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Executive Summary

1.0 Introduction

This final evaluation of the ADAPT project had been commissioned by CARE Zambia as an impact evaluation directed aimed at assessing the project's achievements of its goal and objectives. This information is useful as a basis for management information for project accountability, informed decision-making for programmatic improvements, organisational learning and change functions, and possible replication.

The focus was on evaluating the effectiveness of the business model with respect to:

- establishing commercially viable last-mile rural agro-dealer outlets;
- facilitating vertical linkages between input suppliers and agro-dealers; and
- catalysing demand through seed fairs, field days and demonstration plots, in order to demonstrate the existence of a lucrative and steady market for agro-inputs to key seed suppliers.

Specifically, the project performance was evaluated at three key levels, namely, agro-dealer, farmer, and the seed supplier or private sector levels. At the agro-dealer level important variables included sales growth and business viability, relations with input suppliers and the impact of the innovation fund on agro-dealer viability as well as visibility.

At the farmer level, the evaluation focused on the following intermediate outcomes:
   i.   establishing the extent to which the project contributed to raising awareness of hybrid seeds;
   ii. establishing the extent of the project's contribution to raising smallholder farmers' awareness of improved seed;
   iii. the extent to which the project contributed to identification and uptake of optimal hybrid seed by farmers for their locations;
   iv. obtaining indications based on farmer perceptions on which demand creating activities provided them with the best knowledge and exposure;
   v.   assessing the extent to which the project contributed to improving their accessibility, affordability and timeliness to improved seed and other agro-inputs; and
   vi. the implications of these aspects on farmer production and productivity gains.

With respect to the supplier level, the key focus was to demonstrate changes in the private sector perceptions of opportunities for reaching the smallholder markets via agro-dealerships in order to provide for the unmet demand for seed and agro-inputs amongst rural farmers.

This project was designed and implemented as a response to smallholder farmers' general lack of access to a wide range of high–yielding seed varieties and other agricultural inputs and chemicals at affordable prices, on

time and in adequate amounts to support agricultural expansion. To a large extent, this poor access is exhibited by lack of physical availability of agricultural inputs in the remote areas, worsened by the high cost of acquiring these inputs due to the distance that farmers have to cover in order to reach the nearest distribution points. CARE Zambia estimates suggested that most small-scale farmers also lacked access to reliable, all weather and affordable transport and had to travel for up to 35 kilometres to nearest agro-dealer to access seed and other inputs, primarily due to a poor network of viable rural input agro-dealers and distributors.

The ADAPT was a 3 year agribusiness project funded by the Agriculture Revolution in Africa (AGRA) and the Bill and Melinda Gates Foundation. It covered nine districts in three project regions, namely, Copperbelt, Central and Eastern.

1.2 Project Goal and Objectives

The project goal was to reach a total of 91,000 farmers with improved seed and other agro-inputs through establishing a scalable network of 500 rural agro-dealers.

Specifically, the project sought to achieve the following three objectives:

    i.   to enable supply chain actors to pursue the smallholder market;

    ii.   to improve the affordability, timeliness, range, and volume of inputs and services reaching smallholder farmers in the target geographic areas; and

    iii.   to strengthen the enabling environment for expansion of agro input networks into the smallholder market;

The theory of change for the ADAPT Project was that if it succeeded, farmer productivity would go up, which in turn, would improve their general household food security and incomes.

1.3 Evaluation Methodology

The team conducted a critical review of the project documents in order to gain some insights on its performance and identify gains and gaps. Key documents reviewed included the ADAPT project document, the M & E plan, the Baseline Survey Report, the monthly and quarterly progress reports, the project Mid-term Review Report, the Care Business Assessment Interim Report, the Copy of ADAPT Monitoring Sheet for January to March 2011, Categorisation of Results, and innovation briefs amongst other important documents.

In order to capture the stakeholder perspectives and triangulate the findings, the team conducted limited key informant interviews of 2 input suppliers, 1 agro-dealer association executive, 5 agro-dealers, and 1 Block Extension Officer (Ministry of Agriculture and Cooperatives). The team also held focus group discussion with 2 groups of farmers, each comprising of 5 males or females, all in Chibombo District. The interviews

and discussions were recognized to have been drawn from an insufficient population sample, but used to provide qualitative anecdotal perceptions of change and achievements across the spectrum of project stakeholders attributable to the project. This data was meant to augment the quantitative M & E data collected by the project.

1.4 Evaluation Findings
1.4.1 Measuring Effectiveness

In programme monitoring and evaluation, effectiveness is a measure of the extent to which intended results, that is, outputs, outcomes and impacts have been achieved. It includes measuring change in the observed output and outcomes and attributing these changes to the initiative.

1.4.1.1 Recruitment, Training and Certification of Agro- Dealers

By March, 2011, the Project had recruited a project-wide total of 626 agro-dealers in the 3 regions, namely, Eastern, Central and Copperbelt Regions as shown in table 1.When the project–wide total of 626 agro-dealers is compared to its targets, it is evident that the overall project effectiveness for this component stood at 96.3 per cent, with Central Region accounting for 99.5 per cent, Eastern for 94.4 per cent and Copperbelt for 94.8 per cent, respectively. With a total of 626 agro-dealers recruited, it is evident that the project's recruitment exercise contributed a total of 491 new agro-dealers between the period September 2009 and March 2011. This figure represents an increase of 363 per cent over the base value. The Copperbelt Region contributed the highest proportion to the overall growth rate of agro-dealer recruited, with 39 per cent of the growth rate occurring over an 8 month period starting July, 2010.

An analysis of the distribution of the recruited agro-dealers by geographical location indicates that, as at September 2010, 85 per cent of the total agro-dealers recruited were located in rural areas. This means that the project succeeded in establishing rural agro-dealers to better serve smallholder farmers.

1.4.1.2 Project Performance by Category of Skills Training

With respect to training of agro-dealers, evidence based on a comparative analysis of the trained versus recruited agro-dealers shows that the overall effective rate of the business management skills training was at 82 per cent of the recruited agro-dealers, whereas that of technical skills training stood at 69 per cent.

With respect to business management training, statistics show that the Eastern Region had the largest proportion of the agro-dealers trained in business management skills at 89 per cent followed by Central Region at 82 per cent. Copperbelt Region had the lowest achievement rate of 76 per cent. Based on the above data, it is evident that the ADAPT project succeeded in providing training to a much larger proportion of the recruited number of agro-dealers, with the majority of those trained being rural based.

On the other hand, an analysis of the overall success rate of the delivery of the technical skills training shows that the project was effective in training about 69 per cent of the recruited number of agro-dealers. In Central Region, the project was able to train 73 per cent of the recruited agro-dealers; in Eastern Region it trained 72 per cent; while in the Copperbelt Region 62 per cent of the recruited agro-dealers were trained.

A comparative performance of training delivery by category of skills training suggests that the project performed better in business management skills training as compared to technical skills training in reaching the number of recruited agro-dealers. However there is no significant variance in the success rates of business management and technical skills trainings against project targets as well as the numbers actually recruited in each region.

1.4.1.3 Comparison of Number of Trained Versus Certified Agro-Dealer

When the analysis of the trained versus the certified agro-dealers is made, overall results show that only 54 per cent of the project target was achieved. This finding shows an average achievement indicating that the ADAPT project was fairly effective in reaching the numbers of trained agro - dealers with certification as shown in table 6. However, the regional comparison shows that the Eastern Region had a much remarkable achievement of 84 per cent, followed by Central Region with an above average performance of 60 per cent while Copperbelt Region was the least successful at 19 per cent of the target number of agro-dealers certified. Thus, although the Copperbelt Region had the largest growth rate in the number of recruited agro-dealers over an 8 month period (since July 2010), the project achieved the lowest success rate with respect to the number of certified agro-dealers. It would appear that agro-dealers in Eastern and Central regions saw greater value in this activity because Eastern region is basically an agricultural area.

1.4.1.4 Effectiveness of Demand Creation Activities

The analysis of the overall project performance with respect to demand creation activities shows that the ADAPT project was very effective in conducting seed fairs followed by field days and demonstration plots. A regional comparison of the performance of seed fairs or exhibitions indicate that the project achieved an effective success rate of 316 per cent in the Central Region, 150 per cent in the Eastern Region, and 125 per cent in the Copperbelt Region. The overall effective rate of seed fairs at 197 per cent may also imply that seed fairs were the most popular demand creation activity to both farmers as well as seed suppliers but maybe also a proxy indicator of the increased awareness by smallholder farmers of improved maize seed varieties, and their willingness to increase the uptake of these seeds in order to enhance their productivity. What also becomes evident by the comparison of actual seed fairs conducted and project targets, particularly in the case of Central Region, is that the project targets were much lower than its potential, indicating a need for more realistic target setting based on varying regional potentials and baseline findings.

With respect to field days, the project achieved beyond its targeted figure of 112 field days with an overall project wide performance of 105 per cent. A comparison of performance by region shows that the Eastern Region was the best performer at 135 per cent, followed by the Central Region at 108 per cent, while Copperbelt achieved an overall success rate of 104 per cent.

In the case of demonstration plots, the overall project wide result stood at 98 per cent with the Central Region achieving 97 per cent of the target number of demonstration plots, Eastern Region 98 per cent, while Copperbelt emerged as the best performing region with the project achieving 100 per cent of the target total of 90 demonstration plots.

The above overall performance suggests that the project was much more realistic in setting regional targets or that equal effort was made in each of the regions to meet the set targets. It may also be an indication of the enhanced project implementation capacity resulting from the team's learning - by - doing and change processes.

However, the variations in the regional performance may also suggest that the project planning phase should have based its target setting on an identified regional need and potential, meaning that lower targets should have been set for lower potential regions like the Copperbelt and higher targets for higher potential regions like Central and Eastern rather than opting for uniform project targets across the regions. This could have enhanced its success rate even in low potential regions like the Copperbelt, which, based on the findings, had continually lagged behind in achieving set targets. Perhaps based upon a weaker culture of agriculture in the Copperbelt region, agro-dealers were less inclined to appreciate the value of attending peer exchange field visits. Therefore the project needs to work on this weakness.

1.4.1.5 Farmers Response to Demand Creating Activities

Data based on ADAPT Indicator Monitoring Sheet show that the demand creation activities attracted a total of 27,211 farmers, which was only 18 per cent of the target as shown in table 8. On regional basis, the number of farmers attending demand creation activities was less than 20 per cent in Central and Copperbelt Regions and slightly above 20 per cent in the Eastern Region. According to findings based on key informant interviews with select agro-dealers and seed companies, the low response rate for farmers was a result of some of the demand creation activities like the seed fairs being conducted in the rural and difficult to reach fringes. It was further noted that sometimes, several demand creation activities would be conducted at the same time, thus eroding the capacity of both farmers and input suppliers to attend all.

However, the overall number of farmers accessing improved seed from agro-dealers was substantially higher since it went above the target by 7 per cent. In the Copperbelt Region it was 73 per cent of target, Central Region 83 per cent, and in Eastern Region it was 164 per cent. Thus, there are indications that they were able to raise the number of farmers accessing seed from agro-dealers. The number of farmers accessing improved seed was 2.6 times higher than the number of farmers attending demand creation activities in the Central Region, 4.2 times higher in the Eastern Region, 3.8 times higher in the Copperbelt Region, and 3.6 times for the overall exercise. Moreover, the actual figure of 96,990 farmers accessing improved seeds and input as at March 2011 represents a percentage growth rate of 38 per cent from 70,059 farmers as at July 2010. This growth occurred over an 8 month period which could be attributed to increased awareness of demand creation activities by farmers as well as more sources for improved maize seed.

1.4.1.6 Volume of Improved Seed Sold Through Agro-Dealer Outlets

As at June 2009, a total of 0.0046 metric tonnes of improved seed was sold through various agro-dealer outlets in the three regions. This quantity rose exponentially reaching 402.62 metric tonnes in July 2010 and by the end of the project in March, 2011, quantity of improved seed sold through agro-dealer outlets had reached 148, 967 metric tonnes, representing a percentage growth rate of 36,899 per cent.

A further analysis of the sales of improved seed at the agro-dealer level shows that as at July 2010, a total of US $967,024.71 seed sales were made in all the three project regions. Of these, Central region accounted for $581, 857.00, Eastern US $373,707.71 while Copperbelt contributed a total of US $11,460. By March 2011, project-wide sales of improved seed jumped from less than US $1 million in 2010 to US$ 3,020,125.19, representing an overall growth rate of 212 per cent in all the three regions. Of this total, Central region represented US $812,335, Eastern Region, $612, 302.40 and Copperbelt contributing a total of US $1, 593, 487.79. This finding shows that apart from establishing rural agro-dealer networks, the project contributed to expanding uptake of improved seed amongst smallholder farmers.

1.4.1.7 Facilitating and Supporting the Formation and Viability of Agro-Dealer Associations

According to the ADAPT project documents, the project had intended to establish 9 agro-dealer associations, 3 in each region. Based on the data in the monitoring sheets, the project achieved these targets within the first 11 months of its implementation. For example, by July 2009, only 2 agro-dealer associations had been established with the support from the project, with one in Central region and the other in Eastern region. No agro-dealer association had been established in the Copperbelt region for the review period. However, this target was achieved by June 2010, with the project being able to facilitate and support the formation of all 9 agro-dealer associations in all the 3 regions. This represents a project effective rate of 100 per cent.

However, findings based on Key Informant Interviews with select members of the executive committee of Chibombo Agro-Dealer Association revealed a number of challenges, which in turn erode prospects for project sustainability, mainly as they relate to:

- agro-dealer recruitment, training and certification;

- Policy analysis, lobbying and supporting the improvement in the regulatory framework; and

- Capacity to plan and implement demand creation activities such as field days, seed fairs and demonstration plots on a cost recovery basis or without continued support from donors.

For example, it was noted that although the association had a total membership of 65 agro-dealers, attendance in meetings was most often very poor. Many members have to travel long distances to the venue, which means they incur high transport expenses. The association also does not have an office block for its secretariat, which according to its chairperson, tends to erode its visibility and public standing. It was also noted that some people who has been assisted by the ADAPT project had virtually disappeared. Of the remaining number, only a few have capacity to support the association to carry over the ADAPT skills training and demand creation activities and also facilitate the formation of formal relationships with key input suppliers.

According to the association's chairperson, a good number of them would need some refresher courses to carry these activities forward. However, a bigger concern expressed was that 25 of the 65 members faced the threat of dropping out of business. This number may point to problems with project targeting and potential failure rate of around 38 per cent of agro-dealer start-ups in Chibombo district. This threat is due to reason that range from limited working capital, limited entrepreneurial acumen and opportunities for innovation, to their being geographically located in the fringes, where they can serve only a limited number of customers in both the peak and off seasons. "Customers like buying where there are many and well stocked outlets. To improve the effectiveness of its business model, the ADAPT project needs to apply more rigorous screening and targeting approaches. Its primary focus should have been on those agro-dealers that had shown higher prospects for survival and graduation. Despite the potential viability of agro-dealers, the poor capacity of their association may compromise the sustainability of some of the project interventions.

1.4.1.8 Use and Effectiveness of the Innovation Fund

With respect to the project's use and effectiveness of this variable, evidence suggests that as at July 2010, 162 agro-dealers had benefited from the innovation fund. Of this total, Central region accounted for 74 agro-dealers, Eastern, 31 agro-dealers while in the Copperbelt region the project had reached 57 beneficiaries. By March, 2011, the total number of all beneficiary agro-dealers had grown to 211, which represents a growth rate of 30 per cent over an 8 month period. The highest proportion of this growth was accounted for by Eastern region, which achieved a growth rate of 119 per cent in the number of agro-dealers reached with innovation fund over the same 8 months period. Central region came second at 16 per cent while the Copperbelt represented 0 growth rate over the same period.

However, when the overall project performance is evaluated on the basis of its set target for this variable, evidence indicates that the project achieved an overall effective rate of 111 per cent by March 2011.

1.4.1.9 Total Innovation Fund Disbursed

A total of $345,213.91 has been disbursed as March 2010, which represents an increase of $38,880.6 over the July 2010 value of $306, 333.31. Of the total amount disbursed, Copperbelt accounted for US $194, 040, followed by Central region at US $90,900 and lastly Eastern region with a total of $60,273 disbursed.[1]

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[1] The ADAPT project exchange rate was K5,000 for US $1

1.4.1.10 Comparative Performance by Gender of Agro-Dealer

Generally, of the total number of agro-dealers rated as good, female agro-dealers attained comparatively higher percentage scores than their male counterparts. Evidence further shows that out of a total 20 agro-dealers in the good performance category, 8 were women representing 40 per cent. However, female agro-dealers' overall performance ranged from70-100 per cent with nearly 35 per cent scoring between 80 and 100 per cent. The female agro-dealer performance was evidently much higher than their male counterparts despite their proportionally lower rate of participation in the project. Similarly, the proportion of females was much lower in the average, poor and very poor categories compared to males.

This finding is evident when data on the use of innovation fund is disaggregated by the category of application. Statistics show that 39 per cent of the grant was used expand inventory, 28 per cent was used on shop upgrades, 10 per cent on business promotion and filed days, while the remaining balance was used on various activities ranging from Zambikes, seed kiosks, salaries, to protecting clothing.

However, in order to assess the impact of the innovation fund, one has to look at the total number of the certified agro-dealers in each region and compare with the number of agro-dealer that benefited from the innovation fund. This ratio or percentage should then be compared to the overall performance of agro-dealers based on the categorisation results. This ratio then has to be compared to overall performance of the innovation fund in each region. This result should be able to present a much more realistic picture of the effectiveness of the innovation fund on beneficiary agro-dealers than the current results of the categorisation exercise which also assesses performance of non-benefitting agro-dealers. Based on this approach, findings show that 333 of the total agro-dealers received training and were certified, with Central region having 132, Eastern 180 and Copperbelt accounting for 41 of the certified agro-dealers. Overall, the innovation fund benefitted 63 per cent of all certified agro-dealers, and 34 per cent of the total number of agro-dealers recruited. One would therefore expect that if the innovation fund had achieved its objective, then the number of good to average performing agro-dealers should be at least 63 per cent of all certified agro-dealers and at least 34 per cent for all trained agro-dealers. For example, project-wide results show that of the 626 agro-dealers that were targeted under the project, only 16 per cent are ranked as good, 22 per cent as average, while 28 percent and 34 percent were ranked as poor and very poor respectively. Even when the good and average categories are combined the project-wide performance stands at 38 per cent which is far below the mid-way of 50 per cent. Even when the performance of Central Province, a relatively much better performer, is taken into account, the category of good agro-dealers comprised 28 per cent, while that of average performers comprised 25 per cent of the total of 217 agro-dealers. What is also a concern is the high number of agro-dealers that are categorised as inactive, or at the time of categorisation of performance, were not involved in any trading activities.

The analysis of project performance on this variable shows very little conclusive evidence that the project succeeded in providing matching grants or guaranteeing credit for its agro-dealers. Similarly, data base on the project indicator monitoring sheet also shows no evidence that the project was effective in linking any agro-dealers to any formal financing institutions. Although there are indications that the project has into negotiations with the National Savings and Credit Bank (NATSAVE), there is no evidence indicate that these efforts realised any tangible results. However, findings based on the project's innovation briefs and key informant interviews with agro-dealers in Central region shows that there is growing trust between key seed suppliers and select agro-dealers.

Against a baseline value of 0 % Agro-dealers formally linked to input supply companies, the project can now crow of 20% of the recruited Agro-dealers accessing inputs on consignment. However, it is evident that these relationships are still in their infancy and further support may be needed to consolidate and sustain these business relationships.

Although the number of good to average performing agro-dealers is comparatively lower than that of the poor to very poor categories, it is prudent to assume that generally the target agro-dealers achieved growth in the volumes of inventory, sales turnover and viability. Since most of the agro-dealers were new start-ups, they may have practically started from nearly zero sales at their time of recruitment. Findings based on key informants interviews with Kamano and Pioneer Seed Companies suggest that the ADAPT project was very instrumental in facilitating horizontal linkages between seed suppliers and local agro-dealers. However, 3 years was too short a time to oversee the maturity of these relationships and ensure the sustainability of the project impact.. This means that the project was effective in supporting formal business linkages although conclusive evidence could not be established.

1.4.1.11 Effectiveness of Monitoring and Evaluation Function

The analysis of M & E plan and documentation shows that there was a prudent attempt by the project to gather detailed data to support adequate analysis of progress and achievement of results. The causal model approach to the results chain based on the implied theory of change was a step in the right direction. However, there was lack of clarity in the M &E plan on how the causation or attribution of results to project interventions was to be evaluated. There also seemed to be an assumption that there exists a linear relationship between project interventions and the results outcomes and impact at both agro-dealer and farmer levels. The M&E plan needed to clearly indicate its epitaph of theory of change, including clear assumptions for the success of the project.

The M&E plan also paid more focus on measuring and tracking output indicators. Although these indicators are important in tracking efficiency of achievement of targets, they are not an adequate measure of project success. The ADAPT M&E plan would have paid equal attention to optimal outcome indicators. Further, the plan did not have a clear differentiation of intermediate and final outcomes, and impact indicators. More time should have invested in identifying more optimal outcome and impact indicators to ensure effective attribution of results to the project's interventions. The project collected very useful information but this seemed to be in several places, making instant retrieval and access difficult. The project Indicator Monitoring Sheet was an impressive effort at consolidating project performance data. However, its design was mainly to capture output data. Since the project clearly identified farmers as indirect beneficiaries its M&E plan should have sought to also collect data on farmer level input and outputs trends and outcomes which are clearly disaggregated by gender. Attempts were made to correct these gaps through the internal mid-term reviews, documenting of stories of innovation and through other studies. However, there is little evidence of consolidation of these findings and lessons to provide readily accessible management information. What is a key gap in the M&E approach is the lack of clearly mapped M&E stakeholders in the project results chain. The plan did not clearly show what data already exists, which institution collects this data and when it is collected in order to provide adequate management information and adequately support the M&E function.

In this respect it was very difficult to apply the cause model approach to establish attribution of project outcomes to its interventions.

1.4.2 Concluding Findings

From an impact evaluation point of view, it is evident that the project succeeded in achieving its project goal of reaching at least 91,000 farmers with improved seed and other inputs through establishing a network of viable rural agro-dealers.

With respect to agro-dealer level impact, the project managed to recruit and train a further 491 agro-dealers over its baseline value of 135 which represents and effective rate of 353 per cent. Although the number of agro-dealers ranked as good to average performers is comparatively lower than those in the poor to very poor categories, there is evidence to show that a good number of them, up to 38 per cent of the total, is

commercially viable. This assessment of viability is, based on their levels of entrepreneurial acumen, sales volume and value and capacity to sustain demand through demand creation activities. This means that the project was successful in establishing a network of rural agro-dealer as a mechanism for better serving rural farmers. There is also evidence of improved productivity amongst smallholder farmers and growth in sale turnover of input suppliers, although this would need further validation through further research.

As a result of the project interventions, there is higher motivation amongst agro-dealers and key input suppliers to vigorously pursue the smallholder farmer input market in order to reposition their product, increase their sales and profitability

As a result, of the presence of rural agro-dealers, smallholder farmers are able to access improved seed and other inputs within a radius of 20 -30 kilometres, unlike in the pre-ADAPT era where farmers used to travel a distance of over 200 km to Lusaka to access these inputs. However, it is difficult to conclusively establish the reduction in the distance travelled by farmers in line with the 5 km target set in the ADAPT M&E plan as this finding was not monitored and documented by the project. By providing knowledge to agro-dealers, on agronomics, CARE was also successful in creating imbedded extension agents who are able to transfer knowledge to farmers on various aspects to chemical handling and storage.

At the farmer level, there has been improved knowledge and awareness of hybrid seeds and selection of optimal varieties most suitable to their localities. If increased sales volumes are used as an indicator of the level of awareness and uptake of hybrid seed among farmers in the rural areas, then it is also evident that the project contributed significantly to increasing smallholder farmers' access to improved seed on time, at affordable prices and in demanded quantities. Data suggests that by March 2011, project-wide sales of improved seed increased drastically from less than US $1 million in 2010 to US$ 3,020,125.19, representing an overall growth rate of 212 per cent in all the three regions. Of this total, Central region represented US $812,335, Eastern Region, $612, 302.40 and Copperbelt contributing a total of US $1, 593, 487.79

There are indications that this has contributed to increases in production and productivity gains amongst farmers. For example, Kembe Block Extension Officer indicated that farmers yields in the area has become much higher in the post-ADAPT era hitting 3.5 tons of maize per hectare with good management from 1.5 tonnes in the pre-ADAPT era. However, it was difficult to solely attribute this increase to the ADAPT performance without controlling for other factors. This points to the need for further research to examine and validate ADAPT's contribution to farmer productivity and food security

Unverified evidence also shows that there is growing trust between key input suppliers and agro-dealers. This is illustrated by the growing number of input suppliers willing to enter into consignment agreements with agro-dealers, including negotiations of formalised agency relationships. According to ADAPT project innovation Brief, a total of 199 agro-dealers was able to procure seed on consignment basis from input suppliers worth a total value of $ 1,154,611.09. This is based on a total volume of 379.5 metric tonnes. However, there are still signs of resistance by major seed suppliers to get into full-scale formal relationships and consignment arrangements due to poor trust. This shows that there is still weakness in the nature of these relationships because such relationships take long to mature. It is also an indication of the need for continuous facilitation in order to nurture and consolidate them.

There are opportunities for replicating project activities into other provinces to consolidate these gains. There are also opportunities for CARE to help strengthen these relationships through credit rating and credit guarantee schemes if only there could be much more rigorous screening and targeting of agro-dealers. However, there were gaps in the business model as focus was on addressing supply-side contracts on the input market without due focus on the demand side factors and constraints. The emerging relationships and interest amongst the input suppliers to enter into consignment arrangement with agro-dealers in positive indicator of the contribution that the ADAPT project made toward the seed industry development. Pioneers indicated that

its sales growth within the last three years increased 5 fold, while Kamano's sales doubled as a result of their participation in the ADAPT project. However, it was difficult to verify whether this growth was solely attributable to ADAPT project performance.

CARE should, therefore, support the consolidation of the backward vertical relationships between agro-dealers and input suppliers, particularly focusing on supporting linkages with major input suppliers and financiers on the market. Further support should be directed at addressing the post-harvest marketing constraints that farmers face. Such activities could include supporting farmer market days within the rural areas, provision of market information, provision of market linkages with agribusiness firms and output distributors such as super markets etc. However, there are varying motivations and interest amongst agro-dealers in different regions which might be determined by the main economic mainstay and existing regional business opportunities.

Given the importance and contribution of the ADAPT project to the input and production sectors in the target regions its ultimate impact on household food security and incomes, 3 years was not sufficient time to consolidate the gains, build local ownership and ensure project viability as well as sustainability. The casual model approach to monitoring employed by the ADAPT project was a very innovative and potentially viable ones. Some of the demand creating activities may have been carried out too deep into the hinterlands thereby limiting the capacity of reach of input suppliers to effective participate. A more gradual roll-out should have been more successful. Another gap is that there was little effort made by ADAPT to link the viable agro-dealers to commercial credit providers, or to provide a credit rating service to help input supplier better effective the credible agro-dealer to work with. This should have been more valuable in consolidating the presently fragile business relationships. The innovation fund, which was meant to reduce the risk for expansion of agro-dealers, should have focused more on addressing constraints related to working capital. This also point to the fact that agro-dealers had little leverage on how to use the innovation fund.

1.4.3 Lessons Learnt and Recommendations

1. The ADAPT project succeeded in achieving its project goal and objectives. But better outcomes and greater impact of the ADAPT project could have been achieved with more rigorous screening and targeting of agro-dealers. It would appear that irrespective of the business model adopted by the project, its project screening and targeting approach still followed social orientations. This is illustrated by the higher number of the agro-dealers recruited compared to the good to average performers. The most viable approach to the business model would have been to recruit and train fewer but more promising agro-dealers in order to establish viable one-stop agro-dealer outlets in the target regions. This would have enhanced the overall project contribution to the viability of the agro-dealers and growth of the seed industry.

2.By adopting the business or enterprise development approach model, the project should also have anticipated some failure among the recruited and trained agro-dealers. This anticipation should have assisted in setting a target for benchmarking business viability, growth and adoption of entrepreneurial acumen. For example, an optimal indicator of viability based on a certain value of sales turnover within each category of performance would have provided incredibly useful data for attribution of business viability to project intervention. Although sales growth is an important indicator of the profitability potential of a business, the project data should have combined this indicator with actual profit analysis.

3. The comparatively higher performance of female agro-dealers in the good performing category or rank is an indication of the fact that female agro-dealers possess equal or even higher capacity to assimilate entrepreneurial acumen and grow their businesses. This calls for the need for future CARE projects to mainstream gender and gender equity issues in future programmatic and analytical work. Project should clearly set targets for gender participation and the M& E plan and strategy should endeavour to collect monitoring data and track project performance clearly desegregated by gender.

4. To achieve greatest impact from the industry development point of view, even where opportunities exist, there is need for a more phased and gradual roll-out strategy, which is built on local ownership and institutions. It is evident that the project achieved most of its targets and objectives within the last 1 year of its implementation. Given the magnitude of the project activities, the project design should have implemented its core component activities in a phased manner. The first year, which was practically lost, should have been considered the inception phase to provide better mechanisms for beneficiary targeting, learning and change which would in turn enhance project performance. The second phase should have been the actual implementation. This approach should have given the project implementation team to effectively design the M & E plan and strategy and clearly identify optimal outcome and impact based indicators rather than general proxies.

5. An effective and sustainable business model for supporting the growth of the improved seed industry and other agro-input sector require a deliberate strategy to address both supply and demand-side constraints. This is because agro-dealer viability and prospects for growth are determined by farmers' capacity to increase the uptake of improved seed and other agro – inputs. In turn, this capacity is affected by their farmers' ability to find stable and reliable output markets. At the moment this is only depended on output prices, government payments and seasonality.

6. The ADAPT model has demonstrated a higher motivation for input suppliers and agro-dealers to vigorously pursue the smallholder input market. Farmers have also indicated the contribution of the project to their productivity has been positive. However, incomes have not risen much due to higher costs of fertilisers. This makes it difficult for them to improve the quality of life at household level and be able to access quality education for their children.

7. Effective project monitoring and evaluation of performance requires a deliberate effort to instil a culture of consistent long-term record keeping amongst agro-dealers and farmers in order to provide optimal quantitative indicators for success. Focus of the M & E plan should be on tracking, outputs, intermediate outcomes as well as impact attributable to project interventions. The experience of the ADAPT project should therefore help in streamlining and fine tuning the current proxy indicators based on outputs to more optimal and outcome and impact based measurements. The output indicators are useful in tracking achievement of project targets, but are not a very solid measure of the project effectiveness and impact. Data collection at the agro-dealer level should be done every quarter to help establish performance trends both during peak and off peak seasons. At the farmer level, it would be important to collect data every six months. This would help in identifying and examining constraints farmers face during the growing and post-harvest seasons. This should focus on establishing trends in the timeliness, affordability and volumes of improved seed accessed by farmers, as well as average area cultivated, yield per unit area and the food security situation of the target households. This approach calls for a team approach and better co-ordination between Project management, Monitoring, Evaluation and Learning and Change staff, project field staff, sector associations and key project stakeholders. The current staff compliment also appears to have been too lean for such an enormous task and targets.

8. Successful achievement of project goal and objective requires through analysis of the baseline findings and much realistic target setting based on varying regional and district potential to contribute to overall goal and impact. The interests of agro-dealers in different regions may be varied, and therefore there should be differences in consideration on how to work with them. What to emphasize, what training, etc. This is shown by the varying participation and success ratios, which in turn may be informed by the economic mainstay of each region. Where applicable, target setting should be informed by this potential and on agro-dealer and farmer motivation Higher access to inputs by East farmers shows that the models delivers more benefit and perhaps interest where terrain and topography are challenging. In other places, where the central business district is near or access to line of rail short, farmers will access input as part of normal run into town.

The fact that more farmers than anticipated are accessing seeds and input from the Ads shows that the project does not have to shoot for high numbers, rather be strategic. There will be spin-off and imitation effects as potential entrepreneurs see that agro-business is possible in the hinterland. However, overall, there is evidence that the business model was effective and opportunities exist for project scale-up and replication.