

# SEEDS



## BREAKING INTO THE SMALLHOLDER SEED MARKET

LESSONS FROM THE  
MOZAMBIQUE SMALLHOLDER  
EFFECTIVE EXTENSION DRIVEN  
SUCCESS (SEEDS) PROJECT

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# SMALLHOLDER EFFECTIVE EXTENSION DRIVEN SUCCESS PROJECT

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## WHITE PAPER

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THE MOZAMBIQUE SEEDS  
PROJECT

DECEMBER 2017

### Table of Contents

2	Executive Summary
6	Introduction
7	The Seeds Industry in Mozambique
8	Background to the SEEDS Project and Partners
9	Rural Agrodealer Models and Mozambique
11	Activities Implemented and Main Findings/ Recommendations
22	Seeds Sales
30	Sales per Value Chain
33	Conclusion

# EXECUTIVE SUMMARY

## BREAKING INTO THE SMALLHOLDER SEEDS MARKET

During its implementation over two agricultural campaigns between 2015 and 2017, the Smallholder Effective Extension Driven Success (SEEDS) project, implemented by NCBA CLUSA in partnership with Feed the Future Partnering for Innovation, a USAID-funded program, supported two private sector seed firms--Phoenix Seeds and Oruweru Seed Company--to develop agrodealer networks in line with NCBA CLUSA's Community Based Service Provider (CBSP) model in the Manica, Zambézia, and Nampula provinces of Mozambique.

CBSPs are rural agrodealers who purchase seed from seed companies for resale in their own communities, thus bridging the gap between seed/input suppliers and smallholder farmers and reducing the high distribution costs involved in making products available to Bottom of the Pyramid (BOP) consumers. The aim of this project was to support both firms in profitably breaking into the smallholder seeds market in northern and central Mozambique through the development of their own CBSP sales and distribution systems, and to support them in selling certified improved seed to at least 12,000 smallholder farmers. During this time the main findings and recommendations were as follows:

**Improved seed, like the variety ZM-521 shown here, is showcased by CBSPs to clients by way of demonstration plots set up next to their stores**

## IDENTIFICATION OF CBSPS

By project end, 289 CBSPs (36 Oruweru CBSPs and 153 Phoenix CBSPs) had been identified, trained, and contracted by Phoenix and Oruweru throughout the three provinces. CBSPs were stratified into two main profiles: 1) smaller Lead Farmer CBSPs working with NCBA CLUSA's Promotion of Conservation Agriculture Project (PROMAC) who managed demonstration plots to promote the use of certified seed and marketed this same product from their own small stores, and 2) larger CBSP merchants or existing agrodealers with a greater potential for seed trading. This stratification put in place the structure required to tackle the "Last Mile" of the supply chain – distributing seeds from semi-urban distribution points to the most remote areas – in Year 2.

## NEGOTIATION BETWEEN PRIVATE SECTOR AND CBSPS

Negotiations between seed companies and their respective CBSPs were facilitated by NCBA CLUSA staff together with private sector sales staff, usually working together as a two-person team or "buddy system". This is one way in which donors can provide direct support and capacity building for seed marketing activities during the initial phase of establishing CBSP networks, followed by a subsequent phase out as the private sector takes over.

The success of CBSP networks often depends disproportionately on the capacity of just one or



two sales staff members within the firm. When these individuals are ineffective at their jobs, the whole CBSP program is jeopardized. Seed companies should therefore prioritize recruiting, incentivizing, training, and maintaining the right staff for the job. Donors have a role to play in ensuring that private sector firms have access to resources to train and retain their quality staff.

## CBSP TRAINING

CBSPs were trained in small community groups over a period of one month and by way of a course of three modules. Training should be stratified according to CBSPs' profiles (with different content for Lead Farmer and Merchant CBSPs) and should be repeated on an annual basis, increasing in terms of complexity as CBSP cohorts gain practical seed sales experience. SEEDS recommends training CBSPs in small, community groups with limited subsidies for participants (e.g. for meals and transport) as this allows training to be more responsive to CBSPs' needs and improves the absorption of information; reduces the logistics costs involved in training large numbers of participants at a single event; and emphasizes the business rather than project focus of the CBSP model. Because many rural project beneficiaries are accustomed to more donor-led training events, project staff may need to clearly articulate the business focus and set the tone for the trainings at the beginning of each course.

As with CBSP negotiations, donors' roles should be as facilitation-focused as possible, yet at the same time recognizing that the private sector requires support in the early stages of setting up CBSP networks. Donor interventions should therefore include training for private sector staff as trainers, as well as broader activities that improve the enabling environment for CBSP networks such as working with vocational training institutions to develop an accredited agrodealer curriculum.

In order for the hub/retailer network to function, both the demand (smallholders' willingness/ability to purchase) and supply (distribution) constraints must be met.

## DISTRIBUTION OF SEEDS AND THE ESTABLISHMENT OF AGRODEALER HUBS AND RETAILERS

In Year 1, Oruwera opted for individual distribution to agrodealers' stores, offering credit terms; however, unpaid debts of around \$4,000 (representing a repayment rate of around 50%) at the end of the first campaign led the firm to abandon this strategy in Year 2 and opt for delivery upon cash payment only. Whilst this reduced Oruwera's exposure to risk, it meant that it worked with only 4 CBSPs in Year 2, compared with 13 CBSPs in Year 1.

In Year 1 Phoenix focused on establishing both Lead Farmer and Merchant CBSPs whilst simultaneously employing a seed fair strategy which involved Phoenix selling seed directly in rural communities and CBSPs performing a demand stimulation and aggregation role in return for a commission on seed sold by Phoenix. In Year 2, a limited credit facility was made available for 58 selected Phoenix CBSPs, who received 12,723 kg of seed on credit to the wholesale value of 1,204,155 mt (or around \$22,000). This enabled Phoenix to organize its CBSPs according to a hub and spoke distribution model and utilize a Last Mile approach to supply chain management, with 11 of its larger merchant CBSPs working as hubs and supplying their own networks of smaller Lead Farmer CBSPs with product. However, although the provision of a credit facility undoubtedly helped Phoenix to increase its sales in Year 2, exceeding Oruwera's seed sales, this strategy exposed Phoenix to risk and by the end of the project around \$6,400 remained in outstanding debts.



**A SEEDS agrodealer inspects the germination rates of improved seed at a Seed Fair.**

In order for the hub/retailer network to function, both the demand and supply aspects must be met.

- 1) There must be sufficient demand for certified seed amongst smallholders,
- 2) Seed firms must be able to consistently supply hubs with quality seed, and
- 3) Some form of credit or consignment facilities must be available to CBSPs.

SEEDS found that the supply side was often as much of a challenge as creating demand. Even when CBSPs were requesting seed, both Oruvera and Phoenix frequently struggled to make product available where and when it was needed, indicating that private sector firms require support in the basic aspects of their operations such as improving seed production/processing and transport capacity, quality control, managerial training, leadership, etc.

## SEED FAIRS

A community seed sales strategy through firm-managed seed fairs at existing rural market days can present as an innovative solution to the problem of CBSPs' lack of working capital for seed and input purchases. This strategy should complement sales from CBSPs' stores. Seed companies benefit from increased sales with minimum financial risk, whilst CBSPs are able to become integrated into seed companies' commercial models by aggregating demand in return earning a commission on all seed sold. A total of 29,860 kg of seed were sold through

Phoenix seed fairs in Year 1, decreasing to 7,421 kg in Year 2 as a result of a changing focus of resources away from seed fair sales and towards sales through CBSPs' stores.

Strategically placed and dynamic seed fairs are also an excellent marketing opportunity for seed companies, who should invest in visual and audio marketing materials and low cost branded merchandise as well as take advantage of community radio and existing ICT platforms. They should also leverage support from partners such as suppliers of complementary products (fertilizers, financial services, etc.). To maximize seed fairs' reach, CBSPs themselves should be provided with logistic, financial, and other support in order to organize and manage their own seed fairs.

## MARKETING AND PROMOTION

The most successful marketing tools for seed companies targeting the smallholder market need not be expensive or sophisticated. They should be largely visual and include appealing, easily recognizable brand logos/product names, the distribution of branded merchandise and sample packs, company branding on strategic rural locations (e.g. market place walls, prominent shop fronts, and CBSPs' stores), and micro-packaging. Firms and CBSPs should also engage with community radio wherever possible.

Unlike in many developed countries, almost 100% of rural Mozambican households are engaged in agricultural production of some kind, making them potential consumers of certified seed. Seed should therefore be marketed not as a specialist product but just like any other household necessity, by way of: cost effective distribution strategies to ensure that product is stocked in normal community stores; branding and packaging that appeal to BOP customers; market segmentation activities to target smallholder consumer groups; competitive pricing strategies, etc. Lessons should be drawn from other non-seed related value chains marketing product to BOP consumers.

## M&E, DATA COLLECTION, AND MARKETING METRICS

SEEDS recorded basic sales data for CBSPs (GPS, name, location, date of sale, product sold, volume sold, and price), which enabled a basic analysis of sales data. Limited GPS mapping was conducted by the SEEDS project using Google Maps. Future projects should take this further by plotting the geographical location of CBSPs and other agrodealers (theirs and the competition's) to better plan the placement/spacing of CBSPs and to support larger CBSPs to develop networks of smaller retailers. Much also stands to be gained by serious companies who wish to use IT-based market and data analysis systems to collect socioeconomic, demographic, and other client data and carry out more complex demographic analysis, market stratification/segmentation, and positioning, enabling them to better respond to the needs of their target market.

## SALES FINDINGS

- 203,861 kg of seed were sold in total during the project, to the value of 24,950,882 mt or around \$453,000 in sales revenue to CBSPs (assuming an average exchange rate of 55 mt/US\$). This is enough to plant around 10,000 ha with certified seed. 20,197 unique smallholder farmers benefitted from improved seed;



Phoenix Seeds founder Kevin Gifford

- 105,008 kg of seed were sold through seed fairs and 98,853 kg were sold through CBSPs' stores (52% and 48% respectively), indicating that seed companies benefit from implementing both strategies in tandem;
- 128,096 kg of seed were sold through Phoenix and 75,765 kg from Oruwera (63% and 37% respectively);

In total during the project, 14% of clients bought seed more than once.

Despite not being a Feed the Future value chain, maize was the best-selling value chain during the entire project. This was followed by pigeon pea and cowpea. This suggests that smallholders demand certified seed for both food security and cash crops, and is reflective of the recent high demand for pigeon pea from India, which has stimulated production for the crop.

Seed sales increased during the project, pointing to an increased demand and uptake of certified seed by smallholder farmers. A comparison between Year 1 and 2 sales data shows an increase in the volume of seed sold by each firm, the number of clients per CBSP store and the propensity of smallholders to return and buy seed more than once in the same campaign; however, despite evidence of a strengthening smallholder seed market, average purchases sizes remained small (and grew little over the project) and in general smallholder demand is not yet sufficient to offer seed firms with a viable alternative to bulk sales or to justify the establishment of a large number of rural entrepreneurs selling only seed. The average purchase size was 12 kg from seed fairs and warehouses and 7 kg from CBSPs' stores, less than required to plant an average hectare of land. In addition, despite an increase in the overall number of CBSPs who on paper were trained and contracted by Phoenix and Oruwera, Year 2 did not see a proportionate increase in the number of CBSPs actively purchasing seed and trading it from their own stores. This suggests that CBSPs must be demand- not supply- or project-driven. Firms should therefore focus on consolidating their existing CBSP networks and maintaining the momentum gained through SEEDS, rather than identifying more providers merely for the sake of generating numbers.

## INTRODUCTION

The SEEDS project was a USAID, Feed the Future – Partnering for Innovation-funded project designed to address the lack of access to certified, improved seed in northern Mozambique. Managed by NCBA CLUSA, SEEDS aimed to increase yields for six key Feed the Future supported value chains: sesame, peanut, soya, pigeon pea, cow pea, and sugar bean by supporting two local seed companies, Oruvera Seed Company based in Nampula province and Phoenix Seeds Limitada based in Manica province, to create rural seed distribution systems through a network of seed retailers or agrodealers. SEEDS was implemented between January 2015 and April 2017, spanning just over two calendar years and two seed sales campaigns. Although not a Feed the Future supported value chain and not contributing towards the project milestones, the project also supported the sale of certified maize seed, as well as the six identified value chains. During this time the project supported both Oruvera and Phoenix to establish networks of agrodealers using NCBA CLUSA's model of Community Based Service Providers (CBSPs) who are local, community based entrepreneurs who act as one-stop shops in their communities, linking smallholder farmers with suppliers or seeds, inputs, tools, equipment, and other necessary products and services.

During this time, 281 Oruvera and Phoenix agrodealers or CBSPs were established, trained, and sold certified seed in their communities. In addition, to promote the sale and use of certified seed, the SEEDS project partners implemented a range of other initiatives with the aim of increasing the uptake and purchase of certified seed and other inputs, such as seed fairs and promotional events. This White Paper serves to outline the principal seed sales activities carried out by SEEDS, review the seed sales statistics over the two campaigns, and summarize the main conclusions and lessons learned. It is expected that this document will both add to the existing knowledge base in Mozambique regarding the promotion/sales/distribution of seeds to BOP consumers and improve the effectiveness of future agrodealer and seed sales/distribution related programs aimed at increasing smallholder purchase and uptake of certified seeds, inputs and other technologies.



One local entrepreneur supported by SEEDS is Helder Jorge from Ribaué district, Nampula province, Mozambique. Helder is as a SEEDS supported agrodealer “hub” meaning he receives product at preferential prices for re-sale in his own store and distribution to his own network of smaller SEEDS supported retailers CBSPs (the “spokes” of distribution). Helder’s business has now grown not just in terms of links with suppliers but also in terms of management, with the SEEDS partnership providing business related technical assistance, monitoring and support in areas such as business planning, marketing, stock requisition/management, transport logistics and credit management.

This enabled Helder to increase his stock, introduce new product lines and better keep up with the demand from both his retailers and smallholder clients. As a result, his total sales of Pheonix and Oruvera seed have increased from around 3.5 tons prior to his involvement in SEEDS to 7 tons annually at present. With his increased profits Helder has invested in the construction of a new 30 ton capacity warehouse. The 7 tons of seed from Phoenix and Oruvera was sufficient to plant around 200ha of smallholders’ land with certified seed in Ribaué district, representing increased yields and profits for 443 smallholder farmers and increasing the profits of his CBSP network.

As a result of the business coaching, support and technical assistance provided through SEEDS Helder now feels confident enough to apply his experience to other large seed and input suppliers, stocking an even wider range of product on similar terms, including not just seeds but also fertilizers, pesticides, inoculants, tools and implements, becoming a reference for quality seeds and inputs in Ribaué district.

## THE SEEDS INDUSTRY IN MOZAMBIQUE

With some 36 million hectares of arable land and 2.5 million smallholder farmers, who account for 99% of total farms or 90% of the cultivated area<sup>1</sup>, the smallholder segment has the largest potential for growth in Mozambique. Around 90,000 tons of seed (oil seeds, cereals and pulses) are planted each year, of which just 10% is certified seed with the remaining 10% being grain multiplied from one year to the next. And of the 10% that is actually seed, only 20% of this is formally traded - the remaining 80% is informally exchanged or distributed as part of donor and government projects. This leaves an unmet potential of around 81,000 tons of seed.

Tapping into this potential, however, is incredibly challenging due to a low smallholder adoption of certified seeds. The majority are not yet prepared to invest in certified seeds for their farms - indeed, the sample agricultural censuses show that over the last 15 years there has been virtually no change in the percentage of smallholder farmers doing so, hovering at around 6% (De Vletter, 2018. forthcoming). The main reasons for this are as follows:

- Smallholder farmer price sensitivity, particularly in years of poor yields and economic downturns as were experienced in the period during which SEEDS was implemented, during which time the metical more than halved in its value against the dollar, inflation reached nearly 20% in 2016.

- Inefficient distribution systems in rural areas, making it difficult for seed suppliers to deliver product at an affordable price;
- An average farm size of 1.4 ha, which not only reduces farmers' income and spending power but also means that their demand for certified seed and inputs remains low;
- A low use and slow take up of improved technologies in general. Mozambique has one of the lowest average fertilizer application rates in Africa, with an average of under 6 kg of fertilizer used per hectare of arable land<sup>3</sup> and just an estimated 5% of smallholders using improved seeds and fertilizers<sup>4</sup>
- A tendency of government and donors to distribute free or subsidized seed, which distorts the market and reduces demand for private sector firms. For instance, 3,615 tons of seed were distributed by the Mozambique Government in 2013/14 campaign.<sup>5</sup> This is combined with a general "hand-outs culture" amongst many smallholders, generated from decades of donor intervention.

Yet despite these challenges the market is growing steadily as recent changes in Government and donor policy have begun to reduce the incidence of distributing free or subsidized seed in favor of promoting commercial sales channels through strengthening the private sector's capacity to supply product, at the same time promoting smallholder uptake of new technologies. As a result, smallholders are gradually becoming increasingly aware of the benefits of purchasing certified seed and it is expected that in the future the smallholder market will represent the principal target market for seed companies.

<sup>1</sup>Ministério da Agricultura e Segurança Alimentar (MASA). (2015). Anuário de Estatísticas Agrárias 2012 - 2014. Maputo, Moçambique: Direcção de Planificação e Cooperação Internacional (DPCI).

<sup>2</sup>Jorge, A. 2014. Revisão da política, legislação e quadro regulatório do Sector de Sementes em Moçambique relacionada a facilitação e promoção da intervenção do Sector Privado. SPEED Program.

<sup>3</sup>FAO STAT, 2014 <http://mozambique.opendataforafrica.org/yvcurpf/mozambique-fao-stat-land-use-and-agricultural-inputs>

<sup>4</sup>FPAP, 2008

<sup>5</sup>DNSA, 2014

- Despite there being approximately 44 registered seed companies in Mozambique at present, few have the capacity to supply large volumes of high quality product;
- Large companies who mostly import product (e.g. PANNAR and Klein Karoo) depend on foreign currency for imports, creating difficulties for importing produce (although they are now moving towards import substitution by producing in-country). In addition, traditionally many large seed firms have focused on agribusiness clients, resulting in products that fail to effectively target the smallholder market (inappropriate varieties, too large pack size, etc.).
- Smaller, local seed producing companies who produce their own seed such as Oruwera, Morais Comercial, Ikuru, Dengo Comerical, Nzara Ypera, Semente Perfeita, and Matuel Commercial lack the capacity to supply large volumes of high quality seed since they largely produce using contracted seed farmers farming on small, rain fed, production units. Side selling is also rife. In addition, some of these are known for poor quality, stemming from the use of old, low yielding seed varieties and a poorly regulated seed production/certification system;
- Few companies have developed efficient distribution systems to penetrate rural BOP clients, depending instead on large government or NGO contracts. The majority of seed sales points are located in a few concentrated, mostly urban, areas, particularly the Beira Corridor and parts of Manica province. Few seed companies (limited only to Oruwera, Pannar seeds,

Phoenix Seeds, and Lusosem) have any formal representation in rural areas through retailers or agrodealers. Where agrodealers do exist, they often have limited geographic coverage and little stock since few seed companies provide seed on consignment or credit basis (as is a common practice in neighboring countries, such as Zambia.) On average a smallholder farmer needs to travel some 80 km to the nearest agrodealer or seed store.<sup>6</sup>

## BACKGROUND TO MOZAMBIQUE SEEDS PROJECT AND PARTNERS

It is within this market that Oruwera Seed Company and Phoenix Seeds operate as local seed producing and sales companies. Responding both to the unmet demand from smallholders and to the undeveloped competition, both have placed the penetration of this market as a priority in their five-year strategic and business plans.

SEEDS' objective was to increase the productivity of its six value chains by supporting both firms to market seeds through a network of agrodealers. Activities were implemented in three provinces of northern Mozambique: Nampula and Zambézia province in the first campaign (2015/16) and Nampula, Zambézia, and Manica provinces in the second campaign (2016/17). Manica province was included in Year 2 due to the high potential of seed sales in the geographic area immediately surrounding the Phoenix farm in Vanduzi district and the higher agricultural potential represented by Manica province. Although there was some overlap between the geographical range of the two firms, (e.g. the Alto Molocué and Gurué districts of Zambézia province) in general, Phoenix's agrodealers were located in Zambézia and Manica province and Oruwera concentrated on Nampula province. Figure 1 (below) outlines the key data for each company.

<sup>6</sup> Jorge, A. 2014. Revisão da política, legislação e quadro regulatório do Sector de Sementes em Moçambique relacionada a facilitação e promoção da intervenção do Sector Privado. SPEED Program

## RURAL AGRODEALERS AND MOZAMBIQUE

Agrodealer models are gaining in popularity in Mozambique. A range of initiatives have been implemented or continue to operate, such as:

- Pannar Seeds, whose agrodealer network was previously supported by the Swiss Development Corporation's Inovagro program (in total Inovagro supported 23 rural entrepreneurs in northern Mozambique to become agrodealers for seed companies).
- The AGRA funded HUB project, which ended in 2016 and supported rural inputs agrodealers in Nampula province;
- AgriMerc, a Chimoio based organization promoting agrodealers in Manica province, also funded by AGRA as part of its \$2million in grants for four companies the seed sector in Mozambique;

- iDE's Last Mile program, which links Farm Business Advisors (FBAs) with agrodealers and Lusosem Seeds. With USAID and Feed the Future-Partnering for Innovation funding iDE/ Lusosem linked 100 FBAs to 20 established agrodealers; and
- TECAP, a Mozambican agricultural inputs/ equipment company in the process of establishing a network of agrodealers and franchisees for its Casa de Agricultor franchise.
- Some entrepreneurial individuals such as Carlos Macuacua, who operates 14 independent agrodealer stores throughout Manica province.

NCBA CLUSA's model of CBSPs, pioneered in Senegal (Yayeende project) and Zambia (PROFIT project) is similar to the approach of many organizations working in Mozambique, however with a broader

**Figure 1: Company details, Oruwera Seed Co and Phoenix Seeds**

Legal Name	Oruwera Seeds Co	Phoenix Seeds
Location	Nampula city, Nampula province	Vanduzi, Manica province
Entity	Commercial seed company	Commercial seed company
Ownership	Amilcar dos Santos Lucas Benate, Shelsia Jéssica Chaimite Benate and Otto Mussyvatchea Chaimite Benate	50/50 joint venture between AgDevCo and Phoenix Limitada
Year of Establishment	2010	2010
Method of Production	Contracted outgrowers. Limited own farm production	Mostly own farm production. Limited outgrowers for beans
Value Chains	Maize, mung beans, cow pea, pigeon pea, common beans, sesame, peanut, soya, millet, cassava. Basic seed	Maize, mung beans, cow pea, pigeon pea, common beans, sesame, peanut, millet, sun hemp, soya
Strategic Markets	Government, NGOs, agribusinesses, agrodealers, individual farmers	Government, NGOs, agribusinesses, agrodealers, individual farmers
Sales Strategy and structure	Central warehouse in Nampula city, Oruwera store in Alto Molocue, agrodealers	Central warehouse at farm in Vanduzi province, agrodealers, sales from regional warehouses in Zambézia province
Production, 2016 (tons)	480	400



### From Seed to Harvest, Partnership is Key

Cristina Pulseira is a CLUSA supported lead farmer, training her neighbors on conservation agriculture techniques. Since 2014 she has managed a CLUSA PROMAC supported demonstration plot to demonstrate the advantages of conservation and improved agriculture techniques to a group of 30 smallholder farmers through organized field days. Demonstrating conservation agriculture techniques is key, but so is investing in improved seeds – clearly marked along her plots, she shows her neighbors the Phoenix ZM251 signs to mark where she has sown certified Phoenix maize seed. As a result, last year she harvested 135 kilograms of maize from her demonstration plot compared only 30 kg from her traditional plot. For beans and soy, she harvested five times as much from her conservation agriculture plots as for her plot where she used traditional techniques. “I try to bring as many people here to as possible to show the difference,” she says.

From the 2015/16 campaign onwards Cristina has also been engaged with the SEEDS project due to the fact that not only is she an active Lead Farmer but she also manages a small rural enterprise, in the form of her small rural store (cantina) where she sells basic household food stuffs. SEEDS has linked her to Phoenix seeds so that she has been able to add maize, soya and pigeon pea seed to her existing line of every day necessities and, in this way, to sell the same certified seeds that she promotes on her demonstration plot.

Christina has seen that the interest in certified seed has been high amongst her group of 30 smallholder farmers, as they have seen the

higher yields associated with certified seeds (which according to Kevin Gifford, Phoenix Seeds founder, can mean and increase from 500 kg a hectare to over two tons/hectare). “We want more Phoenix here,” she says, meaning the Phoenix Seeds Co improved seeds. The company’s name has become synonymous with its product – good quality seed.

But to get the seed from seed farm to CBSPs like Cristina requires some innovative solutions to the challenges of logistics and distribution in rural Mozambique. It is simply not cost effective for Phoenix to delivery seed directly to Cristina’s store or to the stores of other small Lead Farmer CBSPs like her. This is where the CLUSA supported network of seed fairs and larger seed retailers or hubs has been instrumental for Phoenix. With SEEDS support, Cristina has been able to purchase product locally, from Phoenix managed seed fairs organized from its district warehouses. SEEDS has bought down the risk for Phoenix by subsidizing the costs of these sales/distribution activities and supporting in the coordination and logistics, ensuring that Phoenix can be consistently present in as many local seed fairs as possible during the seed sales time. “For us, what NCBA CLUSA brought to the table was something that we were already investigating but we didn’t have the means or the full idea of how to fulfill that. And that was how do we get our extension training into the remote areas; how to get the seed sales to the farmers,” said Gifford.

Cristina walks around her plot with the Phoenix ZM251 Maize seeds, pointing out the strength of the stems. With the extra income from her farm and store last year she bought concrete to finish her house. She’s confident in her farming and seed sales activities and already has plans to buy goats this year. And the beauty of the Partnering for Innovation funded programs is that they represent win:win for both smallholders and commercial firms: “We want to sustain our own business, but we want to make sure that the farmers are going forward. Because if they’re going forward, we’re going forward and that’s where we get the win,” said Gifford.

focus. As well as representing inputs companies, fully-fledged Zambian CBSPs also provide a range of agricultural and non-agricultural services to local communities (e.g. crop spraying and the provision of technical assistance) in order to shorten the gap between extensionists/goods or service providers and end clients. In Senegal, CLUSA has supported the establishment of the CultiVerte franchise model, bringing the work of its network of CBSPs/agrodealers under one brand. In Mozambique, SEEDS sought to establish a model similar to those of Senegal and Zambia, however the shorter duration and limited size of the SEEDS project, combined with the less developed agricultural and business environments, meant that during the project timespan few SEEDS supported CBSPs progressed from the sale of seeds and inputs.

## ACTIVITIES IMPLEMENTED, MAIN FINDINGS AND RECOMMENDATIONS

This section discusses the seed sales and marketing related activities carried out by Phoenix and Oruwera during the 28 months of project implementation, and discusses the main findings and recommendations.

### 1. Identification of CBSPs

By the end of the project, a total of 289 CBSPs had been identified, trained, and contracted by Phoenix and Oruwera throughout the three provinces: 36 selling Oruwera seed and 253 selling Phoenix seed. Around 6 of the larger CBSPs sold seed from both Oruwera and Phoenix, something which the project encouraged in order to promote the sustainability of CBSPs' business models.

In Zambézia and Manica provinces, SEEDS was able to leverage significant resources from the NCBA CLUSA managed PROMAC project. PROMAC supports Lead Farmers to manage demonstration plots on which they promote Conservation Agriculture (CA) practices and the use of certified seeds and inputs to groups of 30 surrounding smallholder farmers. Those Lead Farmers (LFs) who also managed small stores in their communities were deemed good candidates to go on to become CBSPs, using their demonstration plots as marketing

tools for seed that they sold in their shops. These peer driven demonstrational activities were critical in enabling farmers to see first hand the benefits of using certified seed, using demonstration plots that showed traditional production practices (using traditional seed) and improved practices (using conservation agriculture combined with the use of certified seed) side by side. As seed below, the existence of Promac lead farmers in Zambézia and Manica provinces likely contributed to the increased sales from Phoenix CBSPs in comparison to Oruwera CBSPs in Nampula and Zambézia provinces

A set of criteria for CBSPs was established at the beginning of the project:

- Speak Portuguese and local dialect
- Basic literacy and numeracy skills
- Be an active, trusted member of the community
- Previous knowledge and/or experience with agricultural production
- Own an existing business, with retail store with adequate storage conditions for seed/inputs
- Have sufficient time to dedicate to seed sales and promotion
- Willing to enter into business arrangements and sign contract with Oruwera and/or Phoenix
- In the case of agrodealers who were also

CBSP identification took place in different ways for each company:

**Phoenix:** In Zambézia province around 80% of Phoenix CBSPs were PROMAC Lead Farmers - entrepreneurially minded Lead Farmer CBSPs who promoted the use of certified seeds on their demonstration plots. The remaining 20% were existing merchants and traders who fitted into the second profile. In Manica province, where the agricultural sector is more developed, most CBSPs were merchants and some of these were already operating as agrodealers – as will be seen in the sales analysis section below, this had a positive impact on seed sales in Manica province.

**Oruwera:** In Nampula province the lack of a PROMAC presence meant that Oruwera opted to identify only merchant CBSPs – these were rural entrepreneurs with existing businesses selling seeds, inputs, and other necessities.

PROMAC Lead Farmers, have an area of land available to mount a demonstration plot for at least 3 continuous years and be willing and able to manage field days involving the local community in order to promote the use of certified seeds and inputs

From the outset of the project it was decided to stratify CBSPs into two main profiles, with Technical Assistance (TA) tailored to each: 1) PROMAC supported Lead Farmer CBSPs managing both demonstration plots and their own rural stores, as described above, and 2) CBSP merchants or existing agrodealers - larger rural merchants and traders with established business activities selling goods in their local communities (usually general household necessities and food stuffs, although some had previous experience selling seeds and inputs).

Unlike many organizations working with agrodealers, SEEDS opted for a strategy of working not only with specialist agrodealers, but also with existing rural shop owners. In this way, SEEDS intended to “treat seed just like any other product” (which was to become the SEEDS motto). In most districts of northern Mozambique the market is not yet developed enough to support the existence of a large number of dedicated agrodealers, especially given that seed trading is a seasonal activity. In addition, seeds do not necessarily require any special storage conditions at the point of sale beyond what is required for other general foodstuffs: it should be stored in cool, dry environments out of reach of rodents and insects, and retailers require only relatively basic knowledge of how to store and use it (knowledge which most retailers can easily acquire). Thus, SEEDS’ approach was based upon the premise that if there were sufficient consumer demand for certified seeds in local communities and if certified seeds were available at the same locations as the other products then existing community shop owners would add seeds to their current range of products. This would enable seed companies to “piggyback” on the same distribution channels that are already operating profitably in rural Mozambique.

## Findings and Recommendations

- By focusing on existing retailers of a diverse range of both agricultural and non agricultural products, Oruvera and Phoenix were able to leverage the existing skills, experience and knowledge of micro businesses already operating in rural areas, a strategy which 1) enabled store owners to increase their product range, 2) reduced identification, training, and other costs for Phoenix and Oruvera, 3) promoted the efficiency of distribution networks since such networks were already established and economically viable, and 4) promoted the concept of certified seeds as a household necessity in local communities. This last point is particularly important since SEEDS’ marketing and communications strategy aimed to break down the traditional concept of seed as a technical product – a concept which can be off-putting to consumers, particularly BOP consumers (see distribution and marketing, below);
- Stratification of agrodealers into 1) smaller, rurally based retailers or seeds promoters (Lead Farmer CBSPs) and 2) larger, often peri-urban, retailers (merchant CBSPs) put in place the structure for a last mile approach required for SEEDS to tackle the last leg of the supply chain – distributing seeds from semi-urban distribution points to the most remote areas – in Year 2 (described below);
- CBSP stratification also supported the SEEDS partners to tailor their interventions to each CBSP type, and to ensure that a large number of CBSPs were integrated into seed firms’ commercial models. For instance, selected larger merchant CBSPs (who would later become seed distribution hubs) received product on consignment basis and acted as seed distribution points whilst smaller Lead Farmer CBSPs were supported in their role as seed marketers and promoters, using their demonstration plots and field days to market certified seeds but not always directly acting as the point of sale. The sales data (discussed below) supports this argument, by suggesting

that not all CBSPs actually went on to sell seed in their own stores – the remainder, however, was integrated into firms' commercial models through seed fairs and demonstration plots.

## 2. Negotiation between private sector and CBSPs

Initial meetings took place at the beginning of the project between Phoenix/Oruwera senior staff and potential CBSPs. The first negotiations over terms, prices and quantities took place here, often in the presence of senior NCBA CLUSA staff. Subsequent negotiation was dealt with by company sales staff with support from project staff, usually working together as a two-person team or “buddy system”, whereby Oruwera and Phoenix field based sales staff—the face of each firm's CBSP sales program—were accompanied by an experienced CLUSA field technician in all of their activities.

### Findings and Recommendations

- In order to be sustainable, CBSPs networks need to negotiate directly with representatives from the private sector firms with the project remaining as much in the background as possible. NCBA CLUSA's presence most likely meant that many CBSPs failed to fully understand the distinction between project and seed firm. This was a probable cause in the high level of debt outstanding for Phoenix CBSPs (out of the 1,204,155 mt of credit disbursed to 58 CBSPs, around \$6,400 remained unpaid by the end of the project, representing a repayment rate of 71%).
- Donors must be careful not to overestimate the capacity of the Mozambican private sector seed companies, particularly when implementing new sales and marketing strategies such as these. Future projects therefore need to strike a balance which ensures increased direct support in the initial phases, with a subsequent phase out as the project moves into facilitation in its later stages;
- SEEDS found that the success of each firm's CBSP network often depended greatly (and disproportionately) on the capacity of just one



**Oruwera CBSP Helena Joaquim, from Meconta district in Nampula province, shows off the seed she is selling for the first time ever in her community**

or two sales related individuals within the firm. If these team members are not equipped, incentivized, or able to perform their duties well then the whole program is put at risk. Firms should therefore prioritize recruiting, incentivizing, training and maintaining the right staff for the job. Donors can support here, through interventions to improve the wider enabling environment for such models to effectively operate - for instance, through direct training to company staff or support to vocational institutions offering courses for private sector staff) in “Last Mile” and other related sales/distribution models.

### 3. CBSP Training

CBSPs were trained in three modules:

- 1) Introduction to working as a CBSP, introduction to Phoenix/Oruwera and their products
- 2) Basic business skills for CBSPs
- 3) Marketing and customer service

Training took place in Year 1, after CBSP selection, and was then repeated in Year 2 after additional CBSPs were identified. Training took place in small community level groups, with the modules spread out over a period of one month - this allowed for a small group size and a more responsive approach. Phoenix and Oruwera staff participated in the events and were responsible for the technical elements of the training, with NCBA CLUSA taking the lead on the CBSP model and business skills as well as the planning, logistics and general training delivery.

#### Findings and Recommendations

- The lack of formal business support for rural entrepreneurs or microbusinesses is a major challenge for firms who wish to engage such businesses in the sale of seeds and inputs, and for the time being donors necessarily play an important role in filling this gap through projects such as SEEDS. Yet their role should be as facilitation focused as possible. Private sector staff (rather than donor agency) should be trained as trainers in order that they can play the most more active role in training planning and delivery for CBSPs, so that 1) CBSPs understand the business relationship that exists between them and the firm and do not confuse seed sales with donor subsidies, 2) CBSPs are trained on the specific products they are marketing, and 3) business training is directly linked to the business in-hand.
- Donors should also consider developing the institutional environment for agrodealer programs - given the quantity of donors working with agrodealers, this could involve organizations harmonizing their training packages or even working with vocational training institutions to develop an accredited agrodealer curriculum, which would improve and standardize CBSPs' work as well as better place them to market their skills to a range of suppliers. Ideally, this would be done by the same institution that trains private sector staff in managing CBSP networks and installing last mile distribution models;
- Training CBSPs in small, community groups (of not more than around 20 people) and staggering the modules can be an efficient training method since it allows training to be more responsive to CBSPs' needs and improves the absorption of information in small doses, and 2) avoids the high transport and logistic costs of many large, centralized training events. To emphasize the business rather than project focus, and avoid the usual pitfall of many donor projects wherein participants attend training events only to receive some kind of subsidy, SEEDS staff clearly articulated the business focus of the project and ensured that subsidies were limited to a small snack. Trainings were also kept short (around 4 to 5 hours) and held in the morning period, to minimize disruption to participants' days and avoid the need to provide meals.
- Training should be stratified and increase in complexity to enable CBSP cohorts to progress through established stages of CBSP development. Lead Farmer CBSPs require only a very basic level of training to successfully market seeds in their communities (calculating sale prices/margins; placing orders and negotiating terms; simple display and marketing methods; the use of demonstration plots, etc.). Merchant CBSPs require more advanced training in stock control and financial management; engaging with a range of different suppliers; negotiating more complex business terms with suppliers (e.g. credit or consignment); customer service and marketing; establishing a network of smaller CBSP retailers and, later, this the provision of other services in the community such as spraying and other services (in line with the PROFIT model of CBSPs promoted by NCBA CLUSA in Zambia);

### The distribution of seed from company warehouses to CBSPs' stores represented one of the biggest challenges to Phoenix and Oruwera.

- Future training courses for CBSPs and rural microbusinesses should include not only the traditional concepts of how to conduct basic arithmetic, control stock, and balance the books, but also on less often discussed aspects of running a profitable enterprise such as marketing, product placement/ differentiation, branding, customer relations, and consumer orientated marketing, drawing real life examples from the marketing tactics employed by known household brands – concepts which most SEEDS CBSPs were encouraged to consider for the first ever time.

#### 4. Distribution of seeds and the establishment of agrodealer hubs and retailers

The distribution of any product in Mozambique is expensive due to the country's size and poor transport network. This is especially so in the case of seeds, a relatively high value product that in the past has often been distributed free of charge or subsidized, marketed to a price sensitive client group in poorly accessible locations. Thus, the distribution of seed from company warehouses to CBSPs' stores represented one of the biggest challenges to Phoenix and Oruwera.

**Phoenix distribution:** In Year 1 of the project, Phoenix seed was sold through Phoenix organized seed fairs, with some limited CBSP sales. CBSPs were not provided with any credit facility in Year 1 and to obtain seed they needed to purchase it from two district level Phoenix warehouses in Mugema (Alto Molocue district) and Murrimo (Gurué district) or from seed fairs located in various communities in Zambezia province. In Year 2 Phoenix began to provide a limited credit facility and to divide its CBSPs into larger and smaller CBSPs according to a hub and spoke model:

- CBSP hubs: a selected group of Phoenix's larger merchant CBSPs took on the role of storage and distribution hubs. 11 hubs were created and supported to negotiate credit terms with Phoenix, enabling them to receive product on consignment basis and re-sell this to their own network of smaller CBSP retailers (spokes). In some cases, hubs also acted as storage and distribution points for Phoenix, by receiving Phoenix product and storing it at their stores until it could be collected by Phoenix clients (without the product changing ownership from Phoenix to the agrodealer – the agrodealer merely acted as the intermediary until collection or onward distribution). This was the case with the Phoenix Nampula hub AgroDalton, who received product when it arrived in Nampula by truck and stored it at his warehouse until it was collected by Phoenix's agribusiness clients in Nampula province – this was a vital service for Phoenix, since the firm lacked any formal representation or storage facility of its own in Nampula province.
- The provision of a credit facility undoubtedly helped Phoenix to increase its seed sales in Year 2. In total, 58 Phoenix CBSPs (hubs and smaller CBSP retailers) received seed on credit throughout the three provinces (amounting to 12,723 kg of product to the wholesale value of 1,204,155 mt, or around \$22,000). However, this strategy exposed Phoenix to risk and at the end of the campaign 345,620mt or \$6,400 remained in outstanding debts, which represents a 71% repayment rate (see figure 2 - next page).

- In order to deliver seed to its hubs, Phoenix managed two drop off points between Manica and Nampula: at 1) Alto Molocué (en route to Nampula) and 2) Nampula City. At Alto Molocué product was stored at Phoenix's main Molocue Hub, Felix Correia, and then distributed with CLUSA support to CBSP retailers located in the Alto Molocué and Gurué districts. Felix Correia also received product on consignment basis for re-sale to clients (both CBSP retailers and end clients). In Nampula City product was received by AgroDalton – a part of this was received on consignment basis for re-sale to end clients and CBSPs retailers (such as Sr. Helder in Namigonha), and another part was stored by AgroDalton until further collection by Phoenix's Nampula province clients, as discussed above.

CLUSA staff played an active role in this delivery process: not just by physically distributing product by also by communicating hub demand to Phoenix, supporting Phoenix to coordinate its drop-offs and, at times, even supporting in the unloading of trucks if there was no one else available to support.

**Oruwera distribution:** In Year 1 Oruwera opted for individual distribution to CBSPs' stores on credit. As was the case with Phoenix, NCBA CLUSA staff provided some logistical support for deliveries, but never the less this was still a costly delivery mechanism. In Year 2, the same delivery method

**Figure 2: Seed sold on credit to Phoenix CBSPs, and outstanding debts, 2016/17 campaign**

	Quantity of seed sold to CBSP (kg)	Value of sale to CBSP (mt)	credit still to Pay (mt)
Maize	5,666	444,910	98,230
Soy	3,305	299,080	48,730
P Pea	2,820	329,685	109,620
S Bean	932	130,480	89,040
<b>Total Seed</b>	<b>12,723</b>	<b>1,204,155</b>	<b>345,620</b>

was used; however, unpaid debts of around \$4,000 out of a total of around \$8,000 in credit (or a repayment rate of around 50%) during the first campaign meant that Oruwera removed the credit option and sold on a cash-only basis in Year 2. Although this approach reduced Oruwera's exposure to risk it meant that the firm sold seed through only 3 CBSPs and its Alto Molocue store in Year 2, compared with 13 CBSPs in Year 1 (since few had access to or were willing to invest their own funds). In Year 2, Oruwera, on paper, played with the concept of offering alternative payment and delivery options to its CBSPs – for instance in theory they could broker product on behalf of Oruwera or take advantage of discounts for purchasing in bulk or collecting from Oruwera's main warehouse. In practice, however, no CBSPs actually took these options up since there existed no formal, established pricing/sales/delivery policies within the company which set these options out or ensured that all company staff knew of them and were able/incentivized to promote them.

## Findings and Recommendations

- Phoenix's Last Mile approach using hubs and retailers appears to be the most viable option for seed firms and CBSPs. In comparison, Oruwera's distribution method of delivery to CBSPs' stores likely contributed to lower seed sales and a limited reach geographic reach. However, Phoenix's apparently more successful mechanism still required intense support from CLUSA and, despite efforts to support Phoenix to develop formal relationships with its collection hubs in Nampula and Alto Molocue, at the time of writing concerns remain regarding Phoenix's ability to manage these activities itself in future campaigns. This is a good example of the challenge that donors face in balancing the need for a hands-on role in supporting the private sector in the short term, whilst also guaranteeing longer term sustainability;
- Unfortunately, it takes more than two sales campaigns to establish a large, fully functioning, and commercially viable network of hubs and retailers. Seed firms, hubs and retailers require intense support

in identifying and forming commercial relationships, business development skills, stock control, credit management, marketing, negotiating beneficial terms for services such as delivery/storage depot services offered, mounting and managing small demo plots, etc.

- Smart incentives will need to be applied in the early stages whilst an integrated business model is established, which could include support and tangible resources for Lead Farmer CBSPs in mounting and managing demonstration plots and field days, support for hubs in identifying and forming business relationships with their retailer networks, the provision of additional monitoring, follow up and control for hubs to buy down the risk of the private sector supplying on credit, etc.;
- In order for the hub/retailer network function, both the demand and supply aspects must be met in such as:

1) there must be sufficient demand for certified seed amongst smallholders, (it is here where donors have a significant role to play, as do smaller Lead Farmer CBSPs, through demonstrations and other interventions);

2) seed firms must be able to consistently supply hubs with seed, either by delivering directly to their stores or ensuring that seed is available at urban and peri-urban warehouses where hubs stock up on other products for re-sale at their stores, and

3) some form of credit or consignment facilities must be available to larger CBSPs or hubs—ideally from the firm, if the firm can assume and manage this risk.

Point 2 was one of the biggest challenges for SEEDS. The project found that the supply side was as much of a challenge as demand – even where



Nampula city-based agrodealer Amilcar Dalton (pictured left) is owner of AgroDalton, one of three agrodealer hubs in Nampula province. SEEDS coordinated the initial contact between Phoenix and Dalton, arranging for Phoenix staff to visit his store and begin business negotiations in terms of products, price, quantities, and delivery/payment terms. From there, SEEDS staff supported Dalton in placing his seed orders and assisting in coordinating the delivery process from Phoenix farm to AgroDalton. With recommendation from NCBA CLUSA and regular technical assistance from the SEEDS project, Phoenix has felt confident

enough to provide stock on consignment basis, increasing AgroDalton's sales volumes.

This relationship was a win-win situation, with Dalton benefitting from increased income from seed sales and Phoenix benefitting from the fact that AgroDalton served as its Nampula storage and distribution point - an invaluable resource for Phoenix since it lacks its own storage facilities, physical presence, or staff in Nampula province. AgroDalton has played a pivotal role in receiving trucks carrying Phoenix product from the farm in Manica, overseeing its unloading and transport to his own warehouse for temporary storage, and coordinating the receipt and dispatch of 110 tons of Phoenix seed to other buyers such as other agrodealers, individuals, and commercial farms in Nampula province during the 2016/17 campaign. That represents 113 tons of seed (enough to sow around 5,500 ha of land) which wouldn't have reached Nampula province if it hadn't been for SEEDS' intervention.

agrodealers did demand more seed, the private sector was often unable to supply this in the required quantities and at the right time. Human resources and organizational issues were often to blame for this, and in Year 1 especially. Future interventions should not underestimate the level of support that Mozambican private sector seed firms require in terms of their day to day operation activities (seed production, processing, packaging, distribution, etc);

- The process of hub/spoke creation should be hub-led, and hubs should be identified before spokes - in other words, the opposite of SEEDS' experience. Hubs themselves, with private sector/project support in the initial stages, should identify CBSP retailers in their surrounding areas. This would ensure that

In terms of increasing sales volume, SEEDS' experience suggests that credit terms from the seed company is by far the best option.

each hub's network of retailers is a demand driven activity imbedded in its business model. This would also address the quantity versus quality dilemma, wherein a large number of less active CBSPs are identified in order to meet project demands (see sales analysis below) yet few of these are really trading seed;

- In order to increase seed firms' geographic presence seed companies should create more established, long term and mutually beneficial trading relationships with more organized hubs who can perform an additional collection and onward delivery function, such as AgroDalton in Nampula. This would allow both Phoenix and Oruweru to increase their presence in other provinces (e.g. Cabo Delgado or Niassa provinces), not just through CBSP sales but also through

direct company sales with the support of hubs as onward forwarding agents. Note that the success of such relationships depends on the dynamism and capacity of seed companies' sales teams. In Phoenix's case, an informal relationship was created with AgroDalton yet the firm has yet to formalize this or to establish fixed incentives for AgroDalton to continue playing this role;

- Seed firms should explore alternative pricing, delivery and sales mechanisms for their CBSPs, such as brokerage, discounts for collection or the type of relationship that Phoenix loosely established with AgroDalton (above). The private sector would benefit from specialist external support in developing and institutionalizing such mechanisms - for instance, donors may wish to contract consultants to support them to develop sales, marketing and distribution plans, as took place for both Oruweru and Phoenix during the SEEDS project. However, this will only be effective if firms are able and willing to follow-up on the subsequent reports and recommendations, turning them into concrete actions and institutionalized company policies. This includes ensuring that their sales teams are sufficiently dynamic, trained, incentivized and provided with the necessary resources to administer the recommendations and plans that arise from consultancy assignments. Too often this is not the case and resources are not put to good use;
- Finance is a key issue in order for agrodealer networks to function. Seed firms/CBSPs can consider external financing options such as microfinance from financiers like Gapi and Banco Oportunidade de Moçambique. SEEDS's experience of supporting 7 CBSPs to obtain finance from Banco Oportunidade in Year 1 suggested however that, with a monthly interest rate of 4% and with low CBSP sales turnover, this option was unviable. In addition, some CBSPs may be good candidates for matching grants from projects such as the World Bank funded Sustenta/Landscape program, if they are

able to raise the required cost-share. In terms of increasing their sales volume, SEEDS' experience suggests that credit terms from the seed company is by far the best option – indeed, nearly all successful agrodealers in neighboring countries such as Zambia receive product on credit from suppliers. Yet firms need to conduct a careful cost-benefit analysis of supplying on credit since some losses are inevitable, especially in the early years whilst CBSP networks are being consolidated. Firms should also look to alternative sales strategies which involve CBSPs without granting credit, such as seed fairs (see below) and the rental of company managed district level warehouses;

- Future agrodealer interventions should expand into other value chains and/or products/services, particularly those with nutritional or other benefits. SEEDS began this through facilitating meetings between some Nampula province CBSPs and the International Potato Centre (CIP)'s Vista program, promoting the use of sweet potatoes, with a view to some CBSPs being producers of sweet potato or retailers of sweet potato vines. One CBSP hub in Alto Molocue (Felix Correia) was also supported to supply hand and foot pumps promoted by the USAID funded NGO Kickstart and SEEDS facilitated him to conduct various demonstrations for neighboring farmer groups. Other potential partnerships for future interventions could include solar panels, vegetable seeds and low cost irrigation systems, offering services, purchasing off-take etc.

## 5. Seed Fairs

In order to address the lack of working capital for CBSPs to purchase seed for sale in their stores during Year 1, Phoenix opted to pursue a community seed fair strategy. Seed fairs are not to be confused with the agricultural input relief programs previously carried out by the Government and other partners. Phoenix community seed fairs involved Phoenix renting two district level warehouses from which regular seed sales events were organized directly

outside the warehouses and in surrounding strategic locations at the times and locations of existing weekly community market days. Phoenix staff were responsible for managing the warehouses and seed fairs and selling seed directly to the public. CBSPs (i.e., smaller Lead Farmer CBSPs) were involved as demand stimulators, responsible for aggregating demand from their neighbors and encouraging them to purchase seed at the seed fairs, receiving in return a commission of 2 mt per kilo of seed sold through their efforts (issued to them in the form of a voucher which was redeemed at the end of the event). Many CBSPs also attended seed fairs in order to purchase seed for re-sale in their own stores;

Seed fairs were made as dynamic as possible, with participation from a range of partners (CLUSA PROMAC and Mozfert fertilizer), the use of sound systems, music, seed demonstrations, banners, and project and Phoenix marketing material/merchandise. The events were marketed through community radio, leaflets, and posters as well as by mobilizing the participation of PROMAC supported farmer groups. A total of 29,860 kg tons of seed were sold through Phoenix seed fairs in Year 1, decreasing to 7,421 kg in Year 2 as a result of a changing focus of resources away from sales (a Year 1 strategy to counter the lack of working capital for CBSPs) to seed sales through CBSP network with a credit facility.

## Findings and Recommendations

- Seed fairs represent an innovative and successful method of engaging smaller CBSPs without access to working capital in seed companies' commercial model, without the need to introduce credit. They also reduce the risk to the private sector since stock remains in the firm's control, at their own premises, and is managed by their own staff. Distribution costs are reduced since firms are able to cost effectively move product around from one community to another on a regular and responsive basis, in addition to distributing to CBSPs for further re-sale in their own stores.
- The issuance of commission in the form of vouchers to be redeemed at the end of the day - as opposed to

simply paying out cash at the moment of transaction - acts as a strong psychological motivation for CBSPs to engage in demand aggregation;

- Seed fairs are an excellent marketing opportunity for seed firms to increase visual presence in rural communities. The more audio/visual and interactive the better, therefore firms should invest in their marketing materials and branded merchandise, such as tee-shirts, pens, baseball caps, sample bags, banners, sound systems, music, etc. Community radio should also be harnessed, as well as alternative platforms such as the NCBA CLUSA-managed Extensão Multimedia platform. Fairs also reduce the distance between company and smallholder clients, providing the opportunity for consumers to interact directly with the company;
- The most strategic locations for fairs are those with regular and highly attended market days. Smallholders, who largely rely on word of mouth, respond well to consistency of fair location and timing, so firms should endeavor to be at the same location on the same day every week;
- Firms should leverage as much support from partners as possible, for instance by engaging the participation of donor managed projects, other suppliers of inputs/ other products, financial institutions and other stakeholders. This increases the range of complementary services on display and also transforms seed fairs into more dynamic events;
- Phoenix's seed fair strategy was in part subsidized by SEEDS in terms of logistics, marketing, and staffing. Future projects will need to seek ways to avoid this. In addition, in order to both free up Phoenix staff and to increase the scope of the seed fair strategy, in the future seed companies should engage with and support CBSPs so that they can organize their own fairs. This would involve providing training, incentives, marketing materials and logistic support to selected, more dynamic CBSPs.

## 6. Marketing and Promotion

From the outset of SEEDS it became apparent that branding and marketing were going to be key features of the project. Activities included:

- Developing a SEEDS logo for branding CBSPs' stores as well as stencils to enable a cost-effective method to paint numerous stores at minimum cost; This made SEEDS supported CBSPs immediately recognizable in their communities. Such branding activities could lead on to future interventions along the lines of those implemented by NCBA CLUSA in its Yayeende project in Senegal, whereby CLUSA has supported the creation of an agrodealer franchise, Culti Vert.
- Participation of both SEEDS and its private sector partners at district, provincial, and national levels (field days, launches of the agricultural year, seed fairs organized by other partners, agricultural fairs, provincial trade fairs, the national FACIM exposition in Maputo, etc.);
- An investment in SEEDS' and the private sector firms' marketing capacity – banners, rollups, leaflets, signs for CBSP stores, painting stores, tee-shirts, sample packs of seed, etc.;
- Developing the SEEDS project motto, "treating seeds like any other product." This became known as the key differentiator between SEEDS and other agrodealer approach;
- Local radio marketing programs;
- Partnering with existing extension and marketing platforms, e.g. Extensão Multimedia for marketing of seeds;
- Phoenix Seeds held a professional launch of the 2016/17 season product to key stakeholders in Maputo.

### Findings and Recommendations

- One advantage of an undeveloped seeds market is the opportunity that this presents to firms who wish to move ahead of the competition, particularly in the case of marketing. In addition, the nature of the smallholder market means that consumers can be best reached through relatively unsophisticated and cost effective marketing strategies. Firms should invest in low cost visual marketing tools, something

which Phoenix in particular did well during SEEDS' implementation through: the use of distinctive, original, and eye catching designs on its branding, packaging, and marketing materials; distribution of branded merchandise; painting strategic rural locations (market place walls, prominent shop fronts and community reference points); signage for CBSPs' stores; distribution of sample packs and by paying considerable attention to its logo design (which the firm's MD Kevin Gifford is regularly tweaking to improve its effectiveness). Fortunately for seed firms, many CBSPs will allow seed companies to paint their stores with company branding if this comes at no cost to them. Seed companies should take advantage of this opportunity to market their product with minimum investment;

- Seed companies should use micro-packaging, after first conducting market research to establish their target market's needs and preferences;
- Phoenix's strategy of a professional product launch in Maputo in 2016 was an innovative and refreshing way to approach seed marketing, drawing lessons from other non-seed-related products. Events such as these increase the visibility and perceived professionalism of seed companies amongst local and international stakeholders;
- Seed in Mozambique has for many years been treated as a special case - protected by guaranteed sales to government and NGOs, and distributed to smallholders for free. Yet NCBA CLUSA argues that seed firms should use the same market driven, commercial, and competitive approach used with any other product aimed at BOP clients. This begins with removing seed marketing from the realms of science and technology. A prime example of this is in its name. Any product manufacturer understands that the product name is of key importance to its sale, yet the seed industry continues to market seed to smallholders using its scientific nomenclature, such as maize MZ523 and Soya TGX 1904-6F.

Although some varieties are marketed under their commercial names like maize Matuba, which most farmers easily recognize, there are numerous examples to the contrary. Smallholders are not scientists and they do not need to know the technology behind what they are buying, only its end result: higher yields, shorter cycles, drought resistance, etc. The pharmaceutical industry, for instance, markets the painkiller Advil under its commercial name, rather than calling it a non-steroidal anti-inflammatory drug containing ibuprofen. For seed companies to sell more seed to smallholders they need to de-mystify their product and make it appeal to their target audience.

## 7. M&E, data collection, and marketing metrics

Sales data was inserted into databases which enabled the analysis of the following datum: company, name, location (province, district, and community), date of sale, product sold, volume sold, and price. Data collection was made difficult by the fact that some CBSPs failed to keep complete sales records, alleging that clients did not wish to leave their names or contact details, that they themselves

**Seed firms should use the same market driven, commercial, and competitive approach used with any other product aimed at BOP clients.**

were too busy to collect client data, or that their sales staff did not have the required literacy skills. SEEDS suspects that the main reason was CBSPs' lack of interest or commitment, therefore the field team endeavored to convince them of the advantages to be gained by better data collection (e.g. for the marketing of new products in stock, etc.). These are all important elements for CBSP training in marketing and customer service. Seed suppliers should work with their CBSP networks to ensure that they collect sufficient data, for their own Know Your Client and other marketing purposes.



Phoenix Seeds Agrodealers train with the company

In addition to the above data, the GPS coordinates were collected for each CBSP in order to form a CBSP database. From these, some limited mapping was undertaken using Google maps.

### Findings and Recommendations

- Firms should fully plot the geographical location of all of their CBSPs and other agrodealers in order to better plan the placement of CBSPs (avoiding excessive competition in a single area) and support larger CBSPs to develop networks of smaller retailers. Ideally, a single entity/organization would make itself responsible for the overall plotting of all CBSPs and other agrodealers (along with other agribusiness services) and make this data available to other stakeholders, though no single entity has yet done this in Mozambique;
- Few (if any) seed companies have yet developed an effective targeted marketing

strategy aimed at the BOP market. SEEDS only touched the surface of what could be done using CBSP and client demographic analysis, the plotting of geo coordinates and IT based market and data analysis systems. Various low cost IT packages exist (some free of charge from the internet) for the collection of socioeconomic, demographic, and other client data which would enable the private sector to better respond to its target market. This would enable seed companies to conduct more complex demographic analysis and market stratification/segmentation, better target their products and position the firms to better respond to the needs of smallholders;

## SEED SALES

This section discusses SEEDS results in terms of the sale of certified seed during the project. Some potential patterns in company performance and smallholder seed demand will be discussed, however NCBA CLUSA cautions that two agricultural campaigns is

Figure 3: Key sales data, 2015/16 and 2016/17 campaigns

Indicator	Unit of measurement	Year 1, 2015/16		Year 2, 2016/17		Total		
		Oruwera	Phoenix	Oruwera	Phoenix	Oruwera	Phoenix	Both firms
Seed sold (total)	kg	3,236	34,996	69,184	93,100	72,420	128,096	200,516
Seed sold (fairs & warehouse)	kg	24	29,860	67,703	7,421	67,727	37,281	105,008
Seed sold (stores)	kg	3,212	5,136	1,481	85,679	4,693	90,815	95,508
% of seed sales volume from stores	%	99%	15%	0%	92%	50%	53%	51%
Total value of seed sold	mt	66,402	2,428,643	9,570,910	12,457,257	9,637,312	14,885,900	24,523,212
Total value of seed sold	\$ (forex: 55mt/\$)	1,207	44,157	174,017	226,496	175,224	270,653	445,877
Total # of smallholder clients (total)	Unique clients	456	2,283	10,654	7,111	11,063	9,276	20,197
Total # unique clients (stores)	Unique clients	434	1,018	1,201	6,764	1,635	7,782	9,417
# CBSPs contracted	total number	32	105	4	253	36	253	289
# CBSPs selling seed in stores	Number	12	46	3	57	15	103	118
% CBSPs selling seed	% of total CBSPs	38%	44%	100%	23%	69%	33%	51%
Av # clients per store	Average number	36	22	56	119	46	71	59
Av purchase size (fairs)	kg per unique client	1	23	7	16	4	20	12
Av. purchase size (stores)	kg per unique client	7	5	1	13	4	9	7
Av purchase size (total)	kg per unique client	7	15	6	13	7	14	11
% of clients making repeat purchases (stores)	%	6%	2%	9%	16%	8%	9%	8%
% of clients making repeat purchases (fairs & WH)	%	2%	36%	2%	2%	2%	19%	10%
% of clients making repeat purchases (total)	%	11%	23%	5%	15%	8%	19%	14%
# of Yr 2 clients who are repeat purchasers from Yr 1	# of clients					47	118	263
% of Yr 2 clients who are repeat purchasers from Yr 1	% of Year 2 clients					10%	5%	10%

insufficient time to draw any solid conclusions from the available data. Note that the figures below are all in kilograms and include all value chains, including maize seed, and all seed sales made with SEEDS support through the companies' warehouses, seed fairs, and CBSP agrodealers' stores. Where a conversion has been made, an average forex rate of 55mt/\$ has been used.

## 1. Total seed sales and number of smallholder clients

### *Total sales, 2015/16 compared with 2016/17*

In total, Phoenix and Oruwera sold 203,861 kg of seed during the two sales campaigns. This amounted to 24,950,882 mt or around \$453,652 (assuming an average exchange rate of 55 mt/kg) in sales revenue to CBSPs. Sales were significantly higher for both firms in Year 2 than in Year 1 – 38,232 kg was sold in Year 1 compared with 165,269 kg in Year 2. This was in part due to the donor's decision to open up seed sales in Year 2 to include sales made to smallholders through each company's own warehouses. Other factors also contributed to lower sales in Year 1, such as adverse climatic conditions (droughts in Manica province reduced Phoenix's bean stock, and flash flooding in Nampula province reduced Oruwera's production in general), economic factors (climatic

problems and a contracting national economy led to reduced food security and reduced spending power in for smallholder farmers and CBSPs), and lower private sector capacity to produce, process and distribute seed in Year 1 (particularly for Oruwera, who distributed seed late and had only sesame seed available in large volumes.)

In total, seed was sold to 20,197 unique smallholder clients during the project. Overall Oruwera sold to more smallholders than Phoenix, but this is due to the fact that many of Oruwera's Year 2 sales came not from direct seed sales to smallholders but as indirect sales as part of smallholder seed bank schemes managed by various NGOs, which benefitted a large quantity of smallholders, each acquiring a small volume of seed as part of the seed bank program. Analyzing the sales data from only CBSPs' stores, however, Phoenix CBSPs sold to more clients than Oruwera CBSPs – 7,764 versus 1,635 smallholders respectively - a difference which is accounted for by the larger scope of Phoenix's CBSP program in comparison with that of Oruwera (discussed in more detail below).

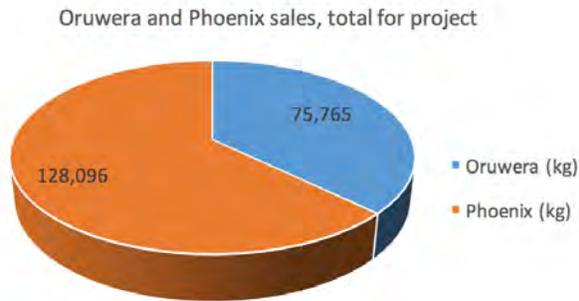
### *Seed sales per partner*

Phoenix contributed to the vast majority (91%) of total sales in Year 1. This was due to the firm's stronger

Figure 4: Total seed sales

Indicator	Unit of measurement	Year 1, 2015/16		Year 2, 2016/17		Total		
		Oruwera	Phoenix	Oruwera	Phoenix	Oruwera	Phoenix	Both firms
Seed sold (total)	kg	3,236	34,996	72,529	93,100	75,765	128,096	203,861

Figure 5: Total seed sales, per partner, Years 1 and 2



The private sector's capacity and, critically, willingness to respond to CBSPs' demands is a key factor in the success of those networks.

capacity in terms of managing its CBSP program, in addition to an investment in a seed fair strategy in order to face the climatic and macroeconomic challenges of the 2015/16 campaign. Oruwera's contribution to project sales increased from 9% in Year 1 to 39% in Year 2 due to the fact that in the second year, with donor concurrence, SEEDS supported Oruwera to market seeds directly from its warehouse to clients who then distributed product to smallholder farmers through commercial channels such as seed bank and outgrower programs (resulting in over 67 tons of seed sales from Oruwera's central warehouse during Year 2).

Over the entire project, Oruwera and Phoenix sales accounted for 37% and 63% of total project sales, respectively. The greater success of Phoenix's CBSP network in comparison with that of Oruwera can be attributed to various factors, an analysis of which can help both firms improve and refine their sales strategies in future years:

- Phoenix's CBSP expansion into Manica province in Year 2 (which accounted for over 63,854 kg of seed sales, or 69% of Phoenix's total seed sales for the year), where Phoenix worked with 18 agrodealers. The agricultural industry is more developed in Manica province and Manica

CBSPs have a higher capacity to sell seed, with many of them possessing previous experience in selling seeds and inputs. There still exists space for serious seed companies to take advantage of this market, and both firms would do well to try to take advantage of the "easier pickings" represented by Manica province in future years:

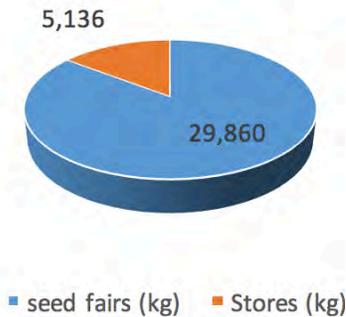
- Phoenix's decision to offer a credit facility for 58 SEEDS supported CBSPs. In contrast, Oruwera's decision not to continue supplying seed on credit in the second year, instead relying on CBSPs with their own working capital, meant that the firm worked with just 4 CBSPs in Year 2;
- In both years, Oruwera's reduced logistic capacity made the firm less responsive to the demands of CBSPs who, even having their own funds for seed purchases, were at times not effectively responded to by the firm. Company strategy also played a part, and it is likely that at times Oruwera took the decision to focus more on bulk sales from its central warehouse, which represented a more cost efficient sales channel. The lesson to be drawn from this is that the private sector's capacity and, critically, willingness to respond to CBSPs' demands is a key factor in the success of those networks. Until smallholder sales become a more attractive option to the private sector they will continue to focus human and other resources in bulk sale channels such as NGOs, government and agribusinesses.

Figure 6: Seed sold per sales channel

Indicator	Unit of measurement	Year 1, 2015/16		Year 2, 2016/17		Total		
		Oruwera	Phoenix	Oruwera	Phoenix	Oruwera	Phoenix	Both firms
Seed sold (total)	kg	3,236	34,996	72,529	93,100	75,765	128,096	203,861
Seed sold (fairs & warehouse)	kg	24	29,860	67,703	7,421	67,727	37,281	105,008
Seed sold (stores)	kg	3,212	5,136	4,826	85,679	8,038	90,815	98,853
% of seed sales volume from stores	%	99%	15%	0%	92%	50%	53%	51%
Total value of seed sold	mt	66,402	2,428,643	9,998,580	12,457,257	10,064,982	14,885,900	24,950,882
Total value of seed sold	\$ (forex: 55mt/\$)	1,207	44,157	181,792	226,496	183,000	270,653	453,652

Figure 7: Phoenix sales through seed fairs and stores, Years 1 and 2

Phoenix sales per sales channel, Year 1



Phoenix sales per sales channel, Year 2



## 2. Sales per sales channel (CBSPs' stores, seed fairs and warehouse sales)

### Phoenix

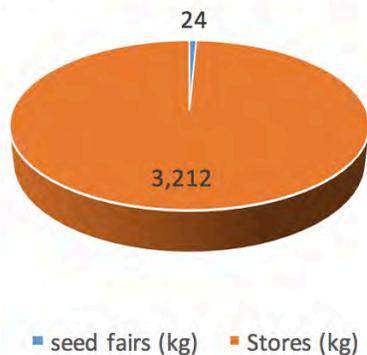
During the first year, 85% of Phoenix seed sales were conducted through seed fairs. 15% of sales were made from agrodealers' stores which, given that there was no credit facility available in Year 1, was a promising sign that local entrepreneurs even at the start of the project saw the value in setting up as seed retailers and using their own funds to purchase seed for re-sale.

The proportion of Phoenix sales from CBSPs' stores increased to 92% by Year 2. This change in focus was largely a result of:

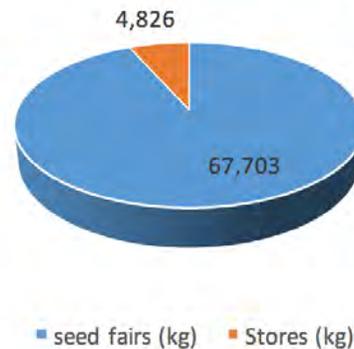
- Phoenix's decreasing focus on seed fairs and increased focus on creating hubs/retailers, combined with the decision to supply seed on credit/consignment basis during Year 2;
- As hubs were better stocked, smaller CBSP retailers were better able to access seed for re-sale in their own stores.

Figure 8: Oruwera sales through seed fairs and stores, Years 1 and 2

Oruwera sales per sales channel, Year 1



Oruwera sales per sales channel, Year 2



- The involvement of 5 CBSPs in the FAO e-voucher program, which in 2017 included Manica, Zambézia (Gurue and Alto Molocue), and parts of Nampula province (Ribaue, Namigonha and Malema);
- Ongoing farmer awareness raising, training and technical assistance through SEEDS' extension team, PROMAC, SEEDS/Phoenix promotional events, etc.;

### Oruwera

Oruwera did not opt for a seed fair strategy in either year. Oruwera management felt that, in contrast to Zambézia province, the community level demand in Nampula province was not yet great enough to justify the use of human and other resources on community fairs, and that resources would be more wisely spent on consolidating the CBSP network. In Year 1, seed was delivered directly to CBSP stores on a credit basis (accounting for 96% of Oruwera's Year 1 sales). In Year 2, Oruwera sold seed through two main channels: 1) CBSPs' stores, with no credit facility and 2) warehouse sales made to smallholders via NGO managed seed bank programs (representing the bulk of sales in Year 2). This shows that, despite SEEDS' efforts to develop Oruwera's CBSP network, by far the most successful sales strategy for Oruwera was the sale of seed directly from the central warehouse, and in neither year was Oruwera able to generate any significant volume of sales through its CBSP network (with CBSP stores selling 3,212 kg in Year 1 and 4,826 kg in Year 2 – and the majority of Year 2's CBSP store sales were made through the Oruwera owned store in Alto Molocue, rather than from independent CBSPs).

As mentioned above, the causes of this probably include not only a lack of Oruwera product in Year 1 but also Oruwera's focus of resources on bulk sales, in addition to reduced demand for certified seed in Nampula province (with no Promac

project to stimulate smallholder demand through demonstrations).

### 3. The number of CBSPs trading seed from their stores

In Year 1 Oruwera trained and contacted 32 CBSPs, 38% of which were active CBSPs trading seed from their stores during that year. The remaining 62% were contracted but remained inactive due to the lack of stock and low Oruwera capacity to supply product on time (mentioned above). Thus, some CBSPs expressed frustration at the unavailability of seed for re-sale during Year 1. By Year 2, Oruwera was supplying seed to only 3 active CBSPs, all of whom were actively trading seed with their own funds, in addition to the Oruwera store in Alto Molocue. The remaining CBSPs who had been contracted in Year 1 were inactive in Year 2.

In Year 1, Phoenix trained and contracted 105 CBSPs. Forty-six, or 44%, of these were actively selling Phoenix seed from their stores. The remaining 56% were involved in seed sales as PROMAC Lead Farmer promoters, using their demonstration plots to stimulate demand, or by earning a commission through aggregating demand at seed fairs. 44% may appear to be a low percentage, but given the lack of credit facility from Phoenix during the first year, in addition to macroeconomic factors that limited CBSPs' spending power, the fact that almost half of CBSPs did actually invest their own funds in purchasing seed for re-sale was a promising sign for the project – especially given the fact that this the first year that CBSPs had been involved in this kind of activity.

Although the number Phoenix contracted CBSPs increased from 100 in Year 1 to 200 in Year 2 (in line with project milestones), the number of active CBSPs who were actually buying and re-selling seed from their stores increased only marginally from 46 in Year 1 to 57 in Year 2. Those who were not selling seed from their stores were either earning a commission by aggregating seed demand at seed fairs or were,

Figure 9: CBSPs trading seed from their stores

Indicator	Unit of measurement	Year 1, 2015/16		Year 2, 2016/17		Total		
		Oruwera	Phoenix	Oruwera	Phoenix	Oruwera	Phoenix	Both firms
# CBSPs contracted	total number	32	105	4	253	36	253	289
# CBSPs selling seed in stores	Number	12	46	3	57	15	103	118
% CBSPs selling seed	% of total CBSPs	38%	44%	100%	23%	69%	33%	51%

Figure 10: Average purchase sizes per client

Indicator	Unit of measurement	Year 1, 2015/16		Year 2, 2016/17		Total		
		Oruwera	Phoenix	Oruwera	Phoenix	Oruwera	Phoenix	Both firms
Av purchase size (fairs)	kg per unique client	1	23	7	16	4	20	12
Av. purchase size (stores)	kg per unique client	7	5	4	13	6	9	7
Av purchase size (total)	kg per unique client	7	15	7	13	7	14	11

in some cases, inactive agrodealers (meaning that they were contracted by Phoenix on paper but in practice they were not trading seed for various reasons, primarily a lack of working capital for purchasing stock). This situation seems surprising given the several growth factors which would lead one to expect a more significant increase in the number of CBSPs actively involved in selling seed in Year 2, such as: a shifting focus from seed fairs to CBSPs' stores during Year 2; the availability of credit terms, for some CBSPs, in Year 2; and Phoenix's entering in Manica province, where the agribusiness environment is more dynamic and seed demand is greater. The conclusion to be drawn from this is that CBSP networks need to be market, not project, driven. They should be in line with CBSPs' capacity to purchase/re-sell seed, the market demand for seed, and seed firms' capacity to supply and manage their CBSP networks. The creation of a large number of CBSPs just to meet arbitrary project milestones is not an efficient use of funds. Whilst seed companies can and should explore other ways of engaging CBSPs in their commercial models, as Phoenix did with seed fairs for instance, the lesson is clear: CBSPs must fit into firms' commercial models and should not be created for the sake of it.

#### 4. Average purchase sizes per client

In Year 1 the average Phoenix smallholder client made larger purchases at seed fairs than from CBSP stores. This can be accounted for by the fact that Phoenix chose to focus on soya sales at many of its seed fairs, in order to rid itself of large volumes of soya stock, and soya has a higher seed sowing rate per hectare (kg of seed/ha) than other value chains such as beans and maize. There also may be other social or cultural factors at play that meant that smallholders spent more money at seed fairs than in CBSPs' stores, which is something that seed companies should explore when making marketing decisions.

In Year 2 SEEDS saw an overall increased average purchase size for Phoenix CBSP store clients. The average Phoenix CBSP store purchase size (taking into account all three provinces) increased from 5 kg/client in Year 1 to 13kg/client in Year 2. For the more developed Manica CBSPs the average purchase size was 13.6kg each in Year 2, whilst for Phoenix's smaller Nampula/Zambézia stores the

increase was slightly less, from 5 kg/client in Year 1 to 10.5kg/client in Year 2.

The Oruwera figures, however, show no change in purchase sizes, which is consistent with Phoenix's average purchase size from seed fairs (which decreased from Year 1 to Year 2). It is unclear why Phoenix clients were making larger purchases from CBSPs' stores whereas the opposite was the case for Phoenix seed fairs and for Oruwera, since both

Figure 11: Average purchases sizes, per partner and per sales channel, Years 1 and 2



Figure 12: Number of clients per CBSP store, Years 1 and 2

Indicator	Unit of measurement	Year 1, 2015/16		Year 2, 2016/17		Total		
		Oruwera	Phoenix	Oruwera	Phoenix	Oruwera	Phoenix	Both firms
Av # clients per store	Average number	36	22	56	119	46	71	59

companies increased the price of their seed by around 30% and both were subject to the same macroeconomic factors affecting the country during the product. It is likely that Phoenix's CBSPs' stores benefited from positive effects of efforts to stimulate smallholder demand through demonstration plots and Lead Farmers in Zambézia province, whereas Oruwera did not.

Regardless of the differences between companies, provinces and campaigns, in general the results show a low average purchase size that is less than the requirement to plant an average farm size or around 1 ha. This is in line with the field observation that smallholders are not prioritizing the use of certified seed for the whole of their farms, often purchasing small amounts of certified seed at first. This is often maize, used as a trial crop at the start of the campaign to test the success of certified seed, with farmers then going on to sometimes purchase other seeds for perhaps one or two other value chains (often selecting cash crops), usually for only a part of the total area. Therefore, much work still needs to be done to understand and tackle the cultural, economic and social factors which affect smallholders' on-farm decision making to increase their trust in certified seed, to encourage them to invest their resources in certified seed for their whole farm, and to understand what drives smallholders to part with their money.

Figure 13: Number of clients per CBSP store, Years 1 and 2



## 5. Clients per CBSP store

The average number of clients per active CBSP store increased from Year 1 to Year 2 (see figure 12 above). The number of unique clients per store for Oruwera CBSP stores remained low, rising from 36 in Year 1 to just 56 in Year 2. (Note that sales from the Oruwera store in Alto Molocue were not included in these figures, since although this store sold to smallholders it was Oruwera-managed, not CBSP-managed stores). For Phoenix the average number of clients increased from 22 per active CBSP store in Year 1 to 119 in Year 2 - this large increase is largely because of the inclusion of Manica province agrodealers in Year 2 and sales from the Phoenix managed Manica store. However, even taking into consideration only the Nampula and Zambézia CBSPs (ignoring the Manica figures) Phoenix still saw a considerable increase from 22 clients per active CBSP store in Year 1 to 53 clients in Year 2. This indicates an increased demand for seed and increased viability of seed trading as a commercial operation for rural entrepreneurs, and is a very promising sign for future agrodealer interventions.



Figure 14: Repeat Purchases

Indicator	Unit of measurement	Year 1, 2015/16		Year 2, 2016/17		Total		
		Oruwera	Phoenix	Oruwera	Phoenix	Oruwera	Phoenix	Both firms
% of clients making repeat purchases (stores)	%	6%	2%	9%	16%	8%	9%	8%
% of clients making repeat purchases (fairs & WH)	%	2%	36%	2%	2%	2%	19%	10%
% of clients making repeat purchases (total)	%	11%	23%	5%	15%	8%	19%	14%
# of Yr 2 clients who are repeat purchasers from Yr 1	# of clients					47	118	263
% of Yr 2 clients who are repeat purchasers from Yr 1	% of Year 2 clients					10%	5%	10%

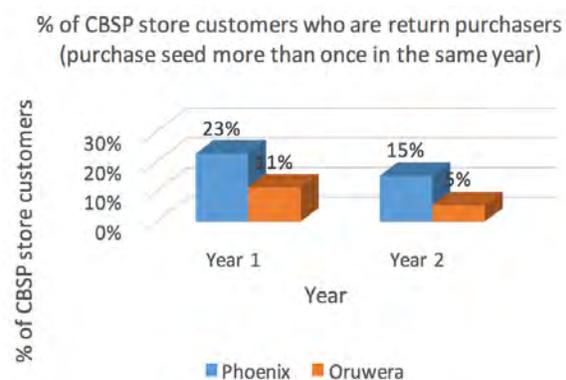
## 6. Repeat Purchases

The figures show a decrease in the number of farmers who made repeat purchases within the same year. This is an important figure since few farmers purchase all of their seed at one single time, instead opting to purchase different value chains as and when they require them (as per the agricultural calendar). This means that farmers who return to a CBSP store on various occasions in the same year are likely to be satisfied with their first purchase and decided to return to purchase another type of seed to sow later on in the campaign. During Year 1, 11% of Oruwera's customers purchased seed more than once during the campaign. This fell to 5% during Year 2. Phoenix's figure show a similar pattern, with 23% making repeat purchases in Year 1 and 15% in Year 2.

The reasons for a decreased percentage of returning clients in the same campaign are unclear. Although the increased seed cost of seed is likely to have played a role in reducing the amount of times that clients return to purchase seed, both firms should investigate this issue in order to rule out issues of poor quality and client dissatisfaction and to better understand farmer behavior. They should also consider developing pricing/marketing strategies to draw farmers back, such as discounts, promotions, vouchers or other strategies. Field observations indicate that farmers often test certified seed with maize seed early in the campaign and, if satisfied with its germination, they are more likely to go on to purchase other crops later in the campaign. The opposite is true, however, if they are dissatisfied with their maize results, and farmers (often ambivalent about the value of certified seed in the first place) are quickly turned off future certified seed purchases if their first attempt is unsuccessful. As well as ensuring quality, seed companies need to focus on the consistency of supply (making sure that CBSPs' stores are consistently stocked at the right time, since a farmer who makes the effort to travel to a store to purchase seed only to find that the product has run out may be less likely to consider investing time and resources in returning on another occasion), as well as training CBSPs in customer service and marketing to ensure that clients receive adequate advice and attention.

Field observations also indicate that farmers tend to purchase certified seed for one year and then re-use this seed for the next one or two campaigns. This could be an explanation for the low number of Year 1 farmers who purchased again in Year 2 (10% for Oruwera and just 5% for Phoenix, or an average of 10% in total). Both firms should continue with awareness raising and demand generating activities that promote the use of certified seed with each new campaign, though of course this is likely to be easier in years where there is less economic stress on farmers and a less dramatic increase in seed price than was the case during the two years of the SEEDS project. They could also consider using targeted marketing strategies to specifically target consumers who purchased seed during previous years and persuade them to re-purchase product, thus making a more efficient use of their marketing budgets. Understanding the motivation and decision making of returning customers will also enable the firms to better attend to their target market. All of these strategies will involve significant efforts and investments in terms of M and E systems and marketing metrics tools to collect both quantitative and qualitative client data.

Figure 14b: Percentage of Year 2 clients who were returning clients from Year 1



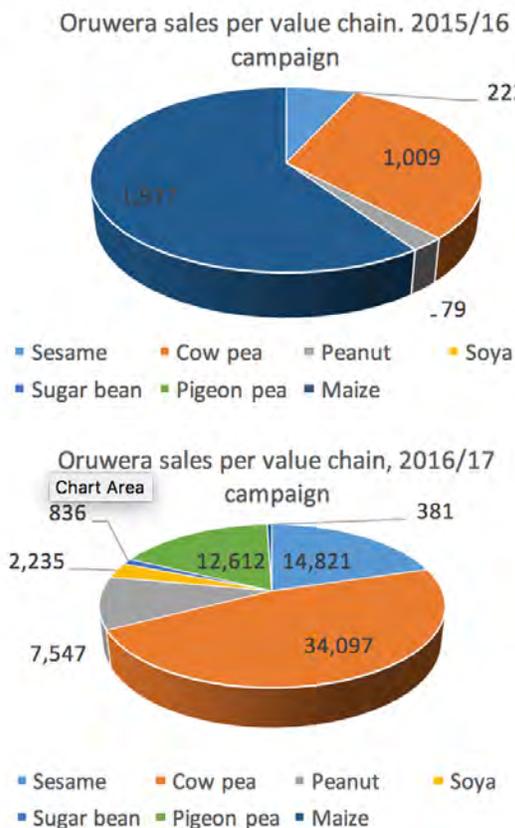
# SALES PER VALUE CHAIN

## SEED SALES PER VALUE CHAIN

### Oruwera sales per value chain

Figure 15 below demonstrates Oruwera’s sales per value chain in Years 1 and 2. In Year 1, the bulk of Oruwera’s sales was maize sales, followed by cow pea and sesame. This is reflective of the main products which Oruwera had in stock in Year 1, not of smallholder demand. In Year 2, the bulk of sales was cowpea, followed by sesame and pigeon pea. Sesame continued to play a relatively important role, indicative of its importance in Nampula province. This addition of pigeon pea as an important product for Oruwera in Year 2 was, similarly, not a result of a change in smallholder demand but more due to programmatic changes – specifically, the donor's decision to widen the range of project supported value chains (including soya, pigeon pea and soya for the Oruwera “package”) and to include sales to seed bank schemes from the central warehouse.

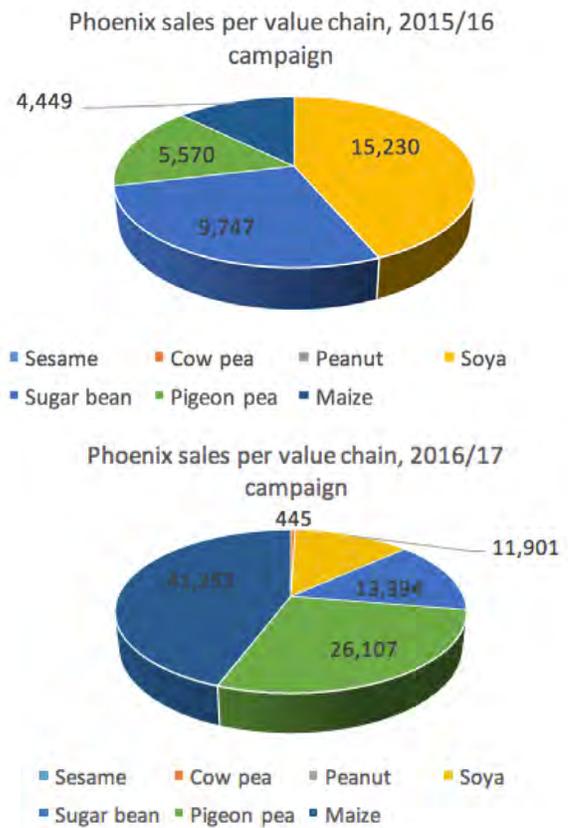
Figure 15: Oruwera sales per value chain, Years 1 and 2



### Phoenix sales per value chain

Phoenix sales in Year 1 mainly consisted of sugar bean and soya sales – the two main crops promoted by Phoenix during seed fairs. In Year 2, the focus shifted to maize sales, followed by pigeon pea. This change can probably be accounted for by a reduced focus in seed fairs in Year 1, which had promoted mostly soya and sugar bean, to sales from CBSPs’ stores in Year 2. In Year 2, CBSPs were largely responding to the immediate needs in their local communities (rather than promoting any particular seed which happened to be in largest supply in the Phoenix warehouse, as was the case in Year 1). Maize is a food security crop, in high demand by smallholders, and it is also a cheaper seed (around 100 mt/kg in Year 2 compared with 100 mt/kg to 160 mt/kg for other products) which was more easily affordable to CBSPs. This may explain why it increased in importance for Phoenix sales in Year 2, over taking pigeon pea as the highest selling value chain.

Figure 16: Phoenix sales per value chain, Years 1 and 2



### Total project sales per value chain

Total sales per value chain, for both companies and for entire project, show that despite it not being a 'Feed the Future' value chain and its sales not contributing towards project targets, maize was the best-selling value chain during the entire project, for the reasons given above. This was followed by pigeon pea and cowpea.

The total project sales figures per value chain were strongly influenced by the programmatic changes during the project, not necessarily commercial demand from smallholders. In particular, the decision in Year 2 to include warehouse sales to seed bank schemes, which accounted for the vast majority of Oruwera sales (cowpea and pigeon pea). Therefore, a direct comparison of total sales in Year 1 with total sales in Year 2 does not give us a true picture of trends in smallholder demand.

In order to identify any patterns in actual CBSP/ smallholder demand, the sales made only from CBSPs' stores provide a truer picture since these sales were 100% comprised of direct sales to smallholders and are a reflection of the product that CBSPs' purchased for re-sale in their communities. These CBSP store sales figures show that maize seed was by far the most popular product purchased for re-sale by CBSPs, accounting for 45% of total CBSP sales throughout the project. Pigeon pea was the second most popular crop, a result of the high prices for pigeon pea during the project's lifespan, reaching over 40mt/kilo in 2016 (promoted by the MoU signed between the Mozambican and Indian governments in 2016 which guaranteed that India would purchase at least 150,000 tons of pigeon pea in 2017). Sugar bean was the third most popular value chain for re-sale by CBSPs in their communities, which can be accounted for by the fact that it is a food security crop that features highly in smallholders' diets, and seed was sold at a relatively affordable price of 100 mt/kg for Phoenix and 115 mt/kg for Oruwera. Peanut and sesame were sold in only very small quantities by CBSPs, being value chains promoted more by Oruwera in Nampula province, and produced in insufficient quantities to meet CBSPs' demand. This was despite the fact that Oruwera CBSPs did show an interest in trading this seed, suggesting that it was a supply rather than a demand problem.

Figure 17: Total sales per value chain, Years 1 and 2

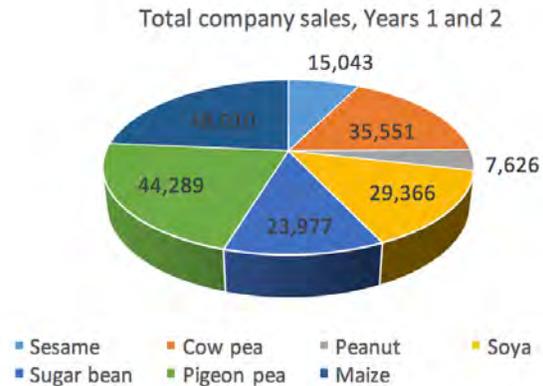
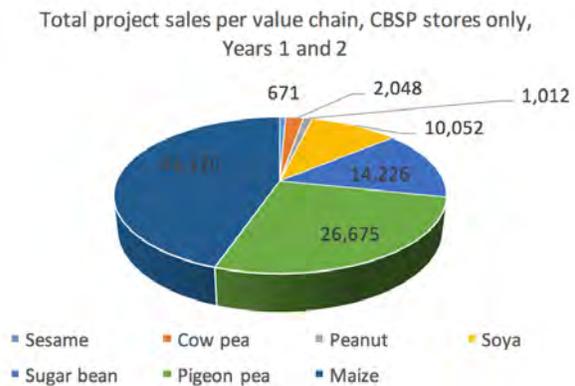


Figure 18: Total project seed sales per value chain from CBSP stores, Years 1 and 2



Note that to some degree the sales volumes per value chain are likely to have been affected not only by smallholder demand and pricing but also private sector capacity to supply and, to some extent, seed companies' sales strategy. Although SEEDS supported CBSPs to place orders, in some cases firms simply did not have the product available at the times or in the quantities that it was demanded by CBSP clients. In addition, there were other cases (particularly with seed fairs) in which Phoenix had large volumes of a certain crop and wished to promote this.



Seeds are distributed to CBSP agrodealers

In summary, sales from CBSPs' stores suggest:

- CBSPs respond to the current market demand for cash crops such as pigeon pea. Seed companies should adequately plan for and respond to this and, wherever possible, create a niche in the market so that they become known as seed companies of reference for these value chains;
- Promisingly, CBSPs are also responding to strong demand in food security crops such as sugar bean, cowpea and maize. By including these in their product ranges seed companies create a win-win situation for themselves (through increased volumes traded) and smallholders (increased food security);
- When considering priority value chains donors should consider the overall importance of particular crops. Maize seed sales did not count towards SEEDS' project targets since it was not a

Feed the Future value chain, however, the results show that maize is a key crop. The promotion of certified maize seed is likely to lead the way to smallholders investing in other and perhaps more expensive seeds in the future;

- SEEDS recommends that seed companies conduct in-depth and culturally sensitive research into the factors that affect the decision making of their target audience. For instance, field observations suggest that many farmers purchase certified seed only once every two or three campaigns and in the intervening years they conduct a selection of the best quality grain to re-sow as seed. In addition, in many cases farmers were found to pass their better quality grain to family members in subsequent campaigns for sowing as seed, in a form of informal seed bank schemes. SEEDS also saw cases of farmers showing a greater tendency to purchase seed in a campaign following a year of high farmgate prices (as was the case in 2016) since they both have more disposable income for investing in certified seed, are more likely to see the increased value to be gained from increasing their yields from cash crops and tend to sell all of their product instead of saving some for seed for the next year. All of this points to the need to conduct longer term and more in-depth studies into smallholder purchasing patterns. Whilst the results from two campaigns can provide some indication of possible patterns in demand and smallholder attitudes, there are too many external factors (climate/production, economic, programatic) at play to draw any solid conclusions at this stage.

# CONCLUSION

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## CONCLUSION

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Although by no means the first agrodealer related initiative in Mozambique, SEEDS has been innovative in its approach and methodology and has paved the way for future agrodealer-based interventions. The project has promoted the marketing and distribution of seed not as a specialist product but as a household necessity. By focusing on setting up a hub and spoke network that draws not specifically from agrodealers but mostly from a network of existing rural microenterprises, SEEDS has begun to establish a seed distribution network which is not affected by seasonality and other limitations (as is the case of the sale of seeds only) but which packages seeds together with other product lines that small shop owners are already profitably trading in their communities. This has the potential to be more sustainable than the agrodealer networks resulting from other methodologies because it leverages existing, viable rural distribution and sales channels whilst at the same time promoting the notion that every rural first necessity store should stock seed and every rural consumer should be purchasing seed.

Even faced with a substantially increased purchase price for seed, combined with two agricultural campaigns of climatic and macroeconomic challenges, the SEEDS sales results are extremely promising. Despite the often quoted challenges facing smallholder adoption of certified seeds, the project saw an overall increase in smallholder seed purchases and a similar increase in a series of other key sales indicators. During the project, over 10,000 smallholder farmers bought certified seed directly from CBSPs' stores or from seed fairs. The majority of them paid full price, with no subsidy and no credit. They did this during two years of drought, food insecurity and a substantial increase in seed price. The SEEDS project questions, therefore, the commonly held belief that smallholders do not want to purchase seed, that they are not convinced of its benefits and will only adopt it if it subsidized. It may be true that smallholders are making small purchases at a time, and the demand is not yet great enough to support large numbers of dedicated agrodealers, yet SEEDS has shown that community level demand for seed does exist. Indeed, if NCBA CLUSA were to single out the one greatest challenge to marketing seeds during the project it would not be related to demand but, instead, to distribution: developing rural, last mile distribution networks and supporting and encouraging the private sector to make product available at a reasonable cost, where and when it is needed.

In short, farmers will buy certified seed, if two critical elements are addressed: distribution and demonstration. Unlike many other interventions, the SEEDS project tackled both of these simultaneously. Distribution was addressed through smart incentives that bought down the risk for the private sector to establish hub and spoke networks, whilst demonstration was tackled by CBSPs doubling as Lead Farmers managing their own demonstration fields, or by establishing small demonstration plots beside their stores. Unfortunately, two agricultural campaigns was insufficient time to see just how far Phoenix and Oruvera could take their CBSP networks: distributing any product in rural Mozambique is challenging - even more so for an undeveloped market such as the smallholder seed market - yet during its lifetime SEEDS began this process and laid the foundations for future work. The project has shown that SEEDS supported rural entrepreneurs view seed sales as a viable business and are eager to engage in commercial relationships with private sector inputs suppliers. It has set up the basis for a CBSP distribution network that could not only make seed available in rural communities but also a whole range of vital products such as fertilizers and other inputs. This network can now serve as a building block for future inputs distribution and marketing interventions by the private and public sector, which will need to provide both CBSPs and inputs companies with the support, smart incentives and technical assistance required to sustain the momentum gained during the past two years. For NCBA CLUSA, this is already taking place through its Norwegian Embassy financed PROMAC II project, which guarantees support the SEEDS CBSPs for at least the next 5 years - strengthening their relationships with Phoenix and other seed suppliers, as well as other inputs firms such as Yara Fertilizers.

The future looks bright for Mozambique's smallholder seed market, and will continue to do so as long as donor and private sector interventions continue to have a positive impact on smallholder understanding of the advantages of certified seed, as agrodealer and other seed distribution systems become more imbedded in private sector partners' commercial models, and as seed companies become increasingly committed to investing their own resources in breaking into this potentially lucrative market.

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