

**VALUE CHAIN PROGRAM DESIGN IN**

**THE RWANDAN MAIZE VALUE CHAIN**

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Report written by Action for Enterprise

[chflogospace](http://www.chfinternational.org/)

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# Executive Summary

In Rwanda, Global Community’s USAID-funded EMIRGE program has begun a market development initiative to promote sustainable impact with farmers and agricultural cooperatives. To support those efforts, Action for Enterprise (AFE) was contracted from April to July 2014 to lead a program design exercise in the maize value chain, and to build the capacity of EMIRGE’s team to conduct value chain development activities. This report presents the results of the program design exercise for the maize value chain.

***Selection Exercise*** – AFE guided the EMIRGE team in selecting sub-products within the maize value chain with strong growth potential and participation of large numbers of farmers. Maize sub-products such as maize flour, maize grain for consumption, maize seed, and animal feed were selected. It was then determined that the EMIRGE team would focus on the larger maize value chain as a whole.

***Orientation -*** AFE conducted a two-day workshop in preparation for the program design exercise for the EMIRGE team. This workshop presented tools and methodologies that combine the strengths of value chain analysis with methods for identifying commercially viable, market-based solutions that promote industry competitiveness and benefits for farmers.

***Value Chain Analysis* -** From April 21 to May 5 the team conducted over twenty interviews with maize market actors and key informants in order to complete a value chain map, assess the end market, understand inter-firm relations and governance structures, and identify constraints in the maize value chain.

***Identification, Prioritization and Assessment of Market-Based Solutions* –** The team then identified potential market-based solutions (MBSs) that could address identified constraints and prioritized these MBSs according to their ability to improve the competitiveness of the targeted value chains and benefit small-scale maize farmers (also referred to in this report as micro, small, and medium scale enterprises or MSMEs). The shortlisted MBSs were then assessed through additional interviews and focus groups with MBS providers (also referred to as “Lead Firms”) to identify their challenges, incentives, and initiatives for developing the targeted MBSs.

***Identification of Illustrative Program Facilitation Activities*** – The team then identified program “facilitation activities” that it could undertake to support the implementation of initiatives proposed by the MBS Providers. The MBSs, illustrative initiatives proposed by targeted Lead Firms, and illustrative project facilitation activities are summarized in the following table.

|  |  |
| --- | --- |
| **Market-Based Solution 1** | **Targeted Providers (Lead Firms)** |
| Access to information for maize farmers about the benefits and use of different varieties of maize seed | Maize Seed Producing Companies and Agrodealers |
| **Illustrative Lead Firm Initiatives** | |
| Prepare training modules for producers they sell to; Create and distribute informational leaflets for farmers; Produce informational/marketing campaigns using media such as TV, radio, etc. targeting maize farmers; Establish demonstration plots and field days for producers; Develop networks of informed agrodealers who can provide information to farmers [Lead Firms will organize and conduct all of these initiatives] | |
| **Illustrative Project Facilitation Activities** | |
| Support targeted Lead Firms to: 1) conduct field demonstrations in target areas; 2) conduct training events for farmers in target areas; 3) build the technical capacity of their staff to better train/orient farmers which would cover the target areas; 4) develop informational pamphlets which can be distributed to farmers or media promotions for farmers; 5) organize exposure visits (for farmers they sell to) to other maize farmers in Rwanda that have advanced knowledge about maize seeds and cultivation practices. | |

|  |  |
| --- | --- |
| **Market-Based Solution 2** | **Targeted Providers (Lead Firms)** |
| Access for maize farmers to information / training about the benefits and proper use of fertilizers and chemicals for maize production | Fertilizer Importing Companies and Agrodealers (Input Suppliers) |
| **Illustrative Lead Firm Initiatives** | |
| Prepare training modules for producers they sell to; Create and distribute informational leaflets for farmers; Establish demonstration plots and field days for producers; Help farmers get affordable access to soil testing services so they can better understand what fertilizers and chemicals are needed for their fields. [Lead Firms will organize and conduct all of these initiatives] | |
| **Illustrative Project Facilitation Activities** | |
| Support Input Suppliers to: 1) conduct field demonstrations in target areas; 2) conduct training events for farmers in target areas; 3) build the technical capacity of their staff to better train/orient farmers which would cover the target areas; 4) develop informational pamphlets which can be distributed to farmers; 5) establish services which provide soil testing to farmers | |

|  |  |
| --- | --- |
| **Market-Based Solution 3** | **Targeted Providers (Lead Firms)** |
| Access to improved maize drying technologies for maize farmers | Intermediary Buyers (Traders, Coops), Maize Processors |
| **Illustrative Lead Firm Initiatives** | |
| Build the capacity of their staff to advise farmers they purchase from in innovative, affordable drying technologies. Establish maize drying facilities where they can dry maize purchased from farmers. | |
| **Illustrative Project Facilitation Activities** | |
| Support targeted LFs to organize research visits for their staff to other regions or countries which utilize different types of maize drying technologies to identify: 1) innovative and affordable technologies for maize farmers to dry maize, and/or: 2) drying facilities that could be used by them to dry maize purchased by farmers. Assist the LFS to develop business plans for these technologies or facilities as needed. | |

**Next Steps –** AFE presented EMIRGE with a draft “Invitation for Application” (IFA) format through which targeted MBS providers/LFs can propose initiatives (that they will implement) that EMIRGE might support with technical/financial assistance. These initiatives would result in improved LF competitiveness and improved products, services, market access and support for maize farmers. Once activities are identified and agreed upon, EMIRGE can develop Memorandums of Understanding (MOUs) and technical and cost share agreements with the LFs and support them in implementation. These tools and methods were discussed during the “Next Steps” session at the end of the consultancy.

# Introduction

In Rwanda, Global Community’s USAID-funded EMIRGE program has begun a market development initiative to promote sustainable impact with farmers and agricultural cooperatives. To support those efforts, Action for Enterprise (AFE) was contracted from April to July 2014 to lead a program design exercise in the maize value chain and to build the capacity of EMIRGE’s team to conduct value chain development activities.

An AFE consultant worked with the EMIRGE team to conduct the following activities:

* A selection exercise to identify high priority sub-products in the maize value chain
* A value chain program design orientation and planning session
* An analysis of the maize value chain
* An assessment of prioritized market-based solutions that address value chain constraints
* Validation of incentives and challenges to market-based solutions
* Identification of potential Lead Firm initiatives and project facilitation activities
* A “next steps” presentation to the EMIRGE team

This report will describe each of these activities.

# Selection of Maize Sub-products

AFE led a process of identifying sub-products within the maize value chain to be the focus of more in-depth analysis and program design. The process began by identifying an initial list of these sub-products. This was followed by interviews with key informants, and a review of secondary information.

**Initial List of Sub-products -** An initial list of maize sub-products was developed for consideration based on ground experience and desk research. These included:

* Maize seed
* Maize for consumption
* Maize flour
* Maize for animal feed

**Interviews with Key Informants –** The EMIRGE team then interviewed key informants familiar with each of the maize sub-products. Those key informants included representatives from the Rwandan Ministry of Agriculture, National Strategic Reserve, maize processing companies, and maize-growing cooperatives.

**Final Selection –** Based on the industry knowledge gained from the key informants, and further discussions between AFE and the EMIRGE team, it was determined that the overall maize value chain would be the best target for the value chain activities. This decision was reached in consideration of the fact that maize producers typically do not differentiate production depending on the end market for the maize produced.

# Value Chain Program Design Orientation

AFE conducted a two-day orientation in preparation for the program design exercise for the EMIRGE team. The orientation presented the tools and methodologies that would be used for each step in the program design process. These are described below.

**Step 1: Value Chain Selection -** During this session, the value chain selection process previously described in Section 2 was reviewed. Participants in the orientation were also exposed to criteria that can be used to compare different value chains.

**Step 2: Value Chain Analysis -** Participants gained a greater understanding of how to analyze market trends and industry dynamics during this session, including the roles of value chain participants and their interrelationships. Participants also discussed: 1) how a value chain map can graphically present all the relevant private sector actors and their relationships with one another, and; 2) the importance of interviews with all market participants and “key informants” to identify major constraints in the areas of market access, input supply, technology/product development, management and organization, policy, finance, and infrastructure. Presentations on how to ascertain inter-firm cooperation in the value chain, governance structures and the business enabling environment were also conducted.

**Step 3: Identification and Selection of Market-based Solutions -** During this session, participants learned to identify sustainable market-based solutions (MBSs) that can contribute to the competitiveness of the targeted value chain and address theconstraints identified in Step 2. Techniques for identifying and prioritizingthese market solutions were also presented.

**Step 4: Assessment of Market-based Solutions -** Participants learned how to assess the MBSs identified in Step 3 during this session. Areas of assessment included: the identification of existing/potential providers of targeted MBSs, constraints to the commercial viability of the targeted solutions, etc. Participants learned how to identify MBS providers, as well as how to determine whether those firms can provide needed products and support services to MSMEs in a commercially viable/ sustainable manner. Discussions included the provision of "embedded" services by MBS providers to MSMEs that take place as part of their commercial transactions. Participants also learned how to choose MBS providers (“Lead Firms”) to target for collaboration.

The two final steps in value chain program design were also discussed briefly during the orientation session but were presented in further detail during the “next steps” session at the end of the consultancy. Those steps include:

**Step 5: Identification of Facilitation Activities -** In this session, examples were given on how programs can build the capacity of LFs (MBS providers) to build their competitiveness and provide needed products, services and support to MSMEs they buy from or sell to. Participants learned how interviews, focus group discussions and “invitations for applications” can be used to engage LFs and assist them to identify interventions that they can undertake (either individually or across companies) to improve their competitiveness and provide sustainable solutions that address the constraints facing participating MSMEs/small farmers. Participants were also exposed to facilitation techniques that can be used to support LF providers in the implementation of their initiatives.

**Step 6: Structuring Collaboration and Monitoring Performance -** The final session presented examples of documents to structure program collaboration with LFs. It also presented a framework for designing performance measurement systems for value chain/market development programs. Participants also discussed how to develop causal models/ impact logics that demonstrate how support to LF initiatives can lead to sustainable impact for targeted MSMEs.

# 4. Value Chain Analysis and Identification of Market-Based Solutions

This section presents the results of the analysis of the maize value chain. It begins with a characterization of the end-market for maize and then describes the functions, activities, and interrelationships of the various market actors, which are laid out in a value chain map. The section concludes with a discussion of the constraints that the market actors face, and the market-based solutions that can address those constraints.

## 4.1 Assessment of the End Market for Maize

There are three primary uses of maize in Rwanda - maize flour for consumption, maize grain for direct consumption, and maize as an ingredient for animal feed. Most of the maize that is produced is used for processing into maize flour, which is consumed locally and exported to neighboring countries. Animal feed processors and farmers use maize as a primary ingredient for feed for animals, most commonly for livestock and poultry. After the maize flour milling process, the remaining maize bran is also commonly used in animal feeds. Animal feed which is sold is purchased by government livestock breeding stations, livestock cooperatives, and individual farmers with livestock or poultry. A few maize flour processors also produce “grits”, also known as semolina, which is sold to brewers for use in making beer. Maize grain for consumption is unprocessed and is sold primarily in local markets for use in cooking.

***Market Demand* –** Maize consumption has been steadily growing in Rwanda in recent years. Several market actors attributed this to the use of maize flour in schools and to the Government of Rwanda’s (GoR) promotion of maize production through the Crop Intensification Program (CIP). According to one supermarket branch manager in Kigali, maize flour has been steadily replacing cassava flour as the preferred flour for household consumption. A visit to one popular Kigali market district supported this, as maize flour was prominently displayed at the entrance to shops and cassava flour was not as readily found. The Rwanda Development Board estimates that the domestic consumption of all maize increased from just over 7 million tons in 2000 to over 10 million tons in 2012[[1]](#footnote-1). Imports of maize flour, primarily from Uganda, have filled the gap created by this increased domestic demand. One Ugandan brand of maize flour, Maganjo, seems to be the most popular among both urban and rural consumers, but other Ugandan brands are available throughout the country as well.

In January 2014 the GoR adopted an 18% value-added tax (VAT) for all sales of maize flour in Rwanda to match the VAT for many other products. Maize flour retailers and processors agree that this may slow the growing popularity of maize flour but do expect domestic demand to continue growing.

Rwandan maize flour processors have also been increasing their demand of maize grain to satisfy domestic and regional demand for flour. Local maize producers have so far been unable to satisfy year-round demand for maize, so maize is also imported from nearby countries such as Tanzania and Uganda. According to the Rwanda Development Board, average net imports of maize in 2012 were valued at US $7.5 million1. The GoR is a key actor in the purchasing of unprocessed maize grain through its National Strategic Reserve (NSR). The NSR has several maize storage facilities in different parts of Rwanda, with a current total capacity of 60,000 metric tons. One of those locations, in Kigali, also has an industrial drying facility. One large maize processor explained that although the price of maize is determined by the market, the managers of the NSR purchase maize from farmers at cost plus a pre-determined margin, temporarily driving up the price of maize and decreasing the availability of high-grade maize.

Increasing maize consumption in neighboring countries has also driven increases in production and processing capacity in Rwanda. As seen in Figure 1, maize consumption throughout East Africa has been growing1. Some Rwandan maize processors export maize flour to neighboring countries, especially DRC and Burundi, despite increasing domestic demand. Market actors cited different reasons for this, including the ability to export lower quality maize flour to those countries, higher prices for maize flour, and as a means of avoiding Rwanda’s 18% VAT on maize flour.



Figure : Increasing Regional Consumption of Maize

**Production Trends**

Historically, maize has not been highly consumed or produced in Rwanda. Maize is therefore considered a “new” crop for many farmers. With their lack of experience growing maize and very small farm sizes (many small farmers have less than 0.5 hectares of land for farming) maize production is low. Some farmers interviewed explained that it is not uncommon to produce less than 3 metric tons of maize per hectare. To increase food security and improve farmer incomes, government agencies and donor programs are focusing on improving yields for maize and other crops.

In 2007, the GoR instituted the Crop Intensification Program (CIP) as a means of increasing domestic production of key food products[[2]](#footnote-2). Those products include maize, wheat, rice, beans, irish potato, and cassava. CIP included the following key initiatives:

* Land use consolidation
* Improved seed and fertilizers use
* Proximity extension service by proximity service providers
* Agricultural product marketing
* Change in farmer’s behaviors
* Promote Agro inputs dealer’s network
* Stimulate reliable, private-sector input and output markets through electronic auctions
* Food sufficiency and sovereignty of Rwanda

By most accounts, these initiatives have contributed to increasing production of the key crops, including maize. In areas designated as maize-production regions, farmers are directed to produce maize as a mandatory primary crop. Additional incentives for producing maize include a strong market due to high demand and production support from CIP. A large part of that support is the provision of subsidized fertilizers and seeds. Government subsidized fertilizer (urea and DAP) and seeds are distributed through government and private sector channels and provided to maize farmers. The maize inputs had been distributed to farmers for free, but recently policy changed so that farmers now pay around 50% of the cost of fertilizers. Maize seeds are still provided at no cost to farmers, but the Ministry of Agriculture (MinAgri) expects to ask farmers to pay a portion of the costs for these in the near future. These changes are part of a plan by MinAgri to privatize the fertilizer and maize seed industries.

As seen in Figure 21, maize production in Rwanda has improved, and some farmers interviewed explained that they now produce at least three metric tons of maize per hectare. If the privatization of the maize seed industry continues, and maize farmers gain access to new and improved seeds, maize production increases should gain momentum. Some farmers interviewed explained that they were able to test different varieties of seed from Rwanda’s Agricultural Board (RAB) and next season will request and pay for their preferred variety. With that variety they expect to produce a minimum of four tons per hectare, a significant improvement from the seed variety they were given in previous seasons.



Figure : Maize Production Trends in Rwanda

## 4.2 Value Chain Market Actors

During the analysis of the maize value chain more than 20 interviews were conducted with market actors and key informants. The primary actors in the maize value chain include the following:

* Government Agencies (RAB and NSR)
* Input supply companies and retailers (seed and fertilizer)
* Producers (small, medium, and large farmers)
* Bulkers/Wholesalers/Traders (including Cooperatives)
* Maize Millers
* Animal Feed Manufacturers/Retailers
* Food Retailers (including supermarkets, local markets)

A value chain map showing the linkages between different market actors is shown below. Following the map, further information is given about each of the major actors.

Figure 3: Maize Value Chain Map



### 4.2.1 Government Agencies

The Government of Rwanda, through policies and agencies of the Ministry of Agriculture (MinAgri), has a strong influence on the domestic maize market and is one of the major buyers of maize from farmers. GoR agencies that play a role in the maize industry are described below.

**Rwanda Agricultural Board (RAB)** – As mentioned earlier, maize is a relatively new crop for Rwanda. MinAgri identified maize as a key crop to promote because it can be grown throughout the country, has multiple uses to support national food security, and can be easily stored and transported. RAB’s maize program’s role in that effort is to coordinate maize research, and to develop and release high yielding varieties of maize seed. RAB distributes 8,000 metric tons (MT) of maize seed annually, 6,500 MT of which are directly produced by RAB. Breeder seed and basic seed are developed by RAB-managed farm land. The foundation seed is then distributed to local seed companies or pre-selected farmer cooperatives for multiplication. Once commercial seed is produced by them, RAB purchases the seed back and distributes it to farmers throughout the country. The remaining 1,500 MT of maize seed is purchased through three tenders for 500MT of maize seed each. Since 2011 international seed companies Kenya Seed Company, Pannar Seed, and SeedCo have won the tenders and supplied RAB with the required seed.

The maize seed that is produced through RAB has traditionally been of open pollenated varieties (OPV), but in recent years efforts have been made to begin producing and distributing hybrid seeds. Although varieties are determined based on the particular district’s elevation, farmers have distinct needs which are not always met through the current system. One seed company explained that all farmers in the northern district are given hybrid seeds which require a 7-month growing season. Many farmers in that region, however, grow Irish potatoes as their primary crop and maize as a rotational crop. A long-season maize does not allow the farmers enough time to grow potatoes, so the farmers are forced to find other varieties of seeds from sources other than RAB. A side-effect of this issue is that farmers now consider all hybrid maize seeds to be undesirable.

RAB also subsidizes fertilizer to farmers. The fertilizers available to farmers through this system are urea and DAP, with NPK available upon request by farmers. Until recently fertilizers were distributed freely to farmers, much the same as maize seed is. Now, however, maize farmers are given a voucher valid for 50% of the cost of fertilizers, and the farmers must pay the remaining 50%. Although all sources described the subsidy to be 50%, one voucher displayed by a farmer showed a 48% subsidy, and other farmers claimed the government only pays for 25% of the total cost.

Although the government is no longer responsible for distribution of the fertilizer, it still plays a direct role in the fertilizer market for maize. District MinAgri officials determine the amount of fertilizer to be provided to each farmer (based on the amount of land they farm), and issue vouchers for farmers through agrodealers. Private sector fertilizer importers are assigned a district by MinAgri for which they are the sole-provider of fertilizers, and these importers then provide fertilizers to the agrodealers for distribution in exchange for vouchers and cash payments. RAB also sets the price for fertilizers, of which agrodealers are allowed a pre-determined margin (30 rfw/kg according to one Agrodealer).

RAB officials have begun extracting RAB from the maize seed and fertilizer industries. As one key official explained, it should not be the case that one agency produces seed and at the same time is responsible for certifying that seed. The agency is therefore attempting to privatize both functions, the first step of which was to decrease the subsidy of fertilizers from 100% to 50%. In the next season, they expect to eliminate that subsidy altogether so farmers will be responsible for paying the entire cost for fertilizers. In the same way, RAB plans to steadily decrease the subsidy for maize seed and to allow private sector firms to be responsible for all of seed production and distribution. It is hoped that in the near future maize farmers will have access to multiple varieties of maize seeds, and additional fertilizers from which they can choose the variety that fits their needs.

Another office within RAB is the Extension Services Department. This office, as the name suggests, is responsible for providing training and extension services to all farmers in Rwanda. This office manages a network of extension agents and “farmer promoters” who provide differing levels of training and informational materials to farmers. Farmer promoters are volunteers at the village level who are trained to supplement the efforts of the sector-level extension agents. According to one RAB official, farmer promoters are beginning to become commissioned agents for Agrodealer fertilizer sales, earning 2 rfw per kg of fertilizer sold. Another initiative recently introduced by the extension services department is an SMS-based service through which farmers can receive agricultural information and provide information to RAB. This system is quite new and so is not yet widely used.

**Post-Harvest and Storage Task Force** **–** MinAgri’s Post Harvest and Storage Task Force is a temporary agency started in 2011 which is tasked with improving post-harvest handling losses and managing the National Strategic Reserve (NSR). The task force works in the maize and beans industries, offering trainings to farmers through approximately 400 trained master farmers. According to MinAgri, the results of these efforts have been a national reduction of post-harvest losses from 40% to 9%. The task force has also provided storage and drying facilities to farmers around the country at a cost of 9 million rfw each. The facilities are intended to be managed by local cooperatives so that all nearby farmers have equal access. While many farmers have access to these facilities, one farmer group explained that it is difficult to get access to their nearby facility as a large number of maize farmers use it.



Visiting the NSR's Kigali maize storage facility

**National Strategic Reserve (NSR) -** The National Strategic Reserve was created to ensure that in times of need there will be a ready source of food available for distribution. The NSR has several modern maize storage facilities around Rwanda, with a total capacity of 60,000 MT. The Kigali storage facility is the largest with a capacity of 20,000MT. A facility in Nyagatare is smaller, but also has a modern maize-drying facility. According to task force officials, maize can be safely stored for up to 10 years but is rarely kept for so long. When being purchased for storage, the NSR pays farmers based on an estimated cost of production plus a pre-determined margin rather than deferring to current market prices. The pre-determined margin depends on the grade of maize purchased. Grades are measured based on the moisture content of the maize, amount of foreign matter, and other key factors.

The maize stored in the NSR can later be used for GoR food-for-work programs, feeding refugees, sold in the East African Exchange commodity exchange, or sold to the World Food Program’s Purchasing for Progress program. As reported by one maize flour processor, the NSR’s maize is not available for direct purchase by private sector actors.

### 4.2.2 Input Supply Companies and Retailers (Seed and Fertilizer)

As described earlier, RAB plays the major role in supplying seed and fertilizer to maize farmers. Private sector input supply companies are expanding however, and their role will continue to evolve and grow as the GoR implements its plan to reduce its responsibilities in the maize sector.

**Maize Seed Producers/Suppliers -** Local maize seed producer/suppliers such as APC Sarura or Win Win Agri-Tech sell seed to RAB, agrodealers, or directly to farmers. A large portion of APC Sarura’s business involves coordinating basic seed multiplication for RAB. RAB provides the basic seed to APC Sarura who then distributes that seed to their contract farmers for multiplication. That commercial seed is then sold back to RAB for distribution to maize farmers around Rwanda. Both local companies interviewed sell to Agrodealers and farmers. Farmer clients prefer the seed sold directly by these companies to the seed provided to them by RAB. Reasons stated for this preference included difference in yield provided by the seed, length of the growing season and late distribution of seed by RAB. The final category of customer for local maize seed companies is NGOs such as the OneAcreFund, who purchase seed for distribution to farmers in their programs.

Local companies are developing their capacity to produce their own lines of maize seed. Both of the local companies interviewed are currently working with CIMMYT (the International Maize and Wheat Improvement Center based in Mexico) to gain their own lines of hybrid maize seed. The quantities of maize seed produced and sold by local seed companies are currently small. APC Sarura produces 150 MT per year and Win Win Agri-Tech produces 30 MT of seed per year, which are small quantities when compared to RAB’s 6,500 MT of seed produced and sold.

The three international seed companies (Kenya Seed Company, Pannar Seed, and SeedCo) are also looking ahead to privatization of the maize seed market. While all three are currently selling maize seed only to RAB, MinAgri has announced that by 2016 all maize seed sold in Rwanda must be produced domestically. For this reason, the companies have begun exploring options for domestic production of maize seed. SeedCo is already producing seed in Rwanda on the Bramin farm, part of a partnership with several major maize market actors including Minimex, Pro-Dev and Bralirwa[[3]](#footnote-3). Kenya Seed Company has been working with select maize cooperatives to multiply its seeds as a way to ensure availability of supply in Rwanda, and this will continue in the future. Pannar is currently importing seed through a sister company and is working to register as an independent company in Rwanda. All of the companies agreed that it is difficult to produce maize seed in Rwanda as there are few farmers who are skilled enough to cultivate maize for seed, and there is limited farm land available with the irrigation and separation needed for seed production.

Understanding that they will soon have greater opportunities to sell their maize seed directly to farmers, the international seed companies have begun marketing their brands to Rwandan farmers, primarily through demonstration plots. They seem to have hesitated, however, to heavily invest in staff and extensive marketing campaigns as RAB has not yet determined how private maize seed distribution and sale will be allowed to occur. One seed company representative suggested that “zoning” may be the method used, with one Seed Company given responsibility for distribution to each district.

**Fertilizer Importers/Suppliers –** The technique of zoning has been applied to the fertilizer industry as a means of transitioning away from government distribution of free fertilizer to farmers. Each farmer is given a voucher which dictates how much Urea and DAP they can receive, with the voucher being valued at approximately 50% of the total cost. Vouchers are distributed by RAB through rural Agrodealers. Farmers then give the voucher to Agrodealers, who send them to their district’s assigned fertilizer importer. The importer fills the orders by sending the total amount of fertilizer to Agrodealers. Vouchers are sent by the importers to MinAgri for reimbursement. When fertilizers arrive at the Agrodealers, farmers bring the remaining 50% cash payment to the Agrodealers and retrieve their allotment of fertilizer. Agrodealers keep 30 rfw per kilo of fertilizer (as instructed by MinAgri) and send the remaining cash to the fertilizer importer.

There are some inherent weaknesses in this system. As farmers are told how much of each fertilizer they are allotted, they often apply everything that is given to them, regardless of actual need. According to one Agrodealer, sometimes farmers submit the vouchers but don’t have the cash needed to retrieve their allotment. The Agrodealers then can either return the fertilizer to the importer or pay for it out of their earnings and sell it to other farmers.

According to one group of maize farmers, they understand that RAB is getting out of the fertilizer distribution business and they do not mind paying for the fertilizers. As they are now paying partially for fertilizers, they have become more careful in applying it to their fields. The same group of farmers was not aware that they would also be asked to pay for at least a portion of maize seed costs in the near future.

### 4.2.3 Producers

Maize production has been largely influenced by the CIP and is driven by high demand from maize flour processors, regional markets, and the NSR. These influences have helped maize production in some parts of the country increase productivity and reduce post-harvest losses. One group of maize farmers explained that they have increased maize production from less than 0.2 tons per hectare of land to 2 tons per hectare. After testing different varieties of seed offered by RAB, they found one variety that can increase their production to 3 MT per hectare. Private sector seed companies estimate that with their varieties production can reach as high as 8 MT/hectare.

Small farmers in Rwanda farm on one half a hectare of land or less. One maize-growing cooperative explained that their member farmers each have fewer than 0.1 hectares. Encouraged by CIP and donor programs small maize farmers usually sell their maize through cooperatives who then then sell to traders or processors. Some maize is also sold in local markets for unprocessed consumption.

### 4.2.4 Bulkers/Wholesalers/Traders

With smallholder farmers holding very small amounts of land, bulking harvested maize is an important step in Rwanda’s maize value chain. The primary actors responsible for bulking are traders, wholesalers and cooperatives, with one advanced company playing a role as well.

**Cooperatives –** After harvest, many farmers sell maize to cooperatives who then sell the maize to traders or processors. One cooperative reported that they form a marketing committee that is responsible for approaching traders with a sample of maize. In this way they are able to find the best price for their product.

**Traders/Wholesalers –** Equippedwith trucks, traders/wholesalers buy maize directly from farmers or cooperatives and sell on to processors or international markets. In some cases, they have temporary storage facilities. Processors and exporters can then buy maize in bulk from them rather than going directly to farms. One larger trader/wholesaler reported that during the peak harvest season (February through May) he sells up to 100 MT of maize per month. The limiting factor for his business is supply of maize from farmers, but finding buyers for maize is not a problem.

**Pro-Dev (Private Drying and Storage Facility) –** One unique market actor in this space is Pro-Dev, which is located in the eastern province. This company buys most of its maize from regional traders, as well as the Bramil farm and individual farmers. Those sources bring maize to the Pro-Dev facility, which is an industrial drying and storage facility (the only private sector facility in Rwanda). At peak season, Pro-Dev can receive up to 350MT of maize per day, but that is uncommon due to limited supply of quality maize. All of the maize dried and stored by Pro-Dev is sold to Minimex, Rwanda’s largest maize flour miller. Pro-Dev is currently building additional facilities, such as an animal feed mill, to take advantage of its unique place in the maize market. Managers are also considering opening their facility to farmers as a training mechanism.

### 4.2.5 Maize Millers

Most maize produced in Rwanda is milled into flour. The growth of this industry has been impressive, and there are now over 100 millers throughout the country. While most of those millers are small operations, there are a few large processors as well. Minimex, mentioned earlier, currently processes over 23,000MT of maize per year, producing flour (including some fortified with vitamins and minerals), grits (for brewing), and bran (a bi-product sold for animal feed). The largest portion of the flour produced is exported to countries such as the DRC and Burundi (about 36%), but flour is also sold to the Rwandan military (20%), World Food Program (10%), schools (10%), and to retailers for the general public (24%). Most millers, including Minimex, purchase maize from trader/wholesalers who ship the maize in trucks to the milling facilities. If any quality check is done, such as moisture level checking and the presence of molds, it is done at the delivery point. Another large maize miller is the SoSoMa company, which produces a special mix of soya, sorghum, and maize, and markets it as a health product. SoSoMa is a specialty product sold to health centers, and can be more widely found at local retail shops.

Smaller maize millers are more common and have widely differing operations. One maize miller which was interviewed reported that they only mill when orders are placed, and produce very small quantities of maize flour. The mill manager reported that most of their processed maize flour is sold to rural and regional markets. Another miller is operated by a maize-growing cooperative. That miller, COAMVU, gets maize from both cooperative members and contract farmers. Cooperative members are paid a portion of the sales from the flour (rather than a portion of sales from the maize). Contract farmers receive agricultural inputs on credit and are paid for the maize at slightly above the current market price. COAMVU currently produces about 20MT of flour per year, which is sold to schools and local markets. Maize flour contributes to about 70% of COAMVU’s milling revenue. Bran, which is sold for animal feed, contributes to 25% of sales and the remaining sales are from the sale of grits to local brewers.

### 4.2.6 Animal Feed Manufacturers/Retailers

Animal feed manufacturers purchase maize from trader/wholesalers, and also maize bran from flour processors for use in their animal feeds. One animal feed manufacturer based in Kigali explained that the primary ingredient in his animal feeds (for livestock and poultry) is locally-purchased maize, or maize bran. Other ingredients include cotton and sunflower, both of which are imported. The animal feed produced is sold directly to farmers, to livestock cooperatives, and to government breeding stations.

### 4.2.7 Food Retailers

Maize flour and SoSoMa, which are sold domestically, can be found at both local markets and supermarkets. Both market types receive maize flour from millers or, in the case of international brands of maize flour, from distributors. Two supermarket chains, Nakumatt and Simba, are international chains that have two stores each in Kigali. These are frequented by middle and upper class patrons. Supermarket managers at both chains explained that although the price of maize flour sharply increased with the implementation of the 18% VAT in January 2014, their consumers were able to absorb the price difference without complaint. Most maize flour, however, is purchased at local markets. At those markets, maize flour is sold by weight, scooped by customers out of large 50kg bags. Maize grain for consumption can also be found at some local markets, but is not available at supermarkets. SoSoMa can be found at both market types in small packages, clearly marketed as a health product for children.

The most common maize flour sold by retailers is from Uganda. Visits to a number of local markets revealed that only Ugandan brands (mostly “Maganjo”) of maize flour were available. According to discussions with consumers who purchase from local markets, the primary reason to choose international brands over local brands is quality. One supermarket manager explained that the quality of the maize offered by the Ugandan brands is considered superior. In addition, these brands offer maize flour mixed with dried vegetables, which are growing in popularity. Local maize flour mills do not yet have the capacity to offer this with the possible exception of Minimex who does offer a fortified maize flour product.

## 4.3 Constraints and Market-based Solutions

During the analysis of the maize value chain a number of constraints were cited by the market actors interviewed. The table below presents these constraints, along with potential market-based solutions that could address them. The market-based solutions rated as “High-High” (HH) in relation to criteria (presented below) were prioritized for further assessment.

|  |  |
| --- | --- |
| **Value Chain Constraint** | **Market-Based Solution (MBS)** |
| Maize farmers lack access to improved varieties of maize seed which limits their production capacity and income | 1. Access to improved varieties of maize seed for maize farmers (High/Medium) |
| Maize farmers lack access to appropriate fertilizer and chemicals for maize production which limits their production capacity and income | 2. Access to appropriate fertilizer and chemicals for maize farmers (HM) |
| Maize farmers lack information on the use and benefits of improve maize seed which limits their yield, quality of maize produced, and income | 3. Access to information on the use and benefits of improved seeds for maize farmers (HH) |
| Maize farmers lack information on the use and benefits of fertilizer and chemicals for maize production which limits their yield, quality of maize produced, and income | 4. Access to information on the use and benefits of fertilizer and chemicals for maize farmers (HH) |
| Animal feed mixes contain locally sourced maize and imported sunflower and cotton. However, the imported ingredients are costly and Animal Feed companies are limited by their ability to pay for large amounts of the imported ingredients. Therefore, Animal Feed companies lack access to affordable non-maize ingredients for animal feed, limiting their growth and revenue | 5. Access for animal feed companies to locally sourced and affordable non-maize ingredients for animal feed (LL)  6. Access for animal feed companies to affordable financing options to purchase non-maize inputs for animal feed (LL) |
| Most maize flour processors lack the capacity to produce and market maize flour mixes, limiting their ability to compete with foreign competitors | 7. Access to processing equipment which would allow maize flour processors to produce maize flour mixes (MM)  8. Access to information about the production of maize flour mixes for maize flour processors (MM) |
| Maize farmers lack technology to dry maize resulting in maize being sold with a higher moisture content, lower grade, and lower price. There is also increased chances of rejection by buyers and increased risk of molds developing. | 9. Access to improved maize drying technologies for maize farmers (HH) |
| Maize farmers lack maize storage technologies requiring them to sell maize immediately after harvest and drying, limiting their potential income and causing large fluctuations in the seasonal availability of maize | 10. Access to improved storage technologies for maize farmers (MM) |
| Maize farmers in the high-altitude regions of the north have a different growing season than the rest of the country, but maize seeds are not available at the proper planting time. This limits their potential yield and income | 11. Access to improved short-season maize seeds at planting time for northern farmers (ML) |

## 4.4 Prioritization of Market-based Solutions

Once the final list of constraints and (potential) market-based solutions (MBSs) was identified, the team prioritized each of the MBSs on the basis of i) their potential to increase the growth and competitiveness of the maize value chain, and ii) the number of farmers (MSMEs) in the target group that could benefit (both direct and indirect). The grid below shows how each of the market-based solutions from the table above was prioritized and ranked.

**Market-Based Solution Ranking Grid – Maize Value Chain**

High

Medium

High

Low

Low

Medium

**No. of MSMEs in Target Group that will benefit (both direct and indirect)**

5,6

7,8,10

11

**3,4,9**

1,2

**Potential to Increase VC Growth + Competitiveness**

The following MBSs (rated as High-High) were selected as having the highest potential to meet the above-mentioned criteria:

* Access to information on the use and benefits of improved seeds for maize farmers (HH)
* Access to information on the use and benefits of fertilizer and chemicals for maize production for maize farmers (HH)
* Access to improved maize drying technologies for maize farmers

Access to improved seeds, fertilizers and chemicals for maize production (MBS 1 and 2) would have also scored high-high but as the government has not officially opened up the market the market actors interviewed felt that it is best to focus on information at this point (several LFs have already begun some of their own information and dissemination activities on a small scale). Once the market opens up for wide-spread private sector sale of these products (currently part of government policy to do in the near future) there will be many more opportunities and corresponding initiatives to undertake. As the GC program develops, additional MBS can be promoted as needed, and as realities on the ground in the value chain change.

# 5. Assessment of Market-Based Solutions & Identification of Program Facilitation Activities

Having completed the aforementioned activities, the team carried out assessments of the prioritized market-based solutions (MBSs). These assessments included interviews with existing or potential private sector providers to better understand the incentives and challenges they face in providing the MBSs in a sustainable manner. On May 6th AFE and the EMIRGE team organized two “focus group discussions” (FGDs) in Kigali that brought different market actors together. The first FGD included various input supply companies, and the second was to include companies which buy maize, including processors and bulkers. While the input supply FGD was a success with good participation, many companies invited to the buyers FGD were unable to attend. A second attempt by the EMIRGE team to hold the buyers FGD was also unsuccessful, so the team will instead conduct one-on-one interviews with different maize buyers and processors to discuss the MBSs.

Input supply FGD participants included representatives from four maize seed companies, two agrodealers, an agricultural input importer and retailer (who sells pesticides and some equipment to farmers), and two cooperatives. The discussions were structured to validate assumptions regarding the incentives and challenges that these market actors (Lead Firms) face in providing access to higher quality inputs for maize production (and information about those inputs), and to solicit ideas and initiatives that they could undertake to address them. Discussions were also held to discuss facilitation activities that the EMIRGE program could undertake to support the Lead Firms in their initiatives, which ultimately would result in sustainable impact for targeted maize farmers.

The following tables describe the assessments including proposed Lead Firm initiatives and illustrative EMIRGE facilitation activities.

| **MARKET-BASED SOLUTION (MBS) #1** | |
| --- | --- |
| **Improved access to information for maize farmers about the benefits and use of improved varieties of maize seed** | |
| VALUE CHAIN CONSTRAINT | |
| * Maize farmers lack access to and information about different varieties of maize seed, which limits their production capacity and income | |
| EXISTING OR POTENTIAL MBS PROVIDERS | |
| * Maize seed producing companies * Processors * Cooperatives/ Traders | * Agrodealers * Government * NGOs |
| CHALLENGES AND INCENTIVES TO PROVIDING THE MBS | |
| *All Potential MBS Providers*  **Challenges:** 1)Limited staff capacity to provide information to farmers; 2) Lack of informational/training materials; 3) Cost of providing information to farmers  **Incentives:** 1)Increased sales to farmers; 2) Improved reputation for quality and customer loyalty; 3) Supporting improved production of maize in Rwanda  *Maize seed producing companies*  **Challenges:** Most currently lack direct relationships with large numbers of farmers  **Incentives:**1)Building direct relationships with maize farmers; 2) Opportunities to develop regional relationships that could support distribution channels  *Processors*  **Challenges:** 1) Large maize processors have access to as much maize as they need, either through domestic or import channels and so lack incentive to develop sources of maize; 2) Staff lack knowledge about the benefits of different maize varieties  **Incentives:** Developing relationships with and improving sources of quality maize for processing  *Traders/Wholesalers, Cooperatives*  **Challenges:** 1) Lack information about improved maize seeds; 2) Lack access to improved maize seed; 3) Cost of providing information  **Incentives:** 1) Potentially developing alternative revenue streams through seed sales; 2) Improved sources of quality maize;  *Agrodealers*  **Challenges:** 1) Closely tied into the current RAB seed distribution network, so lack incentives to promote other seed varieties; 2) Lack of knowledge of different seed varieties  **Incentives:** 1) Building relationships with local maize farmers; 2) Developing a seed business in anticipation of the transition to privatization of the maize seed market | |
| CHALLENGES AND INCENTIVES FOR FARMERS TO USE THE MBS | |
| ***Challenges***   * Maize farmers have been given maize seeds by the government for many years. They have access to free seeds and so are often uninterested in different seed varieties for which they must pay * Farmers often have limited capital to spend on high-quality seeds, and so do not purchase different varieties of seeds | |
| ***Incentives***   * Larger farm yields, Greater income, Increased ability to plan farm production (such as selecting maize seeds with growing period that corresponds with rotational crops) | |
| PROPOSED PROVIDER(S) OF THE MBS | |
| **Maize Seed Producing Companies and Agrodealers**  Rationale: Although all of the potential MBS providers have incentives to give information about seeds to farmers, input supply companies and agrodealers have the most incentive to provide this service. With the planned privatization of the fertilizer and maize seed markets, input supply companies are quickly moving to strategically develop marketing efforts and distribution networks. | |

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| ILLUSTRATIVE LEAD FIRM INITIATIVES |
| Illustrative initiatives (proposed by input suppliers during interviews and focus group meetings) to overcome challenges they face in providing the targeted MBS include the following:   * Prepare training modules for producers they sell to * Create and distribute informational leaflets for farmers * Produce informational/marketing campaigns using media such as TV, radio, etc. targeting maize farmers * Establish demonstration plots and field days for producers * Develop networks of informed agrodealers who can provide information to farmers   *[Firms will organize and conduct these activities themselves with potential technical/financial support from GC]* |
| ILLUSTRATIVE EMIRGE FACILITATION ACTIVITIES |
| Illustrative EMIRGE facilitation activities to support LFs to implement their initiatives include the following:  *(these are only tentative at this point and the ultimate facilitation activities will depend on the initiatives proposed by the Lead Firms after submitting applications in response to the IFA):*   1. **Support Input Suppliers to conduct field demonstrations in target areas**  * Develop a question guide with technical experts to support the company to determine:   + The objectives of the field demonstrations   + Technical production practices and/or inputs which will be used on the demonstration plots   + How many field demonstrations will there be   + Where will the field demonstrations be located   + What will be the company’s role in managing the field demonstrations   + How will the demonstration plot motivate farmers to adopt improved production practices * Use question guide to support the company through a planning session for these field demonstrations, including the development of a budget * Promote the use of field days to share the results of the demonstration plots with a wider audience * Provide financial support for a portion of the costs (e.g. 70% in Year 1, 50% in Year 2, 30% in Year 3)  1. **Support Input Suppliers to conduct training events/field days for farmers.** Support them to:  * conduct a needs assessment with farmers related to maize seed (including spacing) * develop content and training module for producer training activities / field days (related to maize seed) together with technical experts * conduct training activities for farmers with program technical and cost share support  1. **Support Input Suppliers to build the technical capacity of their staff to better train/orient farmers in new maize seed varieties.** Support them to:  * organize TOT for their staff/trainers on: a) maize seed variety characteristics and best use b) adult learning methodology. Could involve engaging other value chain participants such as agronomists to conduct TOT training. * develop content and training module for producer training activities together with technical experts (this is linked with “training events/field days for maize farmers)  1. **Support Input Suppliers to develop informational pamphlets which can be distributed to farmers or media promotions for farmers.** Support them to:  * develop information pamphlets on improved maize seed and related cultivation techniques (possibly with support from technical expert that the firms identify) * identify publishing and printing services or radio and television service providers * assess the impact of providing information to farmers  1. **Support Input Suppliers to organize exposure visits for farmers** to observe other farmers in Rwanda with advanced knowledge of improved maize seeds and cultivation.  * Support the Input Suppliers to complete the various tasks required, including   + Define the visit purpose and objectives   + Identify leading farmers who would best benefit by participating in the visit   + Conduct research into potential sites and organizations to visit   + Contact potential sites and companies to arrange visits   + Determine an appropriate itinerary that is both educational and cost-effective   + Draft a contract, if necessary, with the hosting agents   + Coordinate the travel logistics   + Ask pertinent questions during the study tour to ensure objectives are being met * Evaluate the exposure visit and establish a follow-up work plan for implementing new ideas triggered by the visit |

| **MARKET-BASED SOLUTION (MBS) # 2** | |
| --- | --- |
| **Improved access to for maize farmers information/information about the benefits and proper use of fertilizers and chemicals for maize production** | |
| VALUE CHAIN CONSTRAINT | |
| * Maize farmers lack access to different varieties of fertilizers and chemicals, which limits their production capacity and income * Many maize farmers lack awareness of the benefits of fertilizers and are reluctant to purchase them. This limits their production potential and income. | |
| EXISTING OR POTENTIAL MBS PROVIDERS | |
| * Fertilizer importing companies * Processors * Large Farms * Cooperatives | * Agrodealers * Government * NGOs |
| CHALLENGES AND INCENTIVES TO PROVIDING THE MBS | |
| *All Potential MBS Providers*  **Challenges:** 1)Limited staff capacity to provide information to farmers; 2) Lack of informational/ training materials; 3) Cost of providing information to farmers  **Incentives:** 1) Increased sales to farmers; 2) Improved reputation for quality and customer loyalty; 3) Supporting improved production of maize in Rwanda  *Fertilizer importing companies*  **Challenges:** Most currently lack direct relationships with large numbers of farmers  **Incentives:** 1) Building direct relationships with maize farmers; 2) Establishing brand recognition of the farmers to support future sales  *Processors*  **Challenges:** 1) Large maize processors have access to as much maize as they need, either through domestic or import channels and so lack incentive to develop sources of maize; 2) Staff lack knowledge about the benefits of fertilizers and chemicals  **Incentives:**Developing relationships with and improving sources of quality maize for processing  *Traders/Wholesalers, Cooperatives*  **Challenges:** 1) Lack information about fertilizers and chemicals; 2) Lack access to different fertilizers and chemicals themselves; 3) Cost of providing information  **Incentives:** 1) Potentially developing alternative revenue streams through fertilizer and chemical sales; 2) Improved sources of quality maize;  *Agrodealers*  **Challenges:** 1) May lack access to different fertilizers and chemicals; 2) Access to Urea and DAP is tightly controlled by fertilizer companies and the government  **Incentives:**1) Building relationships with local maize farmers; 2) Increasing the number of farmers who buy fertilizers and chemicals can directly increase their sales and profit | |

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| CHALLENGES AND INCENTIVES FOR FARMERS TO USE THE MBS |
| *Challenges*   * Maize farmers have been given DAP and UREA by the government for years and have learned to apply these in the quantities provided without question * Farmers are unaware of the specific nutrient needs of their fields * Farmers often have limited capital to spend on agricultural inputs |
| *Incentives*   * Larger farm yields, Greater income, Reduced use of unnecessary fertilizers and chemicals can reduce investment costs |
| PROPOSED PROVIDER OF THE MBS |
| **Fertilizer Importing Companies and Agrodealers**  Rationale: Although all of the potential MBS providers have incentive to give information about seeds to farmers, input supply companies and agrodealers have the most incentive to provide this service. With the planned privatization of the fertilizer and maize seed markets, input supply companies are quickly moving to strategically develop marketing efforts and distribution networks.  **Intermediary Buyers (Traders/Wholesalers and Cooperatives)**  Rationale: Traders and Cooperatives that buy maize in bulk have a good awareness of what qualities of maize are most desired by the end market. They also stand to gain significantly if they are able to procure large quantities of high-quality maize from each farmer/group of farmers that they buy from. |
| ILLUSTRATIVE LEAD FIRM INITIATIVES |
| Illustrative initiatives (proposed by Lead Firms during interviews and focus group meetings) to overcome challenges they face in providing the targeted MBS in targeted areas include the following:   * Prepare training modules for producers they sell to or buy from * Create and distribute informational leaflets for farmers * Establish demonstration plots and field days for producers * Help farmers get affordable access to soil testing services so they can better understand what fertilizers and chemicals are needed for their fields   *[Firms will organize and conduct these activities themselves with potential technical/financial support from GC]* |
| ILLUSTRATIVE EMIRGE FACILITATION ACTIVITIES |
| Illustrative EMIRGE facilitation activities to support LFs to implement their initiatives include the following:   1. Support Lead Firms to conduct field demonstrations in target areas  * Develop a question guide with technical experts to support the company to determine:   + The objectives of the field demonstrations   + Technical production practices and/or inputs which will be used on the demonstration plots   + How many field demonstrations will there be   + Where will the field demonstrations be located   + What will be the company’s role in managing the field demonstrations   + How will the demonstration plot motivate farmers to adopt improved production practices * Use question guide to support the company through a planning session for these field demonstrations, including the development of a budget * Promote the use of field days to share the results of the demonstration plots with a wider audience * Provide financial support for a portion of the costs (e.g. 70% in Year 1, 50% in Year 2, 30% in Year 3)  1. Support Lead Firms to conduct training events for farmers in target areas. Support them to:  * conduct a learning needs assessment on fertilizer and chemical use with the farmers * develop content and training module for producer training activities together with technical experts * conduct training activities for farmers with program technical and cost share support  1. Support Lead Firms to build the technical capacity of their staff to better train/orient farmers about fertilize and chemical use for maize production. Support them to:  * organize TOT for their staff/trainers on: a) fertilizer and chemical use b) adult learning methodology. Could involve engaging other value chain participants such as agronomists to conduct TOT training. * develop content and training module for producer training activities related to fertilizer and chemical use for maize production, together with technical experts (linked with training events for maize farmers)  1. Support Input Suppliers to develop informational pamphlets which can be distributed to farmers. Support them to:  * develop information pamphlets related to fertilizer/chemical use and related cultivation techniques (possibly with support from technical expert that the firms identify) * identify publishing and printing services or radio and television service providers * assess the impact of providing information to farmers  1. Support Lead Firms to establish services which provide soil testing to farmers.  * Work with Firms to create a business plan defining how they can help farmers gain access to soil testing facilities, and then supporting them as needed to   + identify existing providers of soil testing services,   + sources of soil testing equipment for purchase by the Lead Firm   + sources of low-cost soil testing equipment which could be sold to farmers |

| **MARKET-BASED SOLUTION (MBS) # 3** | |
| --- | --- |
| **Improved access to maize drying technologies (such as mechanical dryers, corn cribs, other forms of maize-drying technologies, etc.) for maize farmers** | |
| VALUE CHAIN CONSTRAINT | |
| Maize farmers lack access to maize drying technologies. Maize is therefore sold with a higher moisture content, reducing the maize grade, lowering the price, increasing chances of rejection by processors, and increasing the risk of molds developing. Intermediaries (Trader/Wholesalers, Cooperatives) lack drying and storage facilities reducing their ability to purchase high volume of maize from producers. | |
| EXISTING OR POTENTIAL MBS PROVIDERS | |
| * Processors * Large Farms * Cooperatives * Trader/Wholesalers | * Agrodealers * Government * NGOs |
| CHALLENGES AND INCENTIVES TO PROVIDING THE MBS | |
| *Processors, Intermediary Buyers (Trader/Wholesalers, Cooperatives)*  **Challenges:** 1) Staff lack knowledge about maize drying technologies; 2) Cost of promoting access to maize drying technologies for farmers; 3) high cost of investing in drying/storage facilities  **Incentives:** 1) Improved and centralized access to sufficiently dried maize for processing; 2) Increased ability to buy maize at a lower price but still have access to high grade maize; 3) Able to sell maize with low moisture content to buyers at a higher price  *Agrodealers*  **Challenges:** 1) Lack knowledge about maize drying technologies; 2) Cost of marketing maize drying technologies; 3) Not currently selling these technologies to farmers  **Incentives:**1)Building relationships with local maize farmers; 2) Opportunity to earn additional income through new revenue streams | |
| CHALLENGES AND INCENTIVES FOR FARMERS TO USE THE MBS | |
| *Challenges*   * Maize farmers have limited cash-on-hand which makes investment in drying technologies difficult | |
| *Incentives*   * Fewer post-harvest losses (and therefore greater income), * Greater income from sales of higher grade maize | |
| PROPOSED PROVIDER OF THE MBS | |
| **Intermediary Buyers (Traders, and Cooperatives), and Maize Processors**  Rationale: Traders/wholesalers, Cooperatives and Maize processors have incentives to introduce maize drying technologies to the producers they source from as this would produce a better quality product.  These market actors could also invest in their own drying and storage facilities (silos, warehouses, etc.) which could enable them to purchase more from farmers but would not necessarily increase prices for farmers. | |
| ILLUSTRATIVE LEAD FIRM INITIATIVES | |
| Illustrative initiatives (proposed by Lead Firms during interviews and focus group meetings) to overcome challenges they face in providing the targeted MBS include the following:   * Build the capacity of LF staff to advise farmers (that they purchase from) about innovative, affordable drying technologies; * Establish maize drying/storage facilities where LFs can dry and store maize purchased from farmers | |

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| ILLUSTRATIVE EMIRGE FACILITATION ACTIVITIES |
| Illustrative EMIRGE facilitation activities to support LFs to implement their initiatives include the following:   1. Support targeted LFs to identify innovative and affordable technologies for maize farmers to dry maize. Assist in organizing research visits for LF staff to other regions or countries which utilize different types of maize drying technologies to identify technologies that could be made available to Rwandan maize farmers  * Support the Lead Firms to complete the various tasks required, including   + Define the visit purpose and objectives   + Identify staff who are best fit to participate in the visit   + Conduct research into potential sites and organizations to visit   + Contact potential sites and companies to arrange visits   + Determine an appropriate itinerary that is both educational and cost-effective   + Draft a contract, if necessary, with the hosting agents   + Coordinate the travel logistics   + Ask pertinent questions during the visit to ensure objectives are being met   + Evaluate the research visit and establish a follow-up work plan  1. Support targeted LFs to develop business plans for establishing the means to invest in their own maize drying and storage facilities.  * Support the trader/wholesalers, cooperatives and/or maize processors to:   + Assess the potential market size and purchasing potential   + Identifying appropriate types and different options of maize drying and storage facilities   + Identify all the costs and projected revenues that would be part of the investment   + Assist the LFs to develop and implement their business plan but with a light-touch facilitation |

# Recommendations and Next Steps

On May 9th AFE gave a presentation to EMIRGE staff that summarized the program design activities that were carried out. The presentation concluded with a discussion of next steps that EMIRGE should follow to facilitate systemic improvements in the maize value chain. AFE presented to EMIRGE a draft “Invitation for Application” (IFA) and description of activities which need to be completed to implement the value chain program in the maize value chain. This section summarizes these activities and proposed next steps.

## 6.1 Methodology for assisting LFs to prepare / refine applications

EMIRGE will finalize the draft IFA which was presented (see Appendix 5). To do this, the relevant dates and budget amounts need to be determined by the EMIRGE team. When this is completed, the IFAs can be distributed to potential lead firms through public advertisements (described in Section 4.2.2 below). As discussed during the “Next Steps” presentation, EMIRGE initially may choose to limit the potential number of LFs by targeting only maize seed producing companies. If they decide to expand distribution to additional market actors, EMIRGE can also distribute IFAs through relevant trade associations or cooperatives such as Agrodealer cooperatives. By distributing IFAs to a wider pool of potential LFs (who meet defined criteria) a wider range of quality applications might be received.

As applications are submitted by the interested LFs, EMIRGE will work closely with the LFs to assess and review the applications. When reviewing, the following points should be considered:

* Potential impact of their proposed initiatives on maize farmers (target group)
* Conformance with criteria defined in the IFA
* Capacity of EMIRGE to monitor and provide technical/cost share support to LF
* Conformance with cost share rules

As EMIRGE’s value chain program will most likely have a limited budget to support LF initiatives, emphasis can be put on supporting initiatives that require modest cost share from GC, can be supported at least partially through GC staff technical support, and that involve cross-company activities that utilize the resources and that benefit multiple LFs.

It should be noted that good writing and comprehensive explanations are *not* required for an application to be successful. As Lead Firms submit applications, the EMIRGE staff assigned to support the application process will need to reach out to those companies and begin working closely with them to revise their draft applications so that they have a clear concept and contain the information described in the IFA. To do this, a Question Guide (see Section 4.2.3 below for a full discussion on Question Guides) adapted to the specific proposed LF intervention can be useful to help the LF think about decisions/tasks that must be done to ensure preparation and implementation of their interventions. Working with the LFs to develop their applications and using a question guide will position EMIRGE staff in the correct role of a “facilitator” by allowing the LFs to develop and define their own initiatives. The process of supporting the LFs to prepare their initiatives is therefore a very important part of facilitation.

Another important step in the application process is completion of due diligence. Efforts should be made to validate all information in the application and to ensure that the LF is a reputable firm. AFE recommends that a Due Diligence Checklist be used to ensure that this step has been completed. An example of a checklist is seen in the table below.

|  |  |
| --- | --- |
| 1. Has a LF interview write-up (based on structured interview guide) been completed? If yes, please attach |  |
| 2. Has a site visit been conducted? If yes, describe. |  |
| 3. Describe additional due diligence that has been conducted to ensure that LF is reputable   * who was contacted? * how is determination being made? |  |
| 4. Describe any planning sessions that were held with LF to refine their application and budget |  |

Conducting a site visit (question 2 in the checklist above) is an important part of due diligence. To conduct a site visit, EMIRGE staff should visit the area(s) where the LF’s proposed initiative will take place. During the site visit, EMIRGE should:

* validate that statements presented in LF application are accurate
* meet with sampling of targeted producers
* validate that producers/MSMEs targeted by LFs interventions meet program criteria (e.g. poverty level, geographic area, gender, etc.)
* ensure that LF has conducted its own due diligence of the area

### 6.1.1 Using Public Advertisements to Identify Additional Lead Firms

Public advertisements (through newspapers, associations, etc.) can be used to identify LFs that fit the profile and criteria established by the EMIRGE program. Even if EMIRGE decides to focus specifically on a smaller group such as maize seed producing companies, public advertisements should be used to help ensure that EMIRGE is: a) providing an equal opportunity to all qualified LFs that participate in the program, and; b) maximizing the number of LF participants. Though the MBS assessments and FGDs have already been conducted, there may be LFs that EMIRGE has not yet identified.

The goal of public advertisements is to invite LFs that fit EMIRGE’s criteria to submit an ***‘expression of interest’*** to collaborate with the program. EMIRGE can then review the expressions of interest submitted, compare the LFs with the identified selection criteria, and determine which of the LFs merit follow-up. When EMIRGE reviews the expressions of interest it should compare the LFs’ qualifications against the criteria, not against other LFs. An example advertisement that EMIRGE could use for input supply companies selling to maize farmers is presented below.

#### Advertisement

The following text is an advertisement that has been tailored to the specific criteria and sector (maize) that the EMIRGE program is focusing on.

***Request for Expression of Interest from Maize Seed Companies***

An international development organization is inviting maize seed companies to submit expressions of interest to build their capacity to provide greater access to quality maize seeds for small scale farmers (less than 0.5 acres). The opportunity to benefit from technical support from the project is open to all maize seed companies which meet the following criteria:

* Must have been in operation for at least two years.
* Must be selling seed under their own brand name and packaging
* Must have sold at least 30MT of maize seed over the last year
* Must have access to large quantities of foundation/basic seed for multiplication
* Must have policies in place to ensure that no dangerous or illegal products are sold to farmers.
* Must have commercial interest and incentives to invest in Rwandan maize farmers in the X, Y, and Z districts through training, new products, field days and/or other forms of support.
* Investment in the proposed initiative must be at least 30% of the cost of the initiative.
* NGOs, government agencies, cooperatives, consulting firms, and associations are not eligible to apply.

Interested companies are requested to send an email to [email] to request the application format. Phone inquiries can be directed at [phone number]. All expressions of interest are due by [date].

### 6.1.2 Using Question Guides to Facilitate Lead Firm Interventions

As the AFE consultants noted during the “Next Steps” presentation, Question Guides are an invaluable tool for working with LFs. As EMIRGE gets started with the process of building its relationships with LFs, AFE recommends that it develop Question Guides to help the LFs refine their intervention ideas. As mentioned in Section 5.1, this will help ensure EMIRGE play the correct role of “facilitator” by allowing LFs to develop and define their own initiatives.

Using Question Guides will help the LFs (and EMIRGE) think about all of the decisions/tasks to ensure preparation and implementation of interventions, and has proven successful for a wide variety of LF initiatives under diverse circumstances. However, it is important to adapt each question guide for the specific LF initiatives being promoted, which requires research into the proposed initiative to ensure questions are appropriate. For that reason EMIRGE may consider hiring an external technical consultant to help develop the Question Guides. An example question guide can be seen below:

#### Question Guide Example

*Developing Demonstration Plots*

* What are the objectives of your demonstration plot?
* What technical production practices and/or inputs will you use on your demonstration plots?
* How many and what size demonstration plots will you have?
* Where will you locate your demonstration plots?
* What is your role in managing demonstration plots?
* What is the farmers’ role in managing demonstration plots?
* How will you choose farmers to manage demonstration plots?
* How will you compensate farmers’ for managing the demonstration plots?
* How will you use the demonstration plots to motivate farmers to adopt improved production practices?

### 6.1.3 Structuring Collaboration with Lead Firms

After lead firm interventions have been identified and due diligence has been conducted, the collaboration needs to be carefully structured. This section describes how Memorandums of Understanding (MOU) and addendums to those MOUs (technical and financial support agreements) can be structured to provide clarity and benefits for both EMIRGE and the LF. The section then presents guidelines for cost share financial support, as well as lessons learned in negotiating and managing agreements with LFs.

**Memorandums of Understanding (MOUs)** - Once EMIRGE is ready to collaborate with a LF it is advised to develop an MOU that provides an overview of activities to be promoted (along with general legal provisions), but that does not make firm commitments from EMIRGE for technical and financial support. MOU “addendums” can then be added as needed to describe specific LF initiatives and corresponding technical and financial support from EMIRGE. An MOU addendum is tailored to a specific LF initiative, building on the foundation of the MOU. The creation of an MOU and addendums should be a collaborative effort - the LF and EMIRGE will have specific requirements and requests that need to be negotiated and discussed.

Advantages of having a general MOU followed by more detailed addendums include:

* signing a general MOU shows commitment without allocating resources
* MOUs can show progress to donors (while LF interventions are developing)
* addendums allow and encourage flexibility through an “incremental approach” in which learning takes place and trust develops with the LF as collaboration progresses

Additional instruction on what makes up successful MOUs and MOU addendums is provided below:

**Components of Successful MOUs** - The following table presents and describes common components that should be found in MOU agreements between EMIRGE and the LFs it may work with in the future.

|  |  |
| --- | --- |
| **Component** | **Description** |
| Objective | Statement of purpose and objectives for entering into the MOU |
| General Terms | Duration of agreement as well as termination, communication and extension procedures |
| Confidentiality | Non-disclosure agreement between parties |
| Legal liabilities | Jurisdiction, guiding law and language for enforcement of agreement, mediation process for dispute resolution and intellectual property rights. |
| Addendums/Supplements | Clarification that specific activities and support agreements will be presented in addendums to the MOU |
| Additional Provisions | Specific clauses related to local laws, donor restrictions or other provisions not included elsewhere |

*A sample MOU is available in AFE’s “Tools & Methodologies for Collaborating with Lead Firms: A Practitioner’s Manual”[[4]](#footnote-4).*

The MOU includes some standard contractual type language. There might be some awkwardness while wading through these matters with the LF as you are still building a relationship, but done correctly it can demonstrate EMIRGE’s professionalism concerning the collaboration.

**Addendums to MOUs** - Once an MOU has been established, addendums will need to be written to define specific collaboration between EMIRGE and the LF. An addendum should describe the activities which will take place for the specific interventions that the LF will carry out, and lay out the responsibilities of both EMIRGE and the LF, including financial contributions, technical support, and reporting requirements. Each addendum should contain the following components:

|  |  |
| --- | --- |
| **Component** | **Description** |
| LF initiatives to be undertaken | Description of all activities, deliverables, outputs and reporting requirements covered under the addendum |
| Relationships among parties | Establish the roles and responsibilities of the LF and EMIRGE for specific activities |
| Financial Responsibilities | Detailed description of financial expectations and obligations |
| Timeframe of events/  work plan | Timeframe with clearly established milestones attributed to each party |
| Monitoring and evaluation procedures | Establishment of the EMIRGE’s right to collect and report on activities and participants. Description of reporting procedures. |
| Payment Modalities | Detailed description of cost share agreement and payment modalities |

*A sample MOU Addendum is available in AFE’s “Tools & Methodologies for Collaborating with Lead Firms: A Practitioner’s Manual”4.*

It takes some effort to design and communicate all of the details that are included in an MOU addendum, but it is important that it be done correctly so as to avoid any misunderstandings later in the collaboration. The LF should also be familiar with the indicators that EMIRGE may be responsible for vis-à-vis its donors, so that they understand the importance of their reporting requirements under the agreement.

**Guidelines on Structuring Financial Support to LFs** - The information in the table below reflects how financial support to LFs can be structured to reduce the risks of creating dependencies and promote sustainability. Principles and guidelines are presented according to categories of: 1) timing and duration of financial support; 2) cost share percentages; 3) setting limits of financial support; and 4) miscellaneous.

|  |  |
| --- | --- |
| **Component** | **Suggested Guidelines** |
| **Timing and Duration**  **of Financial Support** | * Provide financial support to get activity going and get LF excited – but only share costs for the first few interventions / activities. * Should be transitioned out over time and should have a limited duration. * Should be for a limited time to establish needed systems and capacity * Ensure that LF is taking full ownership of the initiative |
| **Cost Share Percentages** | * Keep the cost share percentage as low as possible to encourage LF ownership (while still providing incentives and helping to mitigate risks) * Put financial support into context that shows a time when subsidies will be removed (e.g. year 1 = 100% subsidy, year 2 =50%, etc.). * In its IFA, EMIRGE should stipulate that it will support “up to” a percentage (AFE usually recommends 70%) of the total cost of an activity, which gives it some flexibility of assessing proposed activities and corresponding cost shares on a case-by-case basis. |
| **Setting Limits of Financial Support** | * At the time of sharing the IFAs with potential LFs it is useful to communicate the amount of funds that it is willing to expend on financial support with LFs. The advantage of stating this up front is that the LFs understands that there is “real” money involved and it will also prevent them from proposing very high amounts of financial support that EMIRGE will not be able to support. * Some feel that by announcing a financial support amount that the LFs will automatically propose interventions for those amounts – even if they are not required. This could happen, but EMIRGE will always be in a position to scrutinize LF proposals and cut them back or decide not to fund them. |
| **Miscellaneous** | * EMIRGE and the LF can reduce financial support needed for capacity building by identifying providers of products and services that have an incentive to develop commercial relationships with the targeted LFs and the producers they buy from or sell to. These providers (input supply companies, consultants, etc.) will oftentimes provide free or “embedded” technical support, information, training services, etc. as part of their commercial relationship with the LF and producers. * Assist LF to look at leasing or alternative financing mechanisms that might be cheaper or offer more flexibility than traditional loans * Build in conditions for LFs that propose initiatives such as study tours, exposure visits, etc. to share that information and promote wider dissemination with other LFs upon their return. |

EMIRGE will need to develop guidelines and policies for providing financial support for the different kinds of initiatives proposed by LFs they are collaborating with. The guidelines of supporting a LF training activity for example will be different than those for supporting an exposure visit. EMIRGE’s financial support policies will depend on a variety of factors and will need to be tailored to specific situations – but in general they should be established in such a way as to discourage any LF that is not serious and committed to the initiative.

**Negotiating and Managing Technical and Financial Support Agreements with LFs** - This section presents some “lessons learned” in negotiating and managing technical and financial support agreements with Lead Firms.

1. When providing financial support to LF initiatives EMIRGE should think carefully about the potential consequences (from viewpoints of sustainability, level playing field, impact on other market actors, support market development, competition, etc.) and adopt a “do no harm” policy.
2. EMIRGE’s technical and financial support to a LF can be contingent upon a demonstrated commitment by the LF in, for example, hiring staff, making specific investments, undertaking initial activities, etc. In this manner, LFs “self-select” for collaboration with the EMIRGE program, which can enhance the chance of success and sustainability of impact. Once a LF has demonstrated such a commitment, technical and financial support from the Development Organization can be considered a “smart subsidy” as the chances of it leading to sustainable impact are greatly increased.[[5]](#footnote-5)
3. In negotiating both MOUs and related technical and financial support agreements EMIRGE should not take the responsibility to “organize producers” on behalf of the LFs as this can foster dependencies and hinder the development of sustainable relationships between LFs and producers.
4. Some LFs may require greater capacity building than others before they are able to make needed investments with producers.
5. In developing agreements, EMIRGE should be cognizant of risk management from the perspective of producers that are interacting with targeted LFs. For example, if a LF is the sole buyer of products it is purchasing from producers, then producers will face higher risks in expanding their production. In such cases, EMIRGE’s agreements with LFs can include measures to mitigate producers’ risk (such as providing support to LF to help ensure that quality inputs are provided to producers and that their end market is secure).

# Acknowledgements

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APPENDICES

Appendix 1: Illustrative Work Plan for EMIRGE

Appendix 2: Maize Program Design Work Plan

Appendix 3: MBS Interview Guide for Maize Buyers and Processors

Appendix 4: Draft Invitation for Applications (IFA)

Appendix 5: Persons interviewed in the maize value chain

Appendix 6: Focus Group Discussion Participants

Appendix 7: Focus Group Discussion Presentation

## Appendix 1: Illustrative Work Plan for EMIRGE

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **RECOMMENDED ACTIVITIES FOR RWANDA MAIZE VALUE CHAIN** | | **WEEKS** | | | | | | | | | | | | **KEY QUESTIONS TO BE ANSWERED** | |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | |  |
| **Determination of Key Program Details** | | | | | | | | | | | | | | | |
| 1 | Determine number of desired lead firms (LFs) |  |  |  |  |  |  |  |  |  |  |  |  | | Will the VC program target only Maize seed companies or other market actors as well? |
| 2 | Determine EMIRGE VC Program timeline |  |  |  |  |  |  |  |  |  |  |  |  | | When should LF activities begin?  When do LF activities need to be finalized? |
| **Lead Firm Application Process** | | | | | | | | | | | | | | | |
| 1 | Complete the draft Invitation for Application (IFA) |  |  |  |  |  |  |  |  |  |  |  |  | |  |
| 2 | Distribute IFAs to potential LFs that were interviewed or participated in the FGD |  |  |  |  |  |  |  |  |  |  |  |  | |  |
| 3 | Broadcast a request for Expressions of Interest (EOIs) through professional networks and/or media to reach all potential LFs |  |  |  |  |  |  |  |  |  |  |  |  | |  |
| 4 | Distribute IFAs to all potential LFs that submit an EOI |  |  |  |  |  |  |  |  |  |  |  |  | |  |
| **Program Implementation Activities\*** | | | | | | | | | | | | | | | |
| 1 | Receive applications from potential LFs and begin reviewing |  |  |  |  |  |  |  |  |  |  |  |  | | Is there a strong end market for the LFs product of service?  What are the incentives of LFs to conduct the initiative?  How many MSMEs will benefit? how will they benefit?  What is the relationship between the LF and targeted MSMEs? is this relationship sustainable?  Are all criteria stipulated in the IFA met? |
| 2 | Coordinate a time to meet with LF representatives to discuss any questions about the application |  |  |  |  |  |  |  |  |  |  |  |  | |  |
| 3 | Draft and Negotiate MOUs |  |  |  |  |  |  |  |  |  |  |  |  | |  |
| 4 | Draft and Negotiate the initial MOU addendum |  |  |  |  |  |  |  |  |  |  |  |  | |  |
| 5 | Begin facilitation of LF initiative(s) based on the timeline established in the MOU addendum |  |  |  |  |  |  |  |  |  |  |  |  | |  |

\*Due diligence should be done throughout the IFA and MOU process to ensure that any issues may be dealt with as early as possible.

## Appendix 2: Maize Program Design Work Plan

|  |  |
| --- | --- |
| Date | Activity |
| 21 April | Orientation to value chain facilitation |
| 22 April | Continue orientation and field visit planning |
| 23 April – 3 May | Conduct interviews, field visits, and write up interview notes |
| 5 May | Prepare for focus group discussions |
| 6 May | Conduct focus group discussions |
| 7 May | Consolidate findings from focus group discussions |
| 9 May | Orientation on tools and methodology for next steps |

## Appendix 3: MBS Interview Guide for Maize Buyers and Processors

**Structured Interview Guide for Potential Lead Firms**

This guide should serve as checklist to ensure that questions are addressed in interviews with LFs. It **should not be used as a questionnaire**.

**Part I: General company information, position in value chain, competitive advantage, etc.**

| **Company Name and Contact Information** |
| --- |
| Description of products or services they sell |
| Description of market trends and demand for their products or services |
| Geographic coverage where they sell their products or services |
| Company size and number of staff |
| Years in business |
| What differentiates you from your competitors? What is your unique selling point or strength? |
| Are you participating in/or a member of any professional associations? Do you participate in any industry forums? |
| Have you made any recent investments to develop or expand your company? |
| Description of how and where the company sources raw materials |
| Supply/distribution map (showing how products or services are sourced and distributed) |
| What types of investments have you made (or are you planning to make) to “upgrade” or strengthen the MSMEs that you buy from or sell to? |
| Description of major constraints affecting your overall business |
| Please list any other companies similar to yours that are in your industry? Which ones have the largest market share? Which are most innovative? |
| Are you currently working with any donors or development organizations? |

**Part II: Specific Information on Product, Service, or Support that LF provides (or could provide) to MSMEs they buy from/sell to[[6]](#footnote-6)**

| **Product/service/support #1** | **Access to Information for Farmers about Improved Seed, Fertilizer and Chemicals for Maize Production** |
| --- | --- |
| **General Information** | * How many farmers do you currently provide information about modern maize cultivation techniques and proper post-harvest handling techniques to and where? * Describe the size of these farms and the scale of your transactions with them. |
| **Incentives/ Risks/ Constraints** | * What incentives do you have for providing information about modern maize cultivation techniques and proper post-harvest handling techniques to Maize Farmers in the targeted regions? * What challenges or risks do you face in providing information about modern cultivation techniquesto maize farmers in the targeted region(s)? * What support do you need to reduce risks or develop capacity to address these challenges? |
| **Description** (diversity of production, features/ benefits, cost recovery, etc.) | * Describe how you provide information about modern maize cultivation techniques and proper post-harvest handling techniques to maize farmers. * How do you cover your costs of provide information about modern maize cultivation techniques and proper post-harvest handling techniques to farmers in the targeted regions? * What are the features and benefits (e.g. transport, after sale market solutions, warranties, etc.) that you provide to make information about modern maize cultivation techniques and proper post-harvest handling techniques more appealing to maize farmers? * How many firms provide information about modern maize cultivation techniques and proper post-harvest handling techniques to maize farmers? (get contact info) |
| **Users / Trends** | * How many maize farmers do you provide information about modern maize cultivation techniques and proper post-harvest handling techniques to? * How frequently do you provide information about modern maize cultivation techniques and proper post-harvest handling techniques to farmers? What is the volume or scale of your technical supportper year? * How do/will you obtain information on what the targeted farmers need to know? * How do/will you let maize farmers in the X, Y, and Z regions know that you provide information about modern maize cultivation techniques and proper post-harvest handling techniques? |

| **Product/service/support #1** | **Access to Improved Drying Technologies for Maize Farmers** |
| --- | --- |
| **General Information** | * How many maize farmers do you currently provide access to maize drying technologies to and where? * Describe the size of these farmers and the scale of your transactions with them. |
| **Incentives/ Risks/ Constraints** | * What incentives do you have for providing access to maize drying technologiesto farmers in the targeted regions? * What challenges or risks do you face in providing access to maize drying technologiesto maize farmers in the targeted regions? * What support do you need to reduce risks or develop capacity to address these challenges? |
| **Description** (diversity of production, features/ benefits, cost recovery, etc.) | * Describe how you provide access to maize drying technologies to maize farmers. * How do you cover your costs of providing access to maize drying technologies to maize farmers? * What are the features and benefits (e.g. transport, after sale market solutions, warranties, etc.) that you provide to make utilizing maize drying technologies more appealing to maize farmers in the targeted region? * How many firms provide access to maize drying technologies to maize farmers? (get contact info) |
| **Users / Trends** | * How many maize farmers do you provide access to maize drying technologies to? * How many maize farmers in the targeted regions do you think can use (and acquire/pay for) the drying technologies that you provide access to? * Do you see the need for services to provide maize drying technologies growing in the future? * How do/will you obtain information on what maize farmers in the targeted regions want? * How do/will you let maize farmers know that you provide access to maize drying technologies*?* |

## Appendix 4: Draft Invitation for Applications (IFA)

**INVITATION FOR APPLICATIONS**

**PROGRAM TO SUPPORT AGRICULTURAL INPUT SUPPLY**

**IN THE MAIZE SECTOR**

***Global Communities*** is an international development organization implementing the ***Enabling Market Integration through Rural Group Empowerment (EMIRGE) Project***. The goal of EMRIGE is to increase incomes of agriculture producers and to improve and expand their businesses in Rwanda by enabling them to overcome common constraints and access skills and opportunities to pursue market driven business objectives.

EMIRGE is inviting agricultural input supply companies in Rwanda to submit applications to develop or expand their capacity to produce and/or sell affordable and quality agricultural inputs (primarily seed, fertilizers and chemicals) to small-scale maize farmers in the X Y and Z regions.

Technical and financial support agreements (with cost share components ranging from $2,500 to $7,500 USD) will be negotiated to pilot specific activities with selected companies based on the selection process described below. This support must contribute to a significant investment (in cash or in-kind) that the companies will make. EMIRGE program staff will also provide technical support as needed to build the capacity of successful applicants to implement their proposed initiatives.

Applications must be submitted in accordance with the format described, and received no later than ***August 15, 2014.***

***Background***

The objective of the EMIRGE input supply development component is to promote greater access to quality agricultural inputs (and better information on the use of those inputs) for maize farmers in Rwanda. EMIRGE realizes the importance of private sector companies to drive change and provide needed inputs and technical support to the producers they transact with. EMIRGE is therefore seeking to collaborate with input supply companies to support initiatives that will improve their competitiveness, expand their distribution networks, build their capacity to provide useful information and training to producers, and offer a greater variety of quality inputs adapted to the needs of producers, processors and exporters.

***Illustrative Areas for Support***

Proposed activities should contribute to the company’s ability to improve, expand or develop agricultural inputs they provide to maize producers in the targeted areas. Examples of activities that could be supported include, **but are not limited to**, the following *(company would be responsible for organizing and managing these activities with technical and/or financial support from EMIRGE):*

1. Company led training, coaching or field days to expose producers to improved use of agricultural inputs (seeds, tools, equipment, etc.) and to modern cultivation techniques;
2. Meetings with maize processing and export companies to develop a greater understanding of their specific end market requirements *(so that input supply companies can adapt inputs accordingly);*
3. Organization of demonstration plots to expose producers to new varieties and/or improved use of agricultural inputs;
4. Capacity building of company staff to provide improved information and training to producers and distributors;
5. Training and capacity building of company distributors (retailers, commissioned agents, etc) to enable them to better inform producers on the correct use the products that the company is offering;
6. Development of posters, brochures or other materials to assist in dissemination of good use of agricultural inputs for small scale farmers;
7. Identification and testing of new crop varieties and other agricultural input products to meet the needs of the food processing and packaging industry in Rwanda;
8. Development of seed multiplication programs;
9. Developing or improving products to make them more attractive to producers (better packaging, lower cost, etc.);
10. Exposure visits in Rwanda or other countries to identify new sources of seed, tools, equipment, or other inputs; and
11. Strategic planning exercises/ development of business plans to expand distribution networks.

This list is non-exhaustive. It is simply to provide examples of company initiatives that could be supported by EMIRGE. Any combination of these activities is encouraged. However, all supported activities must show how they will create sustainable impact for the producers that the company sells to, and increase the ability of producers to supply buyers of these products in Rwanda.

***EMIRGE cost share funds cannot be used for:***

* Working capital (day to day company operations for salaries, rent, purchases, etc.)
* Direct payment or subsidy to producers
* Fixed assets (tools, equipment, etc.)

***General Criteria:***

Eligible applicants for this program must:

* Have been in operation for at least two years.
* Have successfully sold maize seed, fertilizer or chemicals to at least 100 farmers over the last year
* (for seed companies) Have access to foundation/basic seed for multiplication
* Have policies in place to ensure that no dangerous or illegal products are sold to farmers.
* Have commercial interest and incentives to invest in Rwandan maize farmers in the X, Y, and Z districts through training, new products, field days and/or other forms of support.
* Make an Investment of at least 30% of the cost of the initiative.
* ***Proposed initiatives where at least 60% of proposed activities/ budget is for activities that involves direct support to producers (training, field days, introduction of new products, technologies, quality management, etc.)***

**Note:** NGOs, government agencies, cooperatives, consulting firms, and associations are not eligible to apply.

After review of the applications, EMIRGE may determine that some of the proposed activities (such as exposure visits) might be best pursued as “cross-company” interventions, with several agricultural input supply companies participating. This could have the effect of reducing costs and promoting lateral learning among the participating companies. This assessment (as well as discussions with the Applicants) will take place once Applicants have submitted their applications.

***Expected Results***

While it is expected that participating companies will benefit from these activities, it is also expected that activities supported under this program will benefit the producers the companies are selling to in terms of better information, skills upgrading, improved productivity, enhanced revenues, etc. as well as improving their ability to supply traders, maize processing and export companies in Rwanda.

#### Preparation of Applications

Support from EMIRGE may be given to several different companies. All applications will be evaluated based on the criteria in the table below and the general criteria given above. ***All applicants that meet the criteria will be considered for financial support.*** Applicants are encouraged to discuss their ideas and request advice from EMIRGE in the preparation of their applications.

**INSTRUCTIONS AND FORMAT**

|  |
| --- |
| **Cover Page**  *Name and Address of Applicant (address, phone, fax, email)*  *Date of Submission*  *Lead Person to Contact*  *Reference: EMIRGE Maize Input Supply Sector Application* |
| **Activities and Impact (up to 2 pages)**:  *Clear description of proposed activities including how they fit into the company’s business strategy, how they will contribute to improved competitiveness, and how they will promote greater access to quality inputs for producers.* |
| **Personnel (up to 1/2 page):**  *Describe the name and qualifications of the people who will be responsible for implementing the activities.* |
| **Experience (up to 1/2 page):**  *Brief description of past or current initiatives that company has conducted similar to those proposed, or why the company feels it is qualified to successfully conduct the proposed activities.* |
| **Sustainability (up to ½ page):**  *A clear description of how the activities will result in increased and sustainable commercial relationships between the company, its distributors, and producers, and how the company will be able to continue these commercial relationships and provide ongoing support to the producers once the program ends.* |

Applications will be accepted in English and Kinyarwanda (though English is preferred) and must be no more than four pages in length (not including the budget or budget notes). EMIRGE will select applicants that meet criteria by August 25, 2014. At that time, more detailed activity planning will take place between EMIRGE and the applicants. This planning will include:

* Detailed discussions and agreement on strategy, budget and timing for different activities.
* Discussions on how technical support from EMIRGE staff and consultants can be provided to support the agreed upon activities.
* Discussions on how combined technical support or “cross-company activities” might be organized with several Companies.

All supported initiatives must be completed within a year of signing an agreement with EMIRGE.

Please submit an electronic copy of the application by August 15th, 2014 to the EMIRGE representative at email: tnkuranga@rw.globalcommunities.org. Please include the name of the lead contact person who will be involved with the application process as well as the telephone and email contact information.

Conditions: **Issuance of this request for application in no way constitutes a commitment by EMIRGE to execute any agreement or to pay any costs incurred by any applicant in submitting an application.**

Please note that EMIRGE **will fully respect the confidentiality** of all companies involved in the program. A joint memorandum of understanding between EMIRGE and the Company will be developed, with detailed activities clearly defining the respective responsibilities, roles, and obligations of each party. Successful applicants must be willing to share information with EMIRGE regarding their sales to (or purchases from) targeted producers. EMIRGE (on a sample basis) will conduct interviews with these producers to gather information on impact and to monitor progress.

**Instructions for Completing the Budget**

Each applicant will prepare a budget using the format below. Please provide as much detail as possible in the line item descriptions and budget notes. If possible (though not mandatory) applicant should prepare and send this budget as an additional file in Microsoft Excel format. ***Applicant must contribute at least 30% to proposed costs***.

|  | **Line Item** | **Budget Notes**  **(describes line item in more detail)** | **Cost/ Unit** | **Days/ Unit** | **People/ Number** | **Total Cost** | **Company Investment** | **EMIRGE cost share** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 |  |  |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |  |  |
| 7 |  |  |  |  |  |  |  |  |
| 8 |  |  |  |  |  |  |  |  |
| 9 |  |  |  |  |  |  |  |  |
| 10 |  |  |  |  |  |  |  |  |
| 11 |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  | ***EMIRGE* cost share (50-70%)** |  |  |  |  |  |  |  |
|  | **Company cost share (30-50%)** |  |  |  |  |  |  |  |

***\* Please contact EMIRGE for any assistance or questions you may have.***

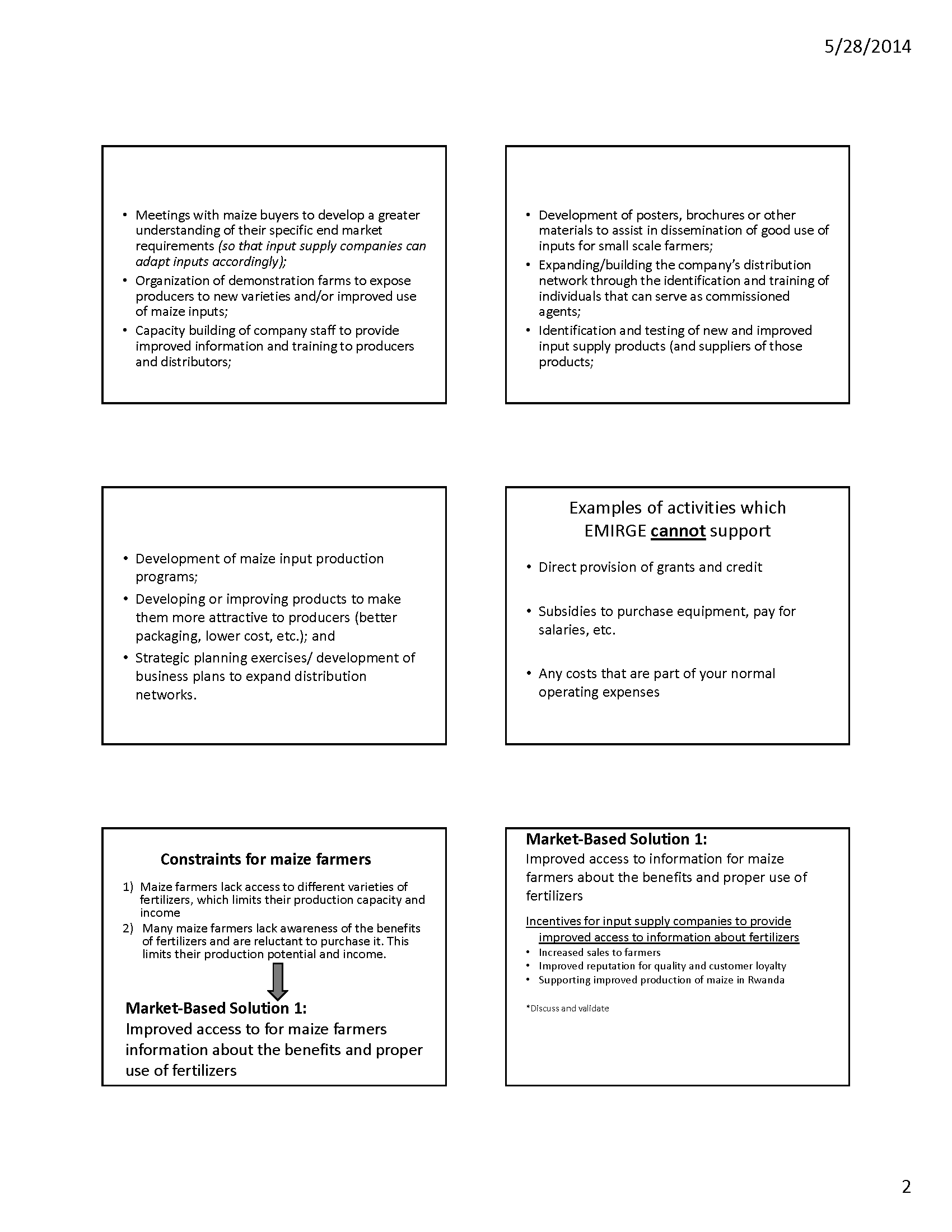
## Appendix 5: Persons interviewed in the maize value chain

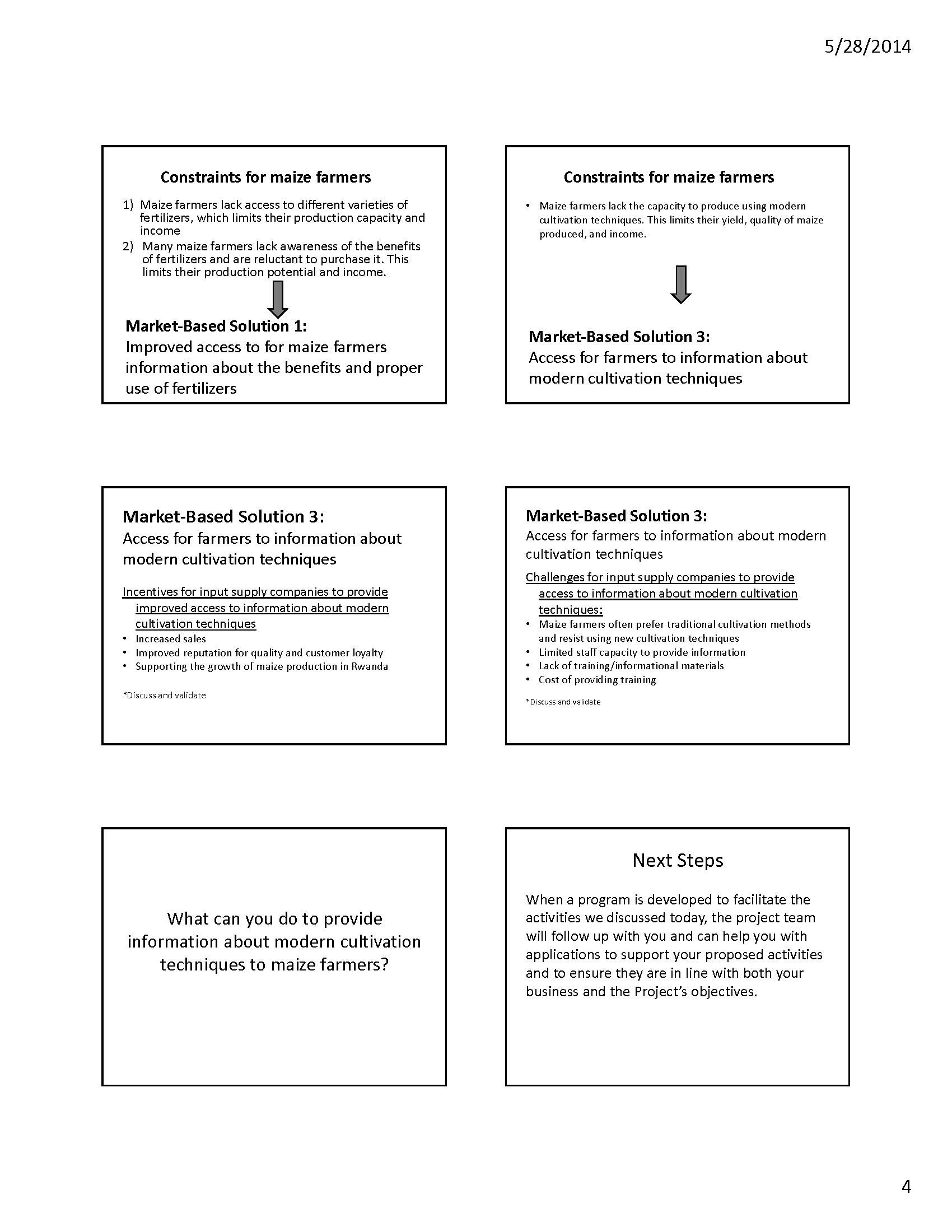
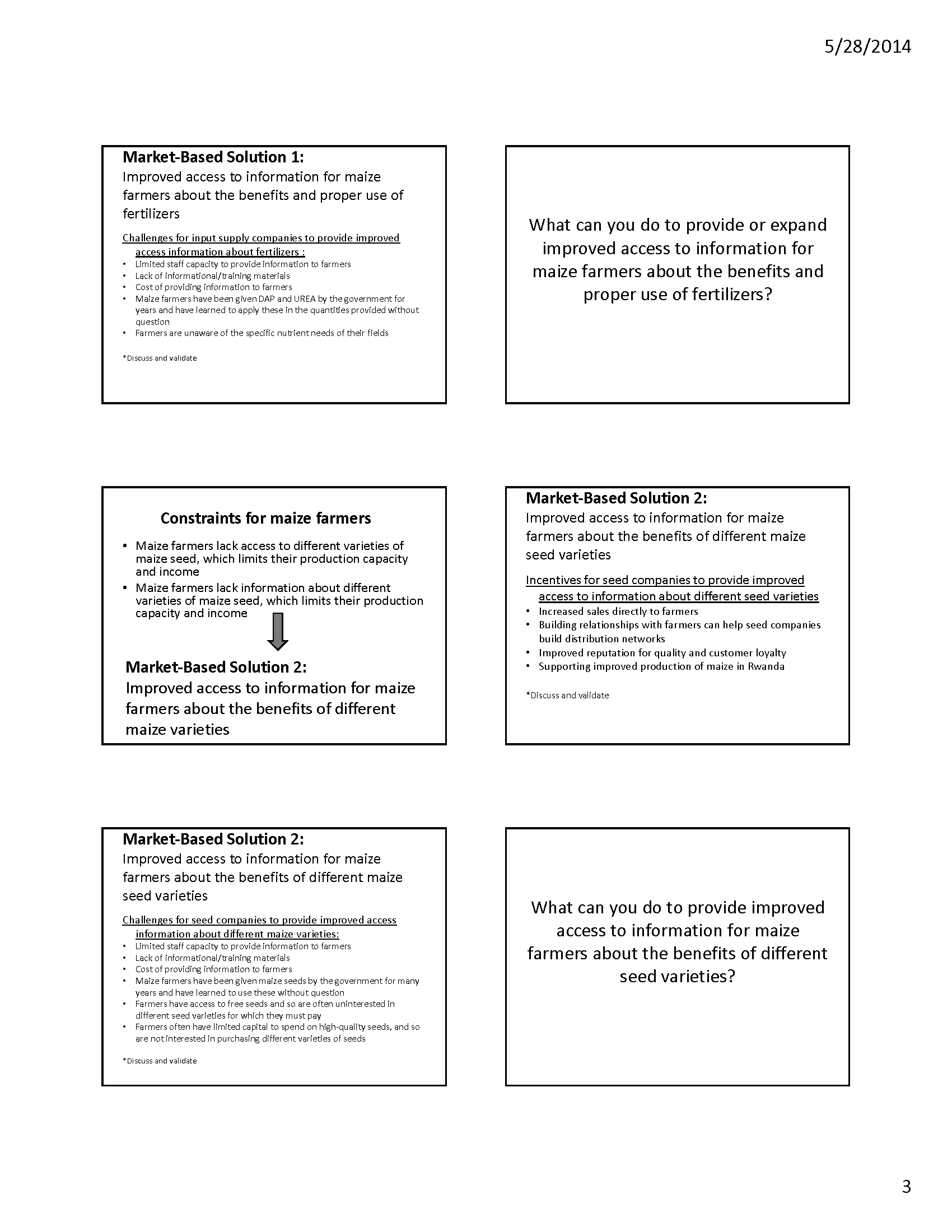
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Date | Market Function | Company | Person | Position |
| 23-April | Wholesaler | Sole Proprietorship | Ndayisaba Vincent | Owner |
| 23- April | Animal Feed producer/Retailer | Sole Proprietorship | Nkuranyabahizi Claver | Owner |
| 23-April | Retailer | Simba | Justin Ngarambe | MD |
| 23-April | Government Training/Maize Buying | Post-Harvest Handling and storage Task force | Emmanuel Kayiranga | Task Force Member |
| 24-April | Retailer | Nakumatt | Stephen Makau | Branch Manager |
| 24-April | Maize Processor | SORTONIA Business Group | Makuza Ernest | Manager |
| 24-April | Maize Processor | Minimex | Claude Mansell | MD |
| 25-April | Seed Company | APC Sarura | Ngoga Claudien | Coordinator |
| 25-April | Maize Processor | COAMV | Ndagijimana Emmanuel | President/MD |
| 28-April | Government Agriculture Agency | Rwanda Agriculture Board (RAB) | Claver Ngaboyisonga | Maize Programme Coordinator |
| 28-April | Agro-dealer | Fumbwe Sector, Rwamagana District | Jean Baptiste | Owner |
| 28-April | Government Agriculture Agency | Rwanda Agriculture Board (RAB) | Jean de Dieu | Extension Service Coordinator |
| 29-April | Seed Company | Seed.Co | Kasaija Banage | Country Representative |
| 30-April | Maize Cooperative | KOARU Cooperative | Cooperative members | Board & Other Members |
| 30-April | Agro-dealer | Agro-vet |  |  |
| 30-April | Medium farmer | Dairy farmer with 4 ha of land | Benjamin | Farmer/Owner |
| 1-May | Agro-dealer | Kigali Input Store |  |  |
| 1-May | Input Importer/Wholesaler | Green Age | Mohamed saidi | Owner |
| 1-May | Seed Company | Pannar | Jean Paul | Country Representative |
| 1-May | Seed Company | Win Win Agri-Tech | Ignace Nyiringabo | CEO |
| 1-May | Seeds multiplication cooperative | IMPAKOMU | Board Members | Board members |
| 2-May | Maize growers Cooperative Union | Nyagatare District union | Daniel | Manager |
| 2-May | Maize Cooperative | Nyagatare District | Cooperative members | members |
| 3-May | Maize Buyer | Pro-Dev | Bayingana Francis | Project Coordinator |
| 5-May | Input supplier | Kenya Seed Co | James Osilo |  |
| 5-May | Buyer | Export Trading Group | Esperance |  |
| 22-May | Animal Feed company | Rutsinga and Sons Co | Rutsinga Jacques | Managing Director |

## Appendix 6: Focus Group Discussion Participants

|  |  |  |  |
| --- | --- | --- | --- |
|  | Representative | Company | Phone |
| 1 | Mohammed Salim | Green Age International Ltd | 0788303786 |
| 2 | Amos | SeedCo | 0787318642 |
| 3 | Jean Paul | Pannar Seed | 0788433242 |
| 4 | Jean Baptist | Agrodealer Rwamagana | 0784626216 |
| 5 | Joseph Ndabukiye | KOARU Cooperative | 0784562400 |
| 6 | Ngoga Claudien | Sarura APC | 0788830109 |
| 7 | James Osolo | Kenya Seed Co | 0786870213 |
| 8 | Nkubiri Alfred | EDC | 0787300760 |
| 9 | Mukankusi Judith | IMPAKOMU Cooperative | 0788412695 |

## Appendix 7: Focus Group Discussion Presentations





1. *Rwanda, Ideal Conditions for High Value Products. Investment Opportunity: Maize Production.* Rwanda Development Board. <http://www.rdb.rw/fileadmin/user_upload/Documents/Agriculture/Maize%20production%20and%20processing.pdf> [↑](#footnote-ref-1)
2. Crop Intensification Program: Government of Rwanda, Ministry of Agriculture and Animal Resources. <http://www.minagri.gov.rw/index.php?id=618> [↑](#footnote-ref-2)
3. *Creating an Integrated Maize Supply Chain in Rwanda, from Field to Consumer.* EMRC. <http://www.emrc.be/documents/document/20131018104620-agri13_-_session_i_-_jonathan_hall_braliwa_with_paul_m__last_version.pdf> [↑](#footnote-ref-3)
4. ““Tools & Methodologies for Collaborating with Lead Firms: A Practitioner’s Manual”. 2014. Action For Enterprise. <http://www.actionforenterprise.org/lf-manual.pdf> [↑](#footnote-ref-4)
5. *Smart subsidies can be defined as those that encourage LFs to do something they probably would not be doing on their own, at least not right away because they see it as too risky. DO value is in buying down that risk to a reasonable level with a reasonable degree of subsidy without doing the work for them or creating dependency on the DO to drive the process.* [↑](#footnote-ref-5)
6. If specific product, service or support required by MSMEs is not known at this point, can use “products, services and/or support to MSMEs you buy from/sell to” (on generic basis) [↑](#footnote-ref-6)