



2SCALE

Seeds of growth

The 2SCALE partnership with East West Seeds International

Photo: Joris Maatman | Vegetable production in Ghana

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KEY MESSAGE

The partnership with East West Seeds International is an example where a pre-competitive intervention resulted in linking actors of a value chain to one another. As relations were strengthened, the partnership emerged, centred around new business models contributing to pull the demand for improved varieties of quality seed, generating impact on the fresh vegetable sector and paving the way for the sector's growth in Africa.

2SCALE consortium



Editing



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Introduction

Improved varieties of vegetable seeds are commonly available from input dealer shops in West Africa. However, it is unusual to find a seed breeder company based in the region. Large quantities of vegetable seeds sold in West Africa are imported from Europe and Japan, which are adapted for the climate conditions of the origin country, but not specifically to African conditions. This situation has hindered growth of the vegetable sector in West Africa for some time. With the exception of the dry season in Sahelian countries, which offers climatic conditions more similar to the conditions in the seeds' country of origin, the situation largely explains the poor performance of vegetable production in the region. Despite this, the vegetable industry in Africa is growing with some interesting examples from Machakos in Kenya or Kumasi in Ghana. In addition, onions and tomatoes grown in Niger and Burkina find their way to coastal city markets, such as in Lomé and Accra. However, vegetable crops from countries

along the coast of West Africa and those produced during the rainy season have continuously seen very poor performance. Many varieties usually fail to give expected results in terms of yields and quality. The performance of the varieties are low and are unable to fulfil the quality and quantity requirements from the (high) end produce markets. This is one of the reason why actors are not enthusiastic to invest in the development of the vegetable sector. Farmers, in particular, do not invest and adopt innovations and new practices because of the poor return on investments. As a result, the vegetable sector in West Africa appears risky for investments.

In the sub-region, there is at the country level, as well as at the Economic Community of West African States (ECOWAS) regional level, regulations on the import and marketing of certified seeds, including vegetable seeds. The main principle of the policies is to regulate the import and use of improved varieties. However, the introduction of improved varieties at country and ECOWAS level is only allowed following approval. In fact, public services in charge of approving improved varieties should organize, with the seed companies and local input importers, to test and engage in demonstrations proving the suitability of varieties. Theoretically, registration is authorized only when varieties are proven fit for the local climate and bio-physical conditions. However, it is noticed that the variety registration process is not fulfilled by the majority of seed importers. Public regulators tend not to intervene and the policy is not enforced. As a result, improved variety seeds available in input supply shops are often inappropriate for local conditions and have little resistance to local pests. The lack of intervention from public regulators has also paved the way to importing seed of doubtful quality.

As a result, when farmers buy these seeds in local shops, they often receive limited information and technical advice on how to use the seeds. Sometimes, minor advice on cultivation practices are provided, but these are often insufficient for farmers to obtain good results in terms of yields and quality of their output (vegetable products). In addition, there is little or no opportunity for farmers to provide feedback to agro-dealers, when they face difficulties using the proposed varieties, and agro-dealers will often put the blame on the farmers and their poor agronomic practices. However, occasionally, it is possible for producers to engage in participatory variety development with breeders to develop varieties truly adapted to the region's conditions.

Some major challenges, but also opportunities to diversify remain as the vegetable sector remains very much focused on tomatoes and onions and much less on other vegetables. In addition, limited priority

is given to consumption of fresh vegetables because of consumer concerns on food safety and the lack of differentiated markets with much of the vegetables in supermarkets being imported.

Start of the partnership

Prospective lead partners normally approach 2SCALE with a proposal or a business idea. In this case, East and West Seeds International (EWIT) had already expressed interest in developing varieties suitable for Africa before the launching of the 2SCALE program during a series of round table meetings with the private sector in the Netherlands organized by the Ministry and 2SCALE consortium partners. Then, 2SCALE expressed the willingness to leverage funds and approaches from private sector actors interested in investing in food security and agribusiness in Africa. EWIT is a Dutch breeding company with its headquarters in Thailand, which specializes in developing improved varieties of tropical vegetables. In 2012, 2SCALE and EWIT signed a memorandum of understanding to develop successful vegetable agribusiness value chains in selected countries in West Africa. This agreement outlined their roles in developing the partnership, resources (technical and finance) mobilization, and the governance principles of their collaboration. Subsequently, 2SCALE introduced EWIT to the vegetable value chain actors in Benin, Ghana, Mali, Nigeria (since 2012), and more recently, in Côte d'Ivoire (2016) with the goal of developing the vegetable seed market.

Incentives for partners

By entering the partnership, EWIT intended to penetrate the West-African vegetable market by expanding a market for its improved varieties of vegetable seeds and developing a network of input dealers who would distribute the seeds to small-scale producers. Banks and microfinance institutions (MFIs) were attracted by the lower risks of crop failure created by quality seeds used by smallholder farmers from well-known sources. Prior to the introduction of EWIT seeds, farmers bought seeds that were not bred for their specific environment so, when they sowed the seed, it would not germinate and there was no recourse for the farmer as input dealers decline all responsibility.

While every company guarantees germination rate, with the use of EWIT's quality seed bred specifically for African conditions, expectations were high. Producers were motivated by the possibility of accessing quality seed which results in higher returns on investments, while reducing losses caused by maladapted varieties from unknown sources. Farmers were also trained by EWIT and 2SCALE on the use of the EWIT seed and related inputs, something EWIT has put a lot of attention into. Traders and processors were also attracted by the increased productivity and quality of the

vegetables grown from EWIT seed, a strong basis to develop new market options for fresh and processed vegetables. Overall, all actors had the potential to increase their revenues by engaging in the partnership as well as developing activities (e.g. processing, marketing, services) along the value chain.

Partnership at the start

The partnership design took into account what EWIT could offer to the sector. EWIT's value proposition is to develop improved varieties adapted to the climate and pest pressure, with expectations from end consumers (size, shape, etc.) also taken into account. In addition, with the organization by 2SCALE, EWIT would facilitate training on production techniques and disease control for the actors involved in using improved varieties. Finally, EWIT would support the development of the seed distribution network through business contacts with local importers. The latter, in turn, would receive support from a locally-based EWIT technician. It is worth mentioning that EWIT usually works with a few distributors (often just one) per country to control quality and avoid opportunism from dealers who could be tempted to mix the seeds with lower-quality stocks. The downside of relying on a single distributor is that seed availability may be a constraint.

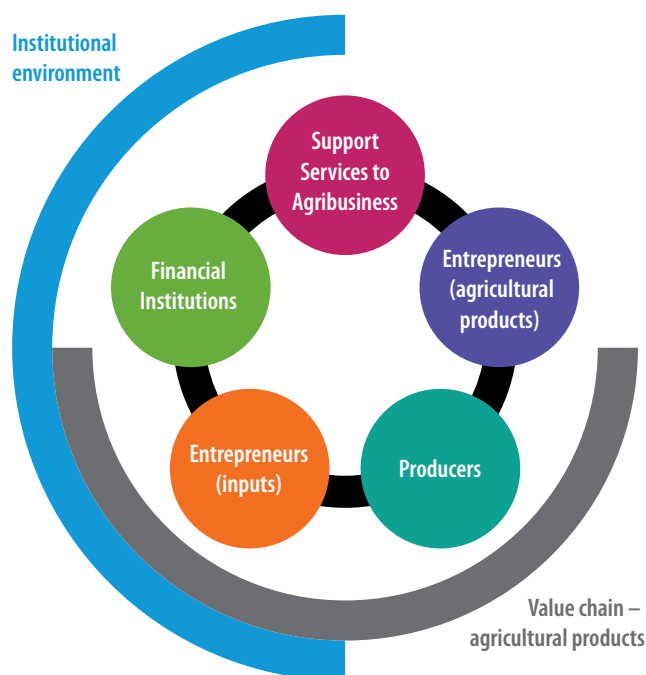
Some of the first activities of the partnership included training on vegetable production techniques and pest management by 2SCALE staff and some of the cluster actors, such as farmers and business support services (BSS)/coaches, by EWIT staff in Accra (Ghana) and Ouagadougou (Burkina Faso) in 2012, but also in Togo and Niger. After the training, EWIT/2SCALE organized demonstrations of several EWIT developed varieties in order to select specific well-performing and adapted varieties of different crops for each country and agro-ecological zone.

Table 1 | Examples of countries and selected crops

Country	Crop
Benin	Onion
	Cabbage
	Tomato
	Chili pepper
	Leafy vegetables
Mali	Onion
	Fresh vegetable
Nigeria	Pepper
	Ginger
	Fresh vegetables

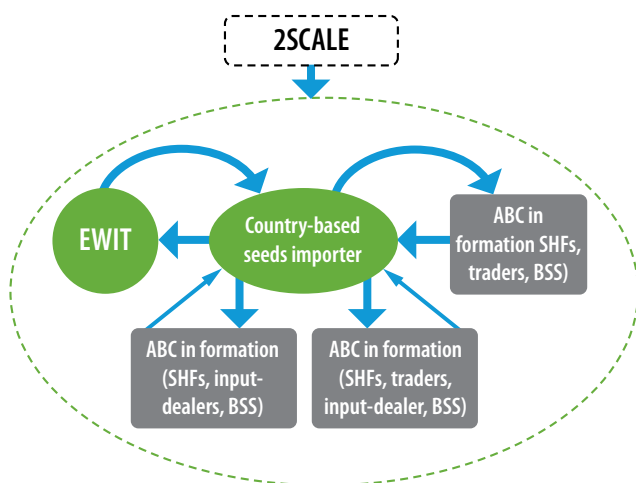
After a number of demonstrations, the selection of priority varieties was completed. Subsequently, EWIT identified and selected one main importer of the selected varieties per country. These importers, who are also distributors with their own distribution networks, were linked by 2SCALE to agribusiness cluster (ABC) actors. In addition, specifically, relations to BSS/coaches, farmers, locally-based input dealers and sometimes traders were fostered through the implementation of the ABC formation model (Vogelsperger, Lakoussan and Teshome, 2017). The Competitive Agricultural Systems and Enterprises (CASE) approach was used, which promotes agribusiness development focused on three pillars: i) linking actors needed to develop business around crops; ii) value chain development around the adopted crop; and (iii) the improvement of the enabling environment for this value chain. This approach is visualized in Figure 1. The rationale is as follows: for farmers to experiment and potentially adopt new vegetable varieties, a local network at proximity (linking them to fellow farmers, to input-dealers and financial and other service providers) that helps farmers to design/implement collective actions/strategies, and develop bargaining power is needed.

Figure 1 | CASE approach



The partnership members are EWIT, a country specific input importer and dealers which in turn are linked to several ABCs in the country. In all countries, it was necessary to get the new varieties tested in a context where the existing vegetable industries had little product specialization and did not seek market differentiation. It was also important to identify a reliable distributor and improve relations among actors. In addition, it was also necessary to provide intensive training to the actors to really appreciate the potential of the new varieties. The diagram below shows the relationship among partnership actors (Figure 2).

Figure 2 | Partnership at the beginning of the collaboration EWIT/2SCALE



Business model at the start

EWIT developed improved vegetable varieties suited to tropical production, taking into account climate, seasonality and biophysical conditions. For example, EWIT developed an onion variety apt for the rainy season; a first when it comes to giving the opportunity to producers to use season specific varieties. Before this selected onion variety (Prema) was made available, vegetable farmers did not generally succeed in growing onion during the rainy season. In order for producers to maximize their success, and for EWIT to create market demand in the rainy season, EWIT brought farmers together for training on the varieties, demonstrations on production techniques and pest management. In a bid to sustain this support of technical improvement of the seed users, EWIT set up its own technical staff in the region, one

in Ghana and another one in Nigeria, who are in charge of providing continuous technical advice to seed users. In addition, EWIT supported the improved availability of seed by identifying and linking users to selected seed importers based in the target countries. The BSSs and coaches of the 2SCALE program supported producers beyond the demonstration phase during the production season. With the support of 2SCALE, EWIT made efforts to develop relations between importers and small-scale input dealers members of the ABCs.

Partnership development over time

Vegetable producers are usually located in rural areas while EWIT seed importers are based in urban areas for their business. 2SCALE felt that having actors close to the producers leading the distribution process would be best – hence the decision to develop rural distributors’ network linked to the importers. The idea was that distributors of rural inputs are generally closer to producers (than the company or the importer). Theoretically, the two actors could organize exchange, orders and deliveries of specific varieties, in turn, made available to seed producers. However, this has proven to be a challenge because the selected importers were not always best positioned to serve the needs of small producers and distributors’ network that should have been developed are still not functional. For example, distribution has remained largely dependent on the location of the importer and its relation to producers. In Nigeria, the importer was said to mostly target large producers, unable to adapt its strategy to small producers wishing to buy small quantities of seeds. In Benin, the importer was based in the South of the country, with limited access to the northern market. In Mali, access to improved varieties was more successful because the importer was smaller and more dedicated to serve small producers.



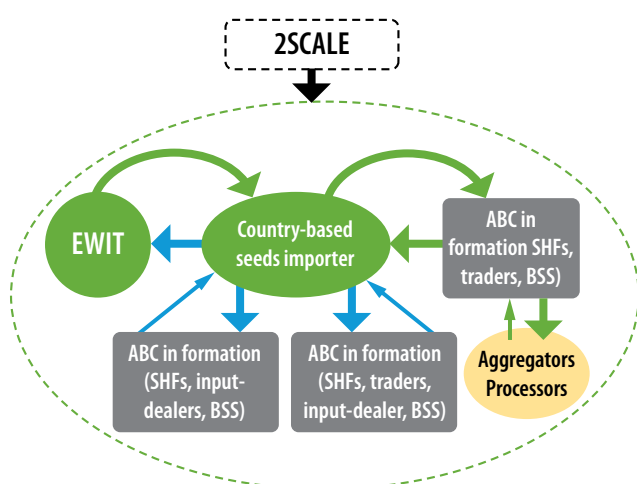
Joris Maatman | Women with harvested chili peppers, Ghana

The 2SCALE program facilitators integrated other complementary innovations into the demonstration activities in order to increase vegetable productivity and product quality. Drip irrigation, plastic mulch, urea deep placement, integrated soil fertility management, insect nets, trellising, heating of the soil prior to setting up the nurseries and line sowing were among the innovations used in the demonstrations.

Fresh vegetable traders and processors were attracted to locally-based agribusinesses and started expressing demands for vegetables because of the notable improvements in quality and productivity of the vegetable producers involved in the EWIT partnership. The 2SCALE program took advantage of this situation to help actors identify supporters and facilitated linkages to the ABCs, like banks, MFIs and aggregators. The increase in fresh vegetable orders created financial needs for some players because of the higher volume of business. Essentially, producers with limited financial capacity needed credit to be able to purchase the necessary volume of seed and/or equipment when adopting technical production innovations. To solve these new constraints, 2SCALE facilitated the integration of financial services (banks or MFIs) within the ABCs. In Benin, a guarantee fund supported by Alidé and the Fédération des Caisses d'Épargne et de Crédit Agricole Mutuel (FECECAM) was set up to enable vegetable producers to access microfinance for their production.

Relations with other actors and service providers in the sector were also actively developed. In Ghana, vegetable producers are attracted by the quality of the products and especially the possibility of sourcing off-season onions (variety prema) and tomatoes (Padma variety). The partnership is gradually developing 7 ABCs, and has sought relation with Rijk Zwaan from 2012 to 2014 and is now establishing contacts with a new partner since 2016, SafiSana, specialized in the production of organic fertilizers in order to support producers in optimizing their production. In Mali and Nigeria, 2SCALE facilitated new relations with large off-takes, Madougou Sarl and AACE Foods, respectively.

Figure 3 | Development of the EWIT/2SCALE partnership over time



Description of the 2SCALE interventions

2SCALE contributed to the evolution of the EWIT-led partnership through the mobilization and facilitation of interactions between ABC actors: farmers, traders, and BSS for training and demonstration activities. 2SCALE supported farmers and traders to analyze the results of demonstration activities, and to give feedback to EWIT through the facilitation team composed of 2SCALE and EWIT technical staff, and BSSs and coaches (internal and external). It linked the identified country-based seed importers to cluster actors, including farmers and other input suppliers.

In Benin, Ghana and Nigeria, the seed importer (which was not a seed sector professional) did not engage in much efforts to reach the north of the country. The 2SCALE program supported EWIT to select another seed importer, which would dedicate its business in the north of the country. This resulted in selection of two seed importers for Benin, each specialized for their respective region.

Generally speaking, 2SCALE facilitated the development and formalization of business relationships between actors. Through the interactions between banks, MFIs and cluster actors, the program tackled problems related to seed accessibility by developing strategies, such as input credit (including seed), saving-schemes, group orders, and planning seed supplying mechanisms to support farmers. Furthermore, 2SCALE linked and supported the development of business relationships between vegetable farmers and large vegetable aggregators and processors. During the intervention period, 2SCALE continuously built the capacity of all value chain actors with the help of coaches to support farmers on production techniques, marketing, access to finance and business relations.

Interesting features

Market innovation

Improved varieties of vegetable seed acted as the driver for the development of the agribusiness sector. The partnership intervention resulted in higher quality products which, in turn, opened the door for producers to brand their products on the market. Quality vegetable varieties were the starting point in triggering market and value chain development. In the case of vegetable seeds in West Africa – such an entry point was justified by the context. Experience in Asia had demonstrated to EWIT that there is a market for quality vegetables and that seeds are instrumental in achieving a quality product. In turn, this quality product is highly sought by the fresh product market actors. Similarly, in West Africa, quality vegetables would easily be marketed – prompting producers to buy quality seeds of improved varieties. Another key aspect of improved varieties is vegetable characteristics, and the possibilities for product differentiation;



Joris Maatman | Vegetable farmer taking care of his field, Ghana

specific varieties will cater for different consumers offering specific, distinctive and appreciated traits, such as color, size, taste and seasonal availability.

In Benin, 2SCALE and BoP.Inc conducted tests on the adaptability of a new leafy vegetable variety, named Kangkong, originally from Asia. The tests proved to be a success with Kangkong seeds growing very well in the targeted zones, which would provide poor Benin consumers the opportunity to access another leafy vegetable for their nutrition.

Business relations

The sustainability and strength of the vegetable output market opened opportunities for farmer organizations, but also necessitated improving relations between actors. Capacity building of producers and their organizations was necessary in order to deal with bulk orders from buyers and negotiate advantageous conditions for all.

An important factor in improving producer-buyer relations was the ability of buyers to offer a secure market to producers, which was used as a credit guarantee at banks. The quality of the seed offered by EWIT, via the agro-dealers, also fostered a trust relation with the producers who felt they accessed a good product.

Partnership now and beyond

While the partnership driver was, at the beginning, a large international seed company, the partnership created favorable conditions for development of other partnerships around the vegetable ABCs. In some cases, the processors and traders started supporting value chain PPPs under the umbrella of 2SCALE (e.g. AACE foods in Nigeria and Madougou and Baramousou in Mali) driven by specific market segments. For example, in Mali and Benin, the onion variety called 'Prema' results in high quality, long shelf life and good bulb size but, more importantly, it can be grown in the rainy season and sold between September and December when prices are sky high. Another example is the tomato traders of Calavi, a commune of Benin, who were able to resume buying tomatoes from commune producers when they began using the 'Padma' tomato variety developed by EWIT. This tomato variety is developed to be naturally resistant to Ralstonia bacteria, which previously prevented any tomato production in Calavi.

While vegetable producers' appetite has grown for these new varieties, there has been important shortcomings in securing access to seeds of the new varieties. EWIT's efforts to develop distribution networks could not keep the pace with demand, and their internal re-structuring (with

a change in their strategy) did not help. In future, it will be important to focus more on local distributors (who often sell different brands and can switch to another supplier if one is not performing and provide alternatives to producers), and not on seed breeders.

Thanks to the Partnership Resource Center (PrC), 2SCALE has launched an action research program in all the targeted countries that has allowed the development of partnership specific theories of change (ToC). While ToCs were developed from the beginning of the partnerships, with PrC, it was possible to make more explicit the changes and impact foreseen at partnership level. This strategy allowed all partnership actors at country level to harmonize their views on strategic issues, such as the inclusion of vulnerable groups in business, partnership governance, and sustainability of business relationships in the event of withdrawal from the 2SCALE program, etc.

In Benin, Ghana, Mali et Nigeria, the partnerships have developed platforms which are composed of key players in business development. These are often producers, the main importer connected to EWIT, local input suppliers, vegetable producers, and sometimes banks. The platforms mobilize capital from partners in the partnerships, and sometimes extend it to players in the value chain for their activities. Beyond 2SCALE, it would be desirable that such platforms continue to exist under the efforts of the sector stakeholders in order to continue coordination efforts and the development of the sector. Developing leadership and ownership among participating stakeholders is key to ensure sustainability.

Conclusions

The 2SCALE strategy for the partnership, in combination with the value proposition of EWIT, contributed to creating the appropriate conditions for a seed market driving vegetable agribusiness partnerships. Scale is achieved through spin-off partnerships, which emerges on the basis of the fresh vegetable produce markets. In essence, the initial focus of the partnership on inputs serves as a starting point for new partnerships to emerge around the fresh vegetable product market and value chain actors.

2SCALE ensured the **sustainability** of partnership activities by designing and executing a training of trainers program. The adopted methodology was the training of the coaches and the improvement of the relationship with embedded input suppliers on seed availability and access. The coaches were also embedded in the clusters as BSS staff, or selected members of farmer groups, or staff of vegetable products buyers. The reason for this is that clusters need to mobilize higher volume, which led to the involvement of more farmers who need to be trained.

In Mali, BEJO, a Dutch company, has started marketing vegetable varieties appropriate in tropical conditions. Farmers revealed that these varieties were becoming an alternative solution for producers. Through the *Jege ni Jaba* project, funded by the Dutch embassy, BEJO leveraged 2SCALE's PPP and they capitalized on the investment made by EWIT and the 2SCALE partnership. This has fostered complementarity between the interventions and proved that such a PPP really capitalized on the investment to conduct training, demonstrations and building relation with actors, enabling the sector to take off and it is now paving the way for other seed companies to become established.

The combination of willingness to develop good performance vegetable varieties, users' interest in the product, combined with capacity building, relationship management and access to services supported solid grounds for market development. It turned out to be an **opportunity** for public actors (national or regional: ECOWAS) to develop a close relationship and strategy with EWIT to start the production of improved varieties of vegetable seed in West-Africa, like in Asia and East Africa. The lack of good quality seed was certainly hampering the growth of the vegetable industry; but what made this partnership distinctive is the complementarity of actions between EWIT and 2SCALE. Introducing varieties can be done by seed companies on their own. However, introduction can only be successful when varieties are appreciated and used by farmers. This requires intensive activities (ABC formation, market development), which is costly and may be difficult for a company to do on their own. This why the **complementarity** of action of 2SCALE and EWIT yielded results. EWIT continues to be committed to developing varieties suited to African conditions and has invested in a breeding center in Tanzania, something which was initiated with Rijk Zwaan, but now the two companies are continuing their efforts independently, both recognizing the potential of improved varieties in Africa. EWIT's commitment to reaching farmers with improved varieties was evident from the result that EWIT scored best in the vegetable seed company category in the Access to Seed Index 2016, which measures and compares the efforts of the world's leading seed companies to enhance the productivity of smallholder farmers. Such a **commitment** was evident and constant from the beginning of the partnership, and has always resonated with 2SCALE's focus of improving small producers' livelihoods and agribusiness in Africa.

References

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Joris Maatman | Women selling onions at the market, Ghana

This paper is part of a series in which 2SCALE facilitators and coordinators share their experiences. Contributors: Abalo Adodo, Grégoire Oniankitan Agai, Mathias Ahounou, Geneviève Audet-Bélangier, Tekalgn Ayano, Judith Chabari, Assefa Degefu, François Dossouhoui, Peter Gildemacher, Olugbenga Stephen Idowu, Alhassan Issahaku, Peter Kiriimi, Eric Lakoussan, Arnoldus Maatman, Janet Macharia, Douglas Magaja, Jacqueline Ndambuki, David Njenga, Irene Njogu, Francis Nthuku, Thompson Ogunsanmi, Gabriel Olengo, Kwame Pipim, Hiwot Shimeles, Faoussa Tadjou, Addis Teshome, Baba Togola, Mahamane Toure, Youssef Traore, Niek van Dijk, Ajay Varadachary, Raphael Vogelsperger, Allan Wayira and Bertus Wennink.

2SCALE manages public-private partnerships (PPPs) for inclusive agri-business in Africa. Partnership agreements are developed with companies with inclusive business agendas. 2SCALE offers support services to companies, farmer groups and other relevant stakeholders – enabling them to produce, transform and supply quality food products to local, national and regional markets, including Base of the Pyramid consumers. 2SCALE strengthens the capacity of grassroots and value chain actors, supports innovation and coordinated action, and improves skills to assure effective participation in markets. The focus countries of the programme are Benin, Ethiopia, Ghana, Ivory Coast, Kenya, Mali, Mozambique, Nigeria and Uganda.

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