Tamale and Greater Accra.	Products certified by ECOCERT and USDA Organic; approved by Ghana Standards Authority (GSA) and Ghana Food and Drugs Authority (FDA)	Ghana Standards Authority criteria: Product certification is carried out by product certification bodies which should conform to ISO IEC 17065.

			motivated these 4 key pillars: (i) Build Capacity Of Women To Produce Fonio, (ii) certified and High quality product (iii) Promote sustainable production and consumption models, (iv) Stakeholder engagement to develop sustainable consumption models for Fonio								
Agro Kings	Accra	Company	Supports smallholder farmers to provide quality farm produce and then turn them into value – added products with a ready market. Through the company's operations, it have empowered over 100 small holder farmers and employed over 1000 people along the entire value chain. Its movement into the rice communities has led to an increase in income to these small holder farmers by over 40%.	Agro Kings (Collector, processor and retailer)	Smallholder farmers, cooperatives, retailers, individuals	Producers, Agro Kings (Collector, processor and retailer), retailers, consumers	Make and package rice, hot and spicy sauces, freshly ground and flaked chilli pepper, chicken, fries	Nyapiena – Kasunya	Greater Accra region, Ashanti region, Volta region and Western region	Packaging, traceability, quality products	The company's social commitment includes: (i) Sustainable Water Provision, (ii) Sanitation for Improved Health, (iii) Climate Action (the company is utilising renewable energy sources like the sun and water resources to drive the operations through its solar powered facilities and recyclable water systems which is safer for the environment than other alternatives), (iv) Women Empowerment, (v) Rural Employment
Volta Presentation Limited	Sogakope	Company	Committed to sustainable agriculture, promoting positive farming practices with a very heavy focus on sustainable biodiversity and	Volta Presentation Limited (producer, processor)	Producer, Processor (Volta Presentation Limited), Traders (Export market), Retailers, consumers	Volta Presentation Limited (Producer and Processor), Traders (export), retailers, consumers.	Plants, Roots, Fruits & Herbs	Volta region (the town of Sogakope)	Greater Accra, Central, Western and Volta regions. Export: USA, UK and some African countries	Organic products: USDA, ECOCERT and EOS organic certified, packaging	Socially supportive, safe, natural and responsible, economically viable, ecologically sound farming

			results are great tastes, aromas, authentic medicinal plants and chemical-free superfoods that support our health".								
Sow Green Organic Farms	Accra	Company	Sow Green values the idea of growing purely organic vegetables and fruits and has educated and trained local farmers (close to their farms) in organic farming and currently support and work with them to grow organically and sell their produce at Sow Green farmer markets to guarantee them a fair and decent price.	Sow Green Organic Farms (Producer)	Local farmers, Sow Green Organic Farms	Producers (Local farmers, Sow Green Organic Farms), consumers	Fruits, vegetables, natural juices, meat (poultry, beef, pork)	Eastern, Greater Accra, Central, Volta and Northern (yam only) regions	Greater Accra	PGS Ghana. NS: ils ont donc une marque? Non, ils ont le PGS	Every vegetable and fruit from Sowgreen Organic Farms and their outgrowers are: • 100% locally grown organic; • No synthetic fertilizers and pesticides used ; • All their weed control is done manually, mulching and other environmentally friendly methods ; • They irrigate using water drawn from a borehole sunk 100 meters into the earth to access fresh water from the underground aquifers ; • They make their own natural pest control using a combination of neem leaves/oil, black soap(alata semena), hot pepper, ginger, garlic, lemon and herbs(dill and mint).
ElssyKess Company Ltd. (EKCL)	Tema	Company, brands ("Home fresh," "Simply fresh")	From Ghana, West Africa, Elssy Dogbedah founded Elssy Kess HomeFresh which deals in agro-processing of ethnic African foods and indigenous homecare products. Her vision of establishing her company was not mainly for profit but to help vulnerable and deprived women in our part of the world. She is	EKCL (Processor)	Producers, Processor (EKCL), Traders (exports), retailers, consumers	Producers, Processor (EKCL), Traders (exports), retailers, consumers	Processed food	Northern, Volta, Eastern regions	Ghana (20%) : Greater Arra region, Kumasi, Takoradi. Export (80%): Diaspora (USA, Canada and Europe)	Certified by the Ghana Standard Authority (GSA), Foods and Drugs Authority (FDA) Ghana and US Food and Drug Authority (FDA). Brand : Home Fresh	Elssy Kess is committed to quality products supported by the company's state of the art equipment and robust Research and Development platform.

			<p>achieving her vision by providing job opportunities for single mothers while also providing food and shelter for some of them. Mama Elssy, as she is called by her employees, also provides scholarship for the employee's children as well. She looks out for these women along the street, which most of them are traders under the hot sun.</p>								
Nest Agro Foods	Suhum	An "indigenous" agribusiness company	<p>is meant to enable farmers to produce on a larger scale and be paid the right price for their produce to cover their cost and make an appreciable margin. By enlarging their farms, they will also require more hands to support, thereby creating jobs for the people. Farmers can, however, be assisted to cut down on their cost of production and marketing; providing stable and remunerating market access and improving price realisation and increasing yields. The method is also aimed at fully utilising the potential of the</p>	Nest Agro Foods	Smallholder farmers, Nest Agro Foods, Keta Vegetable Farmers and Marketers Association, eworldtrade	Producers, Nest Agro Foods (Collector, Processor, Trader), consumers	Cassava, Corn, Vegetables	Volta region	N/A	Fresh organic vegetable production from the Volta region of Ghana.	N/A

			region as far as arable land and access to water is concerned to produce vegetables which are in high demand both domestically and internationally. The company had developed A franchise farming module to help farmers implement best practices, improve their yield and provide market structure that gives them true value of the crops they produce.								
Homefoods Ghana	Accra	Company	(i) The company ensures that all purchases of its agro-products for export such as; Gari and Red Palm Oil are from women co-operative associations. This policy is in line with the government of Ghana's poverty alleviation programme, to improve the livelihood of a great number of women in the country's rural regions and districts. The company's core business is linked to improving Nutrition, Health, Agriculture and Productivity. Homefoods' supply chain starts from the farm gate with	Homefoods Ghana (processor)	Smallholder farmers, farmer cooperatives	Producers, Processor (Homefoods Ghana)	Mainly various type of ethnic foods (Gari, palm oil, processed foods, seasonings, ...)	Depending on the products. The company is engaged in the importation of partly processed food items from all over the world for re-processing and packaging, to suit both domestic and international markets.	Ghana, export (diaspora)	Packaging	The company's AGRO business is sustainable based on reliable and transparent value chain, fair prices and concern for environmental, social and cultural values.

			more than 5,000 cooperative members as women and counting. (ii) The company is also engaged in the importation of partly processed food items from all over the world for re-processing and packaging, to suit both domestic and international markets.								
Okumkom Community Food Distribution Stores	Accra	Company: Africa's first mobile app, online and inclusive discount food Distribution Company	By creating efficient and inclusive means of nutrition for communities through leverage on mobile technology, we aim to: (i) Become Ghana's no.1 indigenous community local food distribution platform (ii) Help semi-urban and rural working women to conveniently have access to affordable food products saving them time on ingredients shopping (iii) Promote accessibility of local agro-processed food products within communities (iv) Reduce food waste and malnutrition in Ghana	Okumkom Community Food Distribution Stores	Smallholder farmers, Okumkom Community Food Distribution Stores, food companies	n/a	Fresh products, snacks & serve, livestock	N/A	N/A	Packaging of local products in Ghana	The company's promise of value to its customers and partners is (i) to bring affordable, healthy and convenient local food retail closer to them (ii) to offer value by reducing the time and cost it takes to shop for food (iii) to provide wide range of local food ingredient choices through the click on mobile phones (iv) For local agro-processing start-ups, to provide them a one stop shop to conveniently connect their products to the community

Meannan Foods	Tema	Company	In the next 3 to 5 years, Meannan Foods wants to employ about 250 people and sell over one million eggs in a month. The company also wants to process eggs into other useful products such as the yoke for producing ice creams, mayonnaise, egg powder, which can serve as a stabiliser for some foods	Meannan Foods (Collector, processor, Trader, Packaging and labeling)	Depends on the products (Smallholder farmers, aggregators, ...)	Producers (Smallholder farmers), Meannan Foods (Collector, processor, Trader, Packaging and labeling), Retailers, consumers	Eggs, processed foods	N/A	N/A	The company's egg packaging is the first to be introduced onto the Ghanaian market that has an expiry date on it, and it is transparent. The eggs are also fresh in that, Meannan Foods has a policy of only accepting eggs from farmers that are at most two days old. All the company's products are certified by the Ghana Standards Authority and the Foods and Drugs Authority	Ghana Standards Authority criteria: Product certification is carried out by product certification bodies which should conform to ISO IEC 17065.
The Farmer's Market Limited (TFM)	Accra, Tema,	Company	Healthy food provision in a clean and hygienic environment. TFM is strategically well integrated in the fresh produce supply chain to ensure a consistent delivery of quality fresh produce	The Farmer's Market Limited (Producer, Collector, processor, Trader, Retailer)	Smallholder farmers, TFM	Producers (Smallholder farmers and TFM), TFM (Collector, processor, Trader, Retailer), consumers	Fresh products, fresh juices, smoothies, salads, nuts and seeds, meat, locally made processed agricultural produce	In Ghana (Not specified), Holland (import)	Greater Accra region	In order to expand on the range for fresh produce all year round, TFM goes the extra mile in sourcing almost every fruit and vegetable there is in the world and import only from companies that deal with farmers who are GLOBAGAP certified.	The supply chain directly offers TFM network of contract smallholder farmers – with no intermediaries – opportunities to commercialize and guarantee supply of required volumes of quality produce in long-term partnership arrangements. All farms from which supplies are sourced are individually inspected during the growing season for adherence to Good Agricultural Practices. Aside the direct field inspection, produce delivered from farms are sorted and graded, spot checked for cleanliness and potential chemical residues, and matched against market and clientele requirements.

Delchris Africa Limited	Tema	Company: Hybrid organization registered as a limited liability company but operates with the society in mind (social enterprise) i.e. solving a societal problem while doing business.	The company's approach : (i) The major challenge over the years for women farmers, whose major occupation is cultivation of maize, groundnuts, brown rice etc has being access to the right market for their farm produce in the Hohoe municipal area. (post-harvest losses and food waste) (ii) The prevailing high rate of unemployment and the phenomenon of young school dropouts as a result of teenage pregnancy and single parenting will be resolved with the opportunity of offering meaningful jobs for self-sustainability (youth and women empowerment and repositioning the age old farming as a business) (iii) The deteriorating health conditions of most Ghanaians due to the adoption of negative foreign cultural behaviors, whereby Ghanaians eat more of the unhealthy but	Delchris Africa Limited (Producer and Processor)	Smallholder farmers, supermarkets, ...	Producers (Smallholder farmers and Delchris), Processor (Delchris), retailers, consumers	Fresh and processed indigenous food	Volta, Oti and Northern regions. Depending on the products, not all the inputs are not from Ghana	All over Ghana, Nigeria, South Africa, UK, USA, Canada, Japan	Delchris Africa Ltd is with it's core function of innovative farming, processing and repackaging of indigenous African foods.	Innovatively redesigning the agriculture value chain and making it attractive and profitable for the women and youth in the community.
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			<p>attractively packaged imported foods full of chemicals which result increased in some lifestyle diseases such as kidney failure, cancers, tumors, cardiac arrest which are caused by such products. (Malnutrition)</p> <p>(iv) My concept therefore, seeks to utilize backward integration process to offer ready market for the women involved in the cultivation of maize, groundnuts, brown rice, millet etc.(food waste management) and also provide employment for the youth in the area through the production and attractive packaging of our healthy indigenous Ghanaian foods and snacks to meet global standards. That is innovatively redesigning the agriculture value chain making it attractive and profitable for the women and youth in the community</p>								
Senam Foods Company Ltd.	Takoradi	Female led Ghanaian-owned Start-Up Company	Satisfy Ghana's demand by providing all-natural, affordable and high-quality	CEO	N/A	N/A	Coconut products	Ghana	N/A	Packaging, quality control	N/A

			coconut products. To build a coconut product business contributing to Health and wellbeing								
Volta Harvest	Maryland, USA	Company	"We are an eco-friendly corporation that is committed to bring freshness from remote West African regions straight to consumers".	CEO	Whole Grains Ghana Limited, smallholder farmers	N/A	Condiments, Gari & Fufu, Grains & Flours, Seeds & Porridges	Ghana	Export (diaspora USA)	Products made from carefully selected crops, harvested mainly from naturally rich soils of Volta Region in Ghana.	Products made by sustainable farming methods and processed and packaged under strict hygienic conditions. High quality products based on fair trade principles (but not labelled). Eco-friendly corporation that is committed to bring freshness from remote West African regions straight to consumers.
Edwumawura rice	Worawora	Company	The establishment of the local rice mill factory is part of Groupe Nduom's commitment towards the improvement of lives of indigenous Ghanaians, majority of them being farmers and fisherment. In all, 4 000 out-growers are expected to benefit from the group's factories. They have since been employed to feed the factories with paddy rice	Groupe Nduom	Smallholder farmers, Groupe Nduom	N/A	Rice	Ghana	Ghana, West Africa, Europe, America. De l'export de RIZ depuis l'afrique de l'ouest vers l'europe?! Et bé!	Local rice brand with superior quality to the foreign ones which have dominated the Ghanaian market	N/A
Yaa Babie Ghana Rice	Greater Accra	Company	Signing with supermarkets like Shoprite all over Ghana, Starting organic Honey production	Yaa Babie Ghana Rice (YBGR)	Smallholder farmers, YBGR, traders and retailers	Producers (YBGR sponsors smallholder farmers and give them a specific rice seed), YBGR (Paddy collector and Processor), Traders, retailers, consumers	Brown, white rice	Volta (white rice) and Oti (brown rice) regions	Mainly Greater Accra region. Also in Takoradi, Kumasi, Ashanti region, western and Northern regions	Organic rice, FDA Ghana approved	Informal contracts and modes of coordination with some smallholder farmers

Organic fruit +Cheers	Greater Accra	Company	Planning to start exportation overseas	Organic fruit +Cheers (OFC)	Smallholder farmers, OFC	Producers (smallholder farmers), OFC, consumers	Fruits	Ghana (not specified where in Ghana), import (apple and grapes)	Ghana (Not specified where in Ghana)	Mostly organic products	Contracts with some smallholder farmers, informal modes of coordination
Comas Royal Co Ltd	Accra	Company	Comas Foods is a Ghanaian based company that is into food production and processing. The company processes varieties of local meals and precook them for a quick cook meal. Ingredients are carefully selected, processed	CEO	N/A	N/A	Processed food	Ghana	N/A	Approved by Ghana standard authority	Ghana Standards Authority criteria: Product certification is carried out by product certification bodies which should conform to ISO IEC 17065.
Golden Exotic Farm Limited Kasunya (GEL)	Asutsuare	Company	GEL is a company that produces fresh banana with less chemical and have over 3000 workers, with the help of fair-trade us. GEL runs two plantations which, together, cover a surface area of 3 500 hectares. One of them is devoted to pineapples and harvests 10 000 tons per year. The other, more to the North, concentrates on bananas and regularly increases its production which now reaches 50 000 tons.	CEO	N/A	N/A	bananas and pineapples	Ghana, Ivory Coast, Cameroon, Senegal	1. France 2. Burkina Faso 3. Senegal 4. Italy 5. Belgium	Certified Fair Trade and GlobalG.A.P	The presence of water in abundance (with the River Volta) and the dry climate enable to produce bananas of high quality in Ghana with a use of chemical products that is among the lowest in the world.

N/A: Information not available