



**SEED COOPERATIVE ALLIANCE
SEMI-ANNUAL REPORT**

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SEED COOPERATIVE ALLIANCE SEMI-ANNUAL REPORT

I. PROJECT SUMMARY

To test the Seed Cooperative Alliance (SCA) development hypothesis that cooperative alliances can provide a commercially sustainable supply chain for distribution of improved hybrid maize seed in Rwanda and Tanzania, the SCA project is conducting a series of interrelated diagnostic, strategic planning and capacity building services. The program has started by assessing the market feasibility of seed alliances and by conducting strategic fit assessments to identify the potential for cooperative alliance formation in Tanzania and Rwanda.

USAID resources, with matching contributions from Land O'Lakes, Seed Co Limited (Seed Co) and local cooperatives have been used to undertake the diagnostic and strategic planning work in Rwanda and Tanzania including: 1) market feasibility assessment; 2) strategic fit assessment with local agricultural cooperatives; and, 3) partnership alliance meetings with high-potential cooperative alliance partners. Although the ultimate goal of these potential alliances is the commercial distribution of new maize seed varieties; formal product testing, validation and commercialization will not be within the scope of the activity. A primary outcome of this work will be the documentation and dissemination of processes, tools and learning from the diagnostic and strategic planning work which Land O'Lakes expects to result in more and better cooperative alliances in the future. In addition, the project will significantly bolster cooperative performance through capacity building and learning events during the project duration. As part of the project efforts, Land O'Lakes will also conduct specific gender training for cooperative management/board and conduct research on the influence of social capital and networks in cooperative alliances.

II. PROJECT PERFORMANCE RESULTS TO DATE

Highlights of program activities include (bolded items are highlights since last report):

- 1) Market feasibility assessments were completed by alliance facilitators in Tanzania and Rwanda.
- 2) A Market feasibility assessment trip took place in February 2014. During this trip, Director Keith Newhouse from Winfield Solutions added significant value to the assessment by providing insights based on decades of experiences in the seed and Ag-industry.
- 3) Land O'Lakes Supply Chain intern, Katie Bolssen, conducted an analysis of seed supply chains in Tanzania and Rwanda.
- 4) **Completed a Winfield commercial viability assessment and analysis.**
- 5) **Greg Grothe, CDP Program Manager and Keith Newhouse, Winfield Solutions Director, visited cooperatives in Rwanda and Tanzania.**
- 6) **Completed Strategic Fit assessments for selected cooperatives in Rwanda and Tanzania.**
- 7) **Successful cooperative and input provider partnership alliances in Rwanda formed as a result of intervention.**
- 8) **Short term technical assistance was provided by Dr. Tom Herlehy, Land O'Lakes Practice Area Manager for Crops. He provided technical support to the cooperatives / Seed Co demo plot partnership.**
- 9) **The first drafts of the Alliance Guides were completed.**

III. PROJECT PERFORMANCE TABLE

Indicator Name	Unit of measure	Baseline		Year 1 ¹ April–Dec 2013		Year 2 Jan-Dec 2014	
		Year	Value	Target	Actual	Target	Actual
Outcomes							
Number of cooperative alliances formed	Number (#)	2014	0	1	3	1	5
Percent increase in agro-input sales increased	Percentage (%)	2014	0	0	0	Target will be in 2015	NA
Percent of active members who are women	Percentage (%)	2014	6%	6%	6%	6%	6%
The average satisfaction rating on perception of men on inclusion of women in cooperative leadership	Percentage (%)	2015	TBD	TBD	NA	TBD	NA
Number of cooperatives that have financial statements that are audit ready	Number (#)	2015	TBD	TBD	NA	TBD	NA
Member satisfaction with cooperative leadership improves	NPS score	2015	TBD	TBD	NA	TBD	NA
Number of new/improved services offered by cooperatives to members	Number (#)	2014	0	TBD	TBD	1	1
Outputs							
Number of business cases developed	Number (#)	2013	0	0	0	2	2
Number of validation	Number (#)	2014	0	NA	NA	2	0

¹ This report has shifted the yearly timeframes given the supplemental funding awarded in September 2014

Indicator Name	Unit of measure	Baseline		Year 1 ¹ April–Dec 2013		Year 2 Jan–Dec 2014	
		Year	Value	Target	Actual	Target	Actual
workshops conducted							
Number of proof of concept pilot studies completed	Number (#)	2014	0	NA	NA	2	5
Number of cooperative alliance strategic fit assessments completed	Number (#)	2014	0	NA	NA	2	10
Number of individuals receiving short term agricultural productivity training on implementing alliance partnerships	Number (#)	2014	0	NA	NA	Target will be in 2015	0
Study on social capital completed	Number (#)	2015	0	NA	NA	NA	NA
Agro-input conference held	Number (#)	2015	0	NA	NA	NA	NA
Number Learning Events held	Number (#)	2015	0	NA	NA	NA	NA
Number of cooperatives receiving USG-funded technical assistance to improve management practices related to the evaluation and initiation of strategic business alliances	Number (#)	2013	0	0	0	Target will be in 2015	0
Number of cooperatives receiving cooperative alliance guide one on one coaching	Number (#)	2013	0	0	0	Target will be in 2015	0

The program added a number of new indicators (represented as 2014 baseline in the table above) following supplemental funding awarded September 30, 2014. The indicators are a combination of outcome indicators and output indicators.

In 2014, the program developed three new cooperative partnerships compared to a target of one new cooperative partnership. All three cooperative partnerships were in Rwanda. In Tanzania, there were multiple conversations between three large multi-purpose cooperatives and Seed Co, but these did not yield a successful partnership ahead of the October maize season. Seed Co has remained engaged in negotiations with Koboku cooperative in Tanzania ahead of the March/April 2015 planting season.

The program also completed a total of eight strategic fit assessments on cooperatives (3 in Tanzania and 5 in Rwanda) compared to a target number of two strategic fit assessments. The strategic fit assessments built upon knowledge from the market feasibility assessment and helped narrow the target list of potential cooperative partners in both countries.

SCA does not expect to achieve other targets in the project performance plan until end of year three and/or the project end. However, based on progress through eighteen months of implementation, the program is well on track to meet these indicators. There is overwhelming interest from cooperatives in Rwanda to work with Seed Co following several initial successful partnerships in 2014. Tanzania is proving to be a more challenging environment and an objective of the alliance guide and validation workshop will be to better understand the barriers and constraints for alliance formation between cooperatives and input providers in the Kilimanjaro region of Tanzania.

By end of year 2014, the Seed Alliance program had planned to focus on one country – either Tanzania or Rwanda. However, as a result of supplemental funding, the program will continue to focus on developing and studying pilot alliances both countries.

IV. PROJECT PARTNERS

A summary of the key partners are listed below:

Winfield Solutions

Land O'Lakes subsidiary Winfield Solutions is the largest wholesaler of crop seed and crop protection products in the United States. The business brings significant expertise in business-to-business relationships through cooperative models and the distribution of inputs and crop solutions. Winfield also has some early stage exploratory partnerships to develop tropical varieties of hybrid maize seeds. The business will be a key partner of the Seed Alliance in assessing the viability of business models that involve cooperative alliances in Tanzania and Rwanda. Winfield will also help support technical assistance work by leveraging their experience and expertise working with coop-coop models in the United States.

Seed Co

Seed Co is a Zimbabwe based company (www.seedco.co.zw) that develops and markets hybrid maize seed, cotton seed, wheat, soya bean, barley, sorghum and ground nut seed. Currently Seed Co has presence in 13 countries – primarily markets in Eastern and Southern African. Seed Co is actively expanding in the two targeted countries of the Seed Alliance. In Tanzania, Seed Co operates a network of distribution agents and produces

around 40% of the needed seed in country. In Rwanda, the business is also rapidly growing through a combination of public / private partnerships. The company sees high potential to work with cooperatives, given their reach and span in many rural communities. However, there have been historic challenges in reaching effective alliances with different organizations. Seed Co will work with the project team and leverage in depth expertise of the seed markets and distribution channels for seeds in each country and will also be included in potential alliance discussions with interested cooperatives.

CSDI Tanzania

Center for Sustainable Development Initiative (CSDI) has been contracted to serve as an alliance facilitator in Tanzania. CSDI brings extensive experience and in-depth knowledge of the Tanzanian Ag-sector and cooperatives. Lead consultant William Massawe has worked closely with many Agribusinesses and cooperatives in the Southern Agricultural Growth Corridor (SAGCOT) as part of partnership with the African Development Foundation (ADF).

ADC Rwanda

African Development Consultancy (ADC) has been contracted to serve as an alliance facilitator in Rwanda. ADC also brings extensive experience to the Rwandan market as a key implementer of ADF program activities in Rwanda. Lead consultant JohnBosco Ruzibuka has worked closely with cooperatives in the maize sector and was previously engaged as a value chain consultant with the USAID post-harvest loss program led by CARANA. JohnBosco also lived and worked in Tanzania for over a decade. His knowledge of both countries and maize markets greatly benefits the Seed Alliance Program.

V. PROGRESS IN ACTIVITIES BY PROJECT PHASE

Contract Seed Alliance Facilitator

Seed Alliance Facilitators were under contracts for all of 2014.

Market Feasibility Assessment

This assessment was completed in first half of 2014.

Insights Generated from Market Feasibility Assessments

See Appendix A – These were created during semi-annual report January-July 2014

Strategic Fit Assessment

Strategic fit assessments were finalized in the second half of 2014.

In Rwanda, the strategic fit assessment was completed in collaboration with both cooperatives and Seed Co representatives. Meetings were arranged so that both cooperatives and input providers could discuss the business opportunities and benefits of partnerships. To maintain the project as an honest broker, SCA also informed cooperatives to be open to similar types of partnership opportunities with other seed companies operating in the market (e.g. Kenya Seed Company and Pannar). Ultimately, SCA believes

that cooperatives will benefit from multiple partnership and business relationships with input providers.

Strategic fit assessments were completed for the following cooperatives in Rwanda:

1. COACMU: Kirehe district, Eastern Province
2. Ibyiza Birimbere (Bright Future): Kirehe district, Eastern Province.
3. Koremu: Ngoma district , Eastern Province
4. IABM: Muhanga district, Southern Province
5. COAMV: Burera district, Northern Province.

Strategic fit assessments were completed for the following cooperatives in Tanzania:

1. Mashima Rural Cooperative Society Limited
2. Tarakea Rural Cooperative Society Limited
3. Koboko Rural Cooperative Society Limited
4. Gallapo Agricultural and Marketing Cooperative Society
5. King' Ori Agricultural Marketing Cooperative Society

The first three cooperatives were shortlisted and visited by the Program Manager and Keith Newhouse in July 2014.

During the assessment process the SCA project team identified some of the primary factors for successful partnership between cooperatives and seed companies. These factors are highlighted below.

- 1) Strategic Alignment** - Strategic alignment between the cooperative and the input providers is very important. Cooperatives that showed the highest aptitude to partner had already made significant investment in processing and storage and were actively looking at new markets to expand business. Leadership of these high performing cooperatives described long term aspirations in words such as "preferred business hub for maize" and "reliable partner with financial institutions". Cooperatives most eager to enter into advanced discussions were those institutions that were able to see the potential to help farmers grow production and at the same time increase revenue from input distribution and grain.
- 2) Trust** – Cooperatives and input providers must have common values and goals and the belief that they can trust one another in business relationships. The SCA program team observed the importance of transparency and open dialogue as means to develop trust, a key in successful cooperative partnerships. In successful partnerships, both cooperative and input providers built trust early through open discussion by sharing aspirations, vision, goals and opportunities. Input providers were transparent about the products/services they offered and acknowledged limitations of specific seed varieties.

In unsuccessful partnerships, cooperatives believed the seed company was hiding something. Likewise, in other instances, seed companies did not believe the cooperative was open and transparent. In both situations conversations stalled when there was lack of trust during early conversations between the cooperative and seed company.

- 3) Financial Returns and Value Creation** - Successful partnership creates value for each partner and most importantly, a financial win-win for the cooperative and the

seed company. During the strategic fit assessment, each business identified the financial returns of entering into partnership compared to the status quo. In Rwanda, successful partnerships created clear value for both parties. The coops received an additional income stream from sale of the inputs, and the seed companies started building a foundation for a cost effective distribution channel that can be scaled.

The shared value of the partnerships extends beyond the additional revenue associated with the input distribution transaction. A number of the cooperatives SCA met during the assessment recognized the advantages of a direct relationship with an input supplier as opposed to a supplier relationship with traders and/or agro-dealers. First, fake seeds and fertilizer are a problem in both markets and there is some suspicion that unscrupulous agro-dealers are one of the culprits. It is also more difficult for the cooperative to address potential fake inputs when there is another layer (e.g. trader) between the input source and final customer. Another challenge in the current system is delay getting seed into the market. Many cooperatives cited inconsistent and late deliveries as being a major challenge. Working in direct partnership with an input supplier benefits the supplier because they are able to obtain more accurate estimates of demand from the cooperative. As a result, seed companies are in better position to deliver the inputs in time and in the right quantity. A unique situation in Rwanda is that many maize cooperatives have been producing Open Pollinated Varieties (OPV) for the Rwanda Agricultural Board (RAB). Cooperatives such as COACMU in Rwanda have demonstrated significant interest in being a seed multiplier for Seed Co and/or other seed companies operating in Rwanda. If this is realized, it would represent another value creating opportunity for both companies.

In contrast, the coops the SCA team approached in Tanzania had some concerns about the equitability of the contract and partnership agreement. Equitability is subjective and at this time and there are not enough details to comment in this report. However, it is an area of concerns and SCA is investigating by interviewing both seed companies and input providers to obtain a better picture of the situation and breakdown in negotiation.

- 4) Financial Capacity** – Early in the partnership discussion, the seed company made it clear to potential cooperatives that it would not offer financing (neither via credit nor consignment). From the perspective of the seed company, the risk of financing a first time customer is too high and not a core business. One could also argue that if a cooperative is already bankable, there is added confidence that the cooperative is reasonably well run and thus a more viable partner.

It was important that seed companies reveal qualifications such as bankability early in discussions. The seed company was happy to help direct cooperatives to potential providers so that cooperatives and financial institutions could discuss the opportunity to obtain credit and working capital.

SCA observed that overall access to finance was high for the cooperatives in Rwanda that participated in the strategic fit assessment. Opportunity Urwego Bank and other financial institutions have developed loan products to serve the maize sector and cooperatives. Urwego's loan product borrows on the micro-finance concept of group lending. The loans are provided to individual farmers, but managed and guaranteed by the cooperative. The system helps manage the risk to the bank by ensuring the loans are used for the intended purpose (purchase of seed, fertilizer and crop

protection products) and that the loan amounts are based on true demand (not inflated for consumption related expense).

In contrast, despite their size and asset base, the cooperatives in Tanzania did not have great access to finance. This is one of several critical factors that the project believes is hindering cooperative alliances in Northern Tanzania. SCA is working to better understand the barriers and reasons for the lack of financial access as the alliance facilitator guides are being developed in Tanzania.

- 5) Track Record** – Knowledge and history of each organization was also an important factor. Input providers had negative associations with some cooperatives based on previous experiences or perceptions in the industry. While these may be well founded in some cases, they also created barriers for alliance formation between some cooperatives and input providers.

Likewise, cooperatives were not always familiar with the track record of seed companies or input providers. In Rwanda, Seed Co and other private sector seed companies are very new to the market. While coops had little reasons to mistrust the products/services, the seed companies could only point to track records in other countries. In Tanzania, most coops/farmers have been using improved seed varieties from major seed companies over the last several years. In a couple cooperatives the program team visited, the farmers had bad experiences with a particular seed variety not performing and as a result farmers had initial mistrust in the product and company.

During conversations between coops and SCA staff and facilitators the non-performing seeds were discussed in more detail to ascertain potential root causes. The project discovered it was unlikely that the seed varieties were the culprit; rather it was more likely that incorrect technique and planting late in the season (i.e. environmental factors) were the causes of poor germination and slow plant growth.

This situation and example emphasized the importance of partnership and was openly discussed by both seed companies and cooperative. It is in the best interest of both seed companies and cooperatives to work together and find out what causes an input to not perform. If non-performance is due to lack of proper planting technique or environmental factors, then the root cause needs to be communicated to the farmer and addressed in the next planting season. If the problem is indeed a seed quality issue, the consequences could be very detrimental to long term business and the coop and seed company should try to partner and identify any issues ahead of the planting season.

In several cases, both in Rwanda and Tanzania, cooperatives had interest in partnership and working with Seed Co, but wanted to see “proof” of the product before entering into a partnership. A couple of cooperatives agreed to work with Seed Co in hosting a demo plot and based on the results would then make a decision for the next planting season. Maize is planted one time per year and reinforced the importance of developing trust. Partnerships/alliances may not form immediately and take some time to develop.

- 6) Knowledge Sharing** – One of the main advantages both cooperatives and seed companies discussed was the opportunity to work together and demonstrate the productivity gains by using improved hybrid varieties of maize seed. Both cooperative and seed companies realize that the product (seed) can only go as far as

the appropriate agronomic practices that are utilized by farmers. Having demo plots and farmer trainings are critical to effective usage of improved seed varieties. To maximize the returns on the hybrid seed, appropriate amounts of quality fertilizer are required alongside proper planting and crop management techniques. Many farmers and cooperative members lack the required skills / knowledge / experience to effectively utilize new, improved inputs. A number of cooperatives Land O'Lakes staff met with were very excited to work with Seed Co on setting up demo plots and training centers to deliver agronomic advice to the farmers.

In the United States, knowledge sharing works effectively because local coops and the agronomists they employ are trusted and are centers of influence in the farming communities. Seed companies do not have that immediate trust in many farming communities. However, through partnerships, the seed company technical expertise is combined with the agronomic advice through the coop system. In partnerships both cooperative and seed company leverage data, insights and improved practices to transfer knowledge and best practices to the farmer.

One of the goals under the Seed Alliance project is to better understand these centers of influence and sources of agronomic expertise in Rwanda and Tanzania. SCA's initial market assessment and strategic fit assessments indicated that the quality of agronomy capabilities, skills and competencies in cooperatives is unevenly distributed. For instance, MASHIMA coop in Tanzania has several ex-government Agronomists serving on the board. One individual in this organization clearly had advanced knowledge of agronomic practices. However this case was an exception to what was observed more broadly across cooperatives in both Rwanda and Tanzania. Furthermore, it was not apparent if this individual's knowledge was widely disseminated across the broader farmer membership of that coop. During the project the team will work to better understand the centers of influence and how coops, government extension staff and seed companies work in partnership to improve the flow of knowledge and improve agronomic practices.

7) Scope and Timeline for Investment – A short timeline and the need for quick turnaround in decision making prevented partnerships from forming in both Rwanda and Tanzania ahead of the maize planting season. In June 2014, the government of Rwanda made a quick decision to immediately end distribution of hybrid maize seed for the October 2014 planting season. The speed of the decision did not allow adequate time for in depth partnership conversations. While several cooperatives eagerly seized the opportunity to work with private sector seed companies based on initial discussions, others were more cautious to do so. In Tanzania, partnership discussions were held three to four months in advance of the planting season, but SCA also discovered that these still did not leave much time. In many cases, cooperative management in Tanzania required board approval to engage in large scale partnership with input providers. The decision making process and timeline in each cooperative was not conducive to forming a partnership with seed companies in 2014. Several cooperatives were also uncertain whether such partnerships required approval from local government authorities. This was particularly frustrating to the project team as Tanzania law was revised in 2014 to create more independence and autonomy for cooperatives. However, it was apparent that the old system of government control and authority still held power in the cooperative system.

SCA learned from this experience that it is important to engage in partnership discussions as early as possible. In addition to normal time it takes to build trust and understand the implications of partnerships, the decision making in cooperatives can

be very slow and bureaucratic. In agriculture production, where crops are planted one time per year, both sides need to be persistent and patient. A strong partnership may take well more than a year to develop and grow.

Build Cooperative Capacity to Evaluate, Initiate and Implement Alliances

This activity will be ongoing throughout the duration of the project and most of capacity development activities will be conducted in 2015 once alliances have been well established.

In 2014, the program provided support to cooperatives through short term technical assistance performed by Dr. Tom Herlehy, Land O'Lakes Practice Area Manager for Crops. Dr. Herlehy's work focused on development of partnership demo plots between Seed Co and partner cooperatives in Rwanda and Tanzania.

Highlights from Dr. Herlehy's in-country assistance include:

- The establishment of one demo plot based in the WinField Answer Plots® model in Rwanda with a partner cooperative. Demo plots were constructed in eight additional cooperatives and both Seed Co agronomists and cooperative leaders were trained by Dr. Herlehy on demo plot lay-out and planting approaches.
- Discussions were held into the possibility of integrating providers of crop protection products alongside seed and fertilizer input providers.
- Promoting access to finance in meetings with financial providers and cooperatives. In Rwanda, Dr. Herlehy had an extensive visit with Opportunity Urwego Bank, an institution currently serving several of the cooperative partners in Rwanda.
- Dr. Herlehy along with Seed Co Agronomists worked directly with farmers in preparing for demo plots, thus promoting the "learning by doing" approach to adult learning.

Appendix A: Insights Generated from Market Feasibility Assessments

Working in two very different countries and markets is providing the SCA Program with valuable insights into factors that influence the potential for successful seed alliances. Below are some of the key insights and observations from this first phase of work.

1) **Government policy and macro-economic factors have a significant impact on the potential for alliances.**

In Rwanda, the government has formally moved out of the maize seed distribution business. The announcement was made by the Rwanda Agriculture Board to seed companies and stakeholders in late June 2014. The government has also initiated a phased approach for removal of subsidies for both seeds and fertilizer. This has created an immediate opportunity for private sector partners and cooperatives to begin discussions on possible agreements for seed distribution ahead of the year's planting season in September. The coop system in the maize sector is very young in Rwanda. The government is promoting development of cooperatives as part of economic growth and post-genocide reconciliation. Coops have also received significant donor support, but many do not have long (and often tumultuous) histories as is the case in Tanzania.

In Tanzania, many of the maize cooperatives (AMCOs) have collapsed. There is a long history of mismanagement, fraud/corruption and instability in the market place that have contributed to this. Despite this, many coops (dormant and active) have some significant assets, including storage facilities. The federal and district governments are also promoting re-generation of many coops. The cooperative law was modified in 2013 and there is belief that modification to the law will help mitigate politicization and create more autonomy in the coop system. Despite this intent, a number of the cooperatives the SCA team visited appeared to experience significant interference at the regional government levels.

The input voucher system in Tanzania is a key initiative that is also having impact on demand for improved varieties of maize seed. Subsidies to farmers have increased purchases in inputs and provided 1000s of smallholder farmers the opportunity to see the demonstrated effects on crop yields. At the same time, there is not a clear plan in place for subsidy removal in Tanzania as in Rwanda. Furthermore, the voucher system may be running out of donor funding and so there are concerns that this could dramatically disrupt the system. There are also critics of the system who claim that the benefits still tend to be captured by the elite farmers and that real impact at the smallholder level is not fully realized.

2) **Demand for maize is growing but there are concerns about overall demand pull.**

There are indications that demand for maize is growing in both countries – both looking at trends in the market and demographic shifts. Maize is a new crop for much of Rwanda. The increase in maize production can be attributed to tastes and preferences that were brought to the country by the many displaced Rwandese that lived in neighboring countries of Tanzania and Uganda during the years of conflict and genocide. Furthermore, a growing GDP, middle class and demand for livestock products is also creating need for production of animal feed and maize inputs. Another positive sign is that several cooperatives we have visited have vertically integrated into maize processing and have been marketing processed maize to a

number of institutions and small business. Where there is consistent (and excess demand there is incentive for farmers in the supply chain to produce more. While the livestock industry is still in its infancy, this could also significantly drive demand for maize. Finally, there is increased demand for processed maize and raw maize in neighboring markets such as Democratic Republic of Congo and Burundi.

In Tanzania, maize has been a long standing historical crop that has been produced throughout the country. We talked to a number of millers and commodity businesses who are not running at 100% capacity and are looking for stable and reliable sources of maize. There has also been a traditional market for maize across the border in Kenya. In some years, Tanzania government restrictions on maize exports have stemmed the flow, but cross-border trade remains prevalent and represents a larger opportunity. The same opportunity also exists in the southern part of Tanzania with historic trade routes to Zambia and DRC. Finally, as in the case of Rwanda, there is a growing and emerging middle class which is driving demand for increased consumption of meat. As in Rwanda this has the potential to further drive the demand for improved feeds and inputs such as maize.

While there are a number of positive indicators that maize demand is increasing, there are also some signs that the potential may be limited. In both countries, the primary buyers are government and large agencies like the World Food Program. These predominant buyers overshadow private sector buyers. While there are emerging buyers for maize like Minimix and brewing companies but private sector demand is driven primarily by small processing mills. The same situation is observed in Tanzania, but there is a much larger production of maize and number of millers in the country. Furthermore, maize is a highly political staple crop and changes to policies regarding imports / exports can dramatically influence the market potential.

3) Access to finance is critical for partnering with input suppliers

Seed companies, cooperatives and financial providers all have emphasized the importance of working capital and finance. In Rwanda, we have observed that many cooperatives have been successfully able to access finance from both commercial / micro-finance institutions and from community based SACCOs. Numerous coops have secured working capital loans and are confident that these can be used to pay upfront for improved inputs such as hybrid maize seed. Financial service providers such as Opportunity Bank have received funding that is helping de-risk their investment into loan products for small-holders and has contributed to some innovative products where coops are providing information on demand and helping guarantee repayment (similar to the micro-finance group loan methodologies).

In Tanzania, there does not appear to be as high of level of cooperative bankability. However, a number of AMCOs that are re-emerging have significant assets and can use this as collateral for financing. Some of the larger well-functioning cooperatives that are in export industries (e.g. coffee, tea) and also have interest in serving maize farmers are highly bankable. For this reason, it is viewed these types of cooperatives in Tanzania as having higher potential than emerging pure maize coops.

4) There is a need to better understand the sphere of influence and trust at farmer level

A key element that has made the coop input distribution model work for Land O'Lakes is the strong level of trust farmers have with the local coops and agronomic advice that is provided through the coop. This trust and distribution access is a key value that Land O'Lakes uses in negotiating with large input suppliers in the market (e.g. Syngenta, Monsanto).

For the most part, cooperatives we have visited in Rwanda and Tanzania do not provide their own agronomy advice to farmer members. Much of the data and information comes from a combination of government extension, farmer trade organizations, NGOs and private sector providers. In some communities farmers may also be receiving different information from different providers – which can create confusion and potential mistrust.

This issue will be critically important as new technologies and seed varieties come in the market. There is the potential to develop additional research on the importance of trust and social capital at the coop level and through agro-economic advice to farmers.

5) New technology adoption of inputs is still very early; some barriers still exist for long term use

There are many positive signs of increasing adoption of improved maize seed varieties in both Rwanda and Tanzania. In Rwanda, the crop intensification program and land consolidation programs have shown tremendous ability to increase uptake of improved seed varieties. In Tanzania, input vouchers and government efforts have also lead to significant growth in hybrid seed usage.

Despite the early growth, there are some potential challenges. One that has been brought up in Tanzania has been the prevalence of counterfeit inputs. If there is not significant regulation to stem counterfeit fertilizer and seed from entering the market – distrust of the technology could inhibit future growth in the industry. This is critical because early adopters of technology have the ability to influence others in the community and if the industry loses the early adopter advocacy because of counterfeits it is a missed opportunity. Furthermore, increased hybrid yields are highly dependent on effective fertilizer usage and of course, access to water. If one of these critical variables is missing, farmers may mistakenly blame the issue on the seed. This further highlights the opportunity for seed companies to use sound agronomy and advice to illustrate what works and to effectively manage complaints by explaining the factor and science behind non-performance. While some cases, seed varieties that are unsuitable for the conditions could be to blame, in others the environmental factors are the reason for low performance of the seeds. Seed companies and cooperatives have a major role to play in managing expectations and using data and agronomy to educate farmers. This is particularly important given the emotions surrounding seed purchases and crop performance.

Some individual farmers are naturally early adopters and others will want to see demonstrated success elsewhere before making the investment in new technologies such as improved inputs. A number of farmer coops that the SCA team met with were eager to try demo plots to show farmer members the impact before they encouraged members to purchase more expensive hybrids. Education will take time and important that demonstration is done right to ensure that farmers will feel empowered to make a decision to increase investment on the farm (and of course

this all assumes there are economic returns for investing in inputs – which is still a big question in the market).

6) The value potential for new distribution channels is high

Tanzania and Rwanda provide interesting and contrasting examples of crop input distribution. In Rwanda, distribution has been almost exclusively through government channels. There is a fairly wide open opportunity for both independent agro-dealers and cooperatives to create and capture value in the distribution market place. Current efforts are underway to way to invest in expansion of farmer agro-dealer networks in the country. At the same time the Ministry of Agriculture and Rwandan Agricultural Board have given us full support to develop better coop distribution channels for inputs in the country.

In contrast, Tanzania has an existing network of agro-dealers and whole-sale distributors. These entities almost exclusively form the current channel in Tanzania. However, reach is limited primarily to urban and regional business centers and networks extending to them. Reaching the majority of rural farmers in a cost-effective manner is limited.

Thus an opportunity exists in both markets to fill a major gap that is not being served by traditional agro-dealer distribution. Tanzania cooperatives once were more involved in input distribution, but with the collapse in many sectors their impact is very limited. Major input companies such as Seed Co and Yara remain very keen to develop a portfolio of distribution channels – including business partnerships with cooperatives.

7) Opportunity market development both by multi-nationals and local seed companies

Hybrid maize seed production is set to increase in both countries. Both through increased investment by larger multi-nationals and regional seed companies and also through investment in local seed companies through programs such as AGRA's PASS. It is believed there is opportunity for both to create value in the market place and competition and development of different seed lines and varieties will be ultimately of great benefit to the farmers and cooperatives by providing choice and access options.