



Solidaridad

FINAL REPORT

**IMPROVING PRODUCTIVITY AND MARKETING OF COTTON THROUGH
STRENGTHENING SELECTED PRODUCER ORGANISATIONS IN
EASTERN AFRICA (CFC/ICAC/40)**





Solidaridad



Pro@tton



PROJECT FINAL REPORT PERIOD DEC 2011-DEC 2013

PROJECT TITLE:

IMPROVING PRODUCTIVITY AND MARKETING OF COTTON THROUGH STRENGTHENING SELECTED PRODUCER ORGANISATIONS IN EASTERN AFRICA

REPORT NO. 3

I. PROJECT SUMMARY:

1. **Title:** Improving Productivity and Marketing of Cotton through Strengthening Selected Producer Organizations in Eastern Africa
2. **Number:** CFC/ICAC/40
3. **Project Executing Agency (PEA):** Solidaridad
4. **Location:** Itigi, Singida -United Republic of Tanzania & Cotton districts Zambia
5. **Starting Date project period 1:** End November, 2011
6. **Completion Date Project period 1:** End December, 2013
7. **Financing:**

	COMMITTED	TOTAL EXPENDITURES DEC 2011-DEC 2013
TOTAL PROJECT COST	USD 840,000	USD 553.392 (Overhead/ Supervision cost from CFC and contingency are not included)
CFC FINANCING	USD 500,000 (grant) *of which USD 250,000 will be provided from a contribution of the OPEC Fund for International Development (OFID) to the CFC	USD 302.949 (grant)
COUNTER PART CONTRIBUTION	USD 340,000	USD 250.443 (grant)

Total Resource Utilization CFC/ICAC/40/ProCotton Project Dec 2011-Dec 2013

PROJECT COMPONENT	TOTAL BUDGET	TOTAL EXPENDITURES	CFC CONTRIBUTION	PROCOTTON PARTNER CONTRIBUTION
Procotton Service Projects				
Zambia (CAZ*)	\$316.000	\$281.266	\$110.619	\$170.647
Tanzania (Biosustain*)	\$174.000	\$148.422	\$87.546	\$60.876
<u>total</u>	\$490.000	\$429.688	\$198.165	\$231.523
PROJECT COMPONENT	TOTAL COST	TOTAL EXPENDITURES	CFC CONTRIBUTION	PROCOTTON PARTNER CONTRIBUTION
Procotton Program consolidation				
ProCotton SP promotion and learning	\$70.000	\$43.704	\$24.784	\$18.920
Development of program manuals and tools	\$20.000	\$0	\$0	\$0
Communication and Dissemination	\$40.000	\$0	\$0	\$0
Overall Program Coordination*	\$80.000	\$80.000	\$80.000	\$0
<u>TOTAL</u>	\$210.000	\$123.704	\$104.784	\$18.920
<u>TOTAL CFC/ICAC/40</u>		\$553.392	\$302.949	\$250.443
*CAZ: Note that a balance of 103.895 USD from PC partners is the carry-over for 2014 and expenditures are included in the quarterly report for 2014				
*Biosustain: the 10.000 USD carry-over funds are reserved for the impact evaluation in 2014				

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FINAL PROJECT REPORT BIOSUSTAIN LTD.

REPORT NO. 6 / 2014

I. PROJECT SUMMARY:

1. Title: Improving Productivity and Marketing of Cotton through Strengthening of Selected Producer Organizations in Eastern Africa
2. Number: CFC/ICAC/40/ProCotton
3. Project Executing Agency (PEA): Solidaridad Eastern and Central Africa Expertise Centre
4. Location: Singida District, Tanzania
5. Starting Date: November 2011
6. Completion Date: December 2013

II. PERIOD COVERED BY THIS REPORT:

From: November, 2011 to: December, 2013

Periods Covered by Previous Reports: January to December, 2013

Report No. 5

III. BACKGROUND OF THE PROJECT

This project was technical assistance based with the specific focus on providing support to producer organizations as a mechanism to strengthen smallholder productivity and increase income derived from cotton production. The methodology was designed based on successes and lessons learnt in Latin America in the production of coffee, tea and cocoa within Solidaridad' s project support. The project aimed to provide integrated support programs to organizations, addressing constraints related to technical support, access to finance, capacity building, access to markets, and product diversification and value-addition.

The project envisaged to transfer the lessons and experiences to the smallholder cotton sector in Africa through:

- Technical assistance (focus on agronomic practices);
- Access to finance (focus on making financial resources available);

- Capacity building (making the producer organization more efficient and its operations more effective/profitable);
- Access to markets (linking producer organizations to appropriate national or possibly international markets); and
- Product diversification (introduction of novel rotation crops and/or attention to value-addition activities).

IV. ABOUT BIOSUSTAIN AND PROJECT RATIONALE

Biosustain Tanzania Ltd (BST) was incorporated in 2006 as a limited company; to promote the development of organic cotton production in the Singida region of Tanzania. This is one of the poorest regions of Tanzania situated in the South East part of the Western Cotton Growing Area (WCGA). The project adopted the contract farming model where BST provided inputs (planting seed and pesticides) on credit and agricultural extension services to cotton growers and provided a procurement guarantee for their entire seed cotton harvests. This system was not common in Tanzania's liberalized market. In 2010, the contract farming model was adopted by the Government; Tanzania Cotton Board (TCB) and rolled out in all cotton growing areas with technical support from Gatsby Tanzania Trust (TGT) under the program dubbed The Tanzania Cotton and Textile Development Program(TCDP).

In 2010, BST renovated the ginnery to improve its efficiency, quality and capacity and at the moment the gin can process up to 15,000 MT of seed cotton (5,400 MT of lint with a ginning out-turn of 36%) over a 5 month period; thanks to the perseverance and financial commitment of its shareholders, the technical and grant support of Rural Life Development Corporation (RLDC) and the PROCOTTON project (Common Fund for Commodities and Rabobank Foundation) and the loan financing support of Catholic Organization for Relief and Development (CORDAID), Rabobank Foundation and National Microfinance Bank (NMB). Over the past two years, BST has grown to reach 8,000 MT seed cotton production which is the economic breakeven point for the gin.

Biosustain, a commercial trading company with an ethical focus was selected as a beneficiary. It then worked with some 3,500 contract farmers who were semi-organized into informal groups (primary societies). Biosustain provided support by supplying seeds, extension services and purchase contracts. Based on its own needs assessment, Biosustain required support from the program in the fields of technical assistance (strengthening the extension services, social organization and productivity improvement), market access (strengthening linkages with long term buyers), capacity building (business planning and financial management) and access to finance (building on an initially obtained loan from the Rabobank). Primary objective of this support was to work towards an efficient internal organization, capable of providing sound member support services, based on donor-independent, commercially viable financing arrangements

V. STAKEHOLDER ENGAGEMENTS

Rural Life Development Corporation (RLDC),

RLDC is a Switzerland/Tanzania development cooperation program involved in small sustainable rural projects. RLDC provided technical assistance to facilitate the development of BST's extension services and farmer training and the introduction of contract farming to the area. Grants amounted to approximately US\$ 100'000 per annum over the project life between 2007 and 2010.

Catholic Organization for Relief and Development – CORDAID

CORDAID is a Netherlands development agency which facilitates access to financial support to small agricultural producers and micro-entrepreneurs. In 2008 CORDAID, SIDI (the French equivalent of CORDAID) and Eximbank of Tanzania provided crop finance (US\$0.5 million, US\$0.1 million and US\$0.35 million respectively). In 2010, CORDAID co-financed with Rabobank Foundation 80% of the acquisition/first phase rehabilitation of BST's Singida ginnery (total cost US\$ 1 million).

National Microfinance Bank (NMB), Tanzania 2011:

Rabobank Foundation facilitated a TZS 5.5 billion (US\$ 3.6 million) trade finance overdraft facility for the 2010-2011 season from NMB. NMB, which is presently BST's main banker, also provided a general working capital overdraft facility of TZS 300,000 (US\$ 187,500).

Tanzania Cotton Board, TCB

Provided overall regulatory framework through inspection for farm production processes and seed cotton quality during harvest and marketing. Also responsible for providing input subsidy on seed and agrochemicals alongside Cotton Development Trust Fund (CDTF).

Cotton Development Trust Fund, CDTF

Responsible for input procurement and supply to all ginner/farmers in the country. The inputs are delivered to farmers by ginner on credit. Farmers in the project area also benefited from this scheme.

Ministry of agriculture

Provided technical support to BST's team of extension staff through regional agricultural extension agents.

Gatsby Tanzania Trust, TGT

TGT provides institutional strengthening for TCB and the national contract farming and conservation cotton promotion initiatives in the larger Mara, Tabora and Mwanza regions. Biosustain was indirectly linked to this program through TCB, since the projects by TGT and Technoserve did not yet cover Singida region

Certification

The process of certification involves standard technical requirements. Since BST does not have expertise in this, BioRe provided trainings to staff and farmers on Internal control systems (ICS) while Plant Health Services (PHS) and TANCERT provide verification and certification services.

VI. SPECIFIC PROJECT OBJECTIVES

- a) To expand production by training and extension services for producers
- b) Reinforce the capacities of primary societies and formalize their relationship with Biosustain (social organization)
- c) To improve and strengthen the capacity of the services of Biosustain and its staff
- d) To make Biosustain self-reliant and a donor-independent organization

VII. PROJECT IMPLEMENTATION STRATEGIES

This project was implemented in two years. Through BioSustain as the implementation partner capable to communicate and interact with a big number of smallholders, the following strategies:

1. Carry out a participatory needs assessment to identify smallholder and PO needs
2. Organize and strengthen farmer organizations in form of (Farmer Business Groups) FBGs
3. Provide technical support in form of trainings in GAP and ICS
4. Train staff of BioSustain on efficient service delivery
5. Renovate the ginning facility through loan arrangement with National Microfinance Bank (NMB)
6. Seek for organic markets through partnerships

VIII. SUMMARY OF PROJECT IMPLEMENTATION AND RESULTS ACHIEVED AGAINST PC-PROJECT/CFC/ICAC/40

GOAL / OBJECTIVE	PLANNED ACTIVITIES	PLANNED OUTPUTS	OBJECTIVELY VERIFIABLE INDICATORS	ACHIEVED ACTIVITIES	ACHIEVED OUTPUTS	MEANS OF VERIFICATION
GOAL	To improve the income position of small cotton producers in developing countries by enhancing the social, economic and environmental performance of cotton production.					
OBJECTIVE 1: To strengthen Producer Organizations in Zambia and Tanzania for the increase of sustainably produced cotton, sales on added-value markets, reinforcement of the Producer Organizations' position in the value chain and financial independence		No. of POs that have improved capacities to service their member farmers Volume of cotton produced under improved social and environmental conditions Improved financial facilities for PO's and/or farmers Activities are implemented to improve the position of the POs in the value chain	Outreach to at least 30,000 farmers in Zambia and Tanzania, through Producer Organizations (POs) POs with improved services to the producers Increase of volume of cotton produced in a sustainable way for added value markets Financial independence of one PO, other PO to have clear plan to become independent Market linkage of PO to added value markets		1,500 organic farmers in project area (Itigi) additional, coming to 5.145 active Organic cotton farmers. BioSustain cable of providing extension support to farmer BioSustain repaid Rabobank Loan and achieved break-even point Sales contracts with Plexus Cotton for organic No added value chain activity	
SUB-OBJECTIVE 1: To expand production by training and extension services for producers	New farmers and staff are trained on organic production in Itigi Ward, Manyoni District Field days and monitoring trips are conducted. Basic training in using ox-plough and weeder,	Productivity increased from 1013 kg/ha (2009/2010) to 1235 kg/ha in season Biosustain production increased from 1,900 Mt 2009/2010 to 4,000 Mt in season 2011/2012 (Organic	Volume of organic cotton produced per Ha Volume of seed cotton produced and sold as organic Area under cotton production	Farmer trainings held on ICS, GAP and Governance Demonstration plots established Field days held Field monitoring visits held	Productivity increased from 500kg/ha to 720Kgs/ha over 2 years produced 700MT additional organic seed cotton produced; 504 MT certified as organic. Total Organic production at 5.261 MT.	Progress reports Gross margin analysis Sales records

	sprayers and protective gear as well as how to use and maintain storage facilities are conducted	cotton)	Nr of ox-ploughs bought		800Ha of land planted with organic cotton, 700Ha certified from 432ha	Progress reports
			Nr. Of farmers trained		8 Ox-ploughs & weeders	
			Nr. Of PPE purchased and distributed		Number of farmers increased from 544 to 1500 over project period in Organic cotton.	Farmer registers/ progress reports
					In total 6.189 farmers received training in Organic cotton. 16 PPE gear bought and distributed	
SUB-OBJECTIVE 2:	Expand the programme for sensitization of famer members of the primary societies that Biosustain is working with	50% of the primary societies are sensitized on the advantages of self-organisation, trained on PO management techniques and the basis for formalizing relation with Biosustain	Nr of FBGs formed and trained	FBGs formed and trained on GAP, ICS and Governance	18 farmer business groups formed and trained	Progress reports
Reinforce the capacities of primary societies and formalise their relationship with Biosustain (social organisation)	Develop a training programme for the board of primary societies on adequate management		Nr of FBGs registered and working with primary societies		No FBGs registered and work with primary societies	
	Research into the most suitable form of formalizing the relationship between the primary societies and Biosustain, plus running a trial		Research outcomes	Farmers engaged in discussions about being shareholders of BioSustain	Farmers did not agree to the concept of shareholding but upheld contract farming system	
	Explore the option of Fairtrade certification		Certification model adopted	Organic certification was maintained over Fairtrade because of available expertise in FT	Organic cotton system adopted by BioSustain	Progress reports

GOAL / OBJECTIVE	PLANNED ACTIVITIES	PLANNED OUTPUTS	OBJECTIVELY VERIFIABLE INDICATORS	ACHIEVED ACTIVITIES	ACHIEVED OUTPUTS	MEANS OF VERIFICATION
SUB-OBJECTIVE 3. To improve and strengthen the capacity of the services of Biosustain and its staff	Organize basic computer training and training in software like Microsoft Office. Organize trainings in accounting using Tally software as training material. Proper documentation and registration	ExtensionstaffBiosustain trained in IT related skills and accountancy to more effectively manage recordkeeping and administrative issues.	Nr of staff trained on Tally system and Microsoft office Working tally system that generates useful data Well-kept seasonal farmer registers	2 tally trainings organized for staff 2 computer trainings organized for staff 3 computers and one printer purchased 4 motorbikes purchased for field staff	12 staff trained on Microsoft 2 staff trained on Tally accounting system Office equipped with computers Field transport facilitation improved	Progress reports
SUB-OBJECTIVE 4. To make Biosustain self-reliant and a donor-independent organisation	Develop long term donor independent business model and social organisation building plan. Organize impact assessment at farm level Organize feasibility study of further vertical integration in the chain (yarn/ textiles). Market linkage for POs to value added markets Profitability of PO	Development of long-term viable business plan for Biosustain Negotiating for at least (1) sales contract for organic cotton pay at least 5% premiums to farmers	1 Business plan developed and implemented Nr of forward sales contracts with organic buyers Report and implementation of vertical integration of gin Profitability analysis	1 Business plan developed Contracts signed Part of above business plan	Business plan developed and implemented Impact assessment in progress Sales Contract with Plexus Cotton Strategic partnership with SAMEER Group company to raise equity is under discussion Break-even analysis done	Copy of business plan and financial forecast Sales records Copy of business plan Financial report
SUB-OBJECTIVE 5. To develop the Procotton strategy and methodology for the cotton sector, establish a strong institutional basis for the Procotton program	Hold stakeholders workshops Organize exchange visits Participate in national and regional exhibition Develop proposal for	ProCotton approach seen and replicated as best-case practice in Zambia and Tanzania Project management system (manuals, protocols, tools, guidelines etc) with a description of	ProCotton methodology and instruments elaborated and applied No. of partners and strategic alliances in ProCotton program (co-funder/ strategic partner)	ProCotton expanded to Uganda and Kenya SAMEER Group, COMPACI/DEG funding BioSustain	ProCotton program expanded to Uganda and Kenya COMPACI funding BioSustain expansion strategy with CmiA cotton (Cotton Made in Africa) 1 stakeholder workshop	Project proposals Project proposal Business plan

(country and regional level), disseminate the best practices to other actors in the cotton sector and create the conditions for extension of	year two of project	procedures and instruments		Stakeholder workshops held to share experiences	held at Biosustain	
	Hold needs assessment for POs	One new co-financing partner in the Procotton program and at least one strategic alliances	Communication of best practices to other actors in cotton sector		1 stakeholder workshop held with COMPACI	Workshop reports
		A publication of the best practices, at least two exchanges between farmers and POs and a presentation on the annual event of CFC	Service project proposals for extension of the program		1 Workshop with Gatsby & TCB in Dar es Salaam, 2012	Progress report
		Two proposals for new service projects in other regions			Participated in the NaneNane Agricultural exhibition in Dodoma, 2012	NA reports
					2 Needs assessments held for BioSustain	Copies of handbook
					ICS guide developed Growers handbook developed	Copy of project proposal
				1 Project proposal for year two submitted to Rabobank and CFC in 2012		

IX. DETAILS OF PROJECT RESULTS

Producer Development

During the two year implementation period the project reached 1,500 smallholder organic farmers in Itigi and Manyoni district. This was increased from an initial 544 organic farmers. Smallholder support was in the form of capacity building implemented through farmer business groups (FBGs) as entry points. A total of 18 FBGs were formed with each having an average of 30 members; and training support was through setting up of demonstration plots to help farmers learn good agricultural practices and group dynamics. Field staff from BioSustain helped to train lead farmers in the groups and provided backstopping through field visits. Practical training skills were provided in the use of ox drawn plough and weeders to increase area under cotton by making it more efficient to open new land. Use of personal protective equipment (PPE) was also demonstrated and used. Trainings in quality control were offered at the farm during picking and grading and at the two storage facilities (warehouses) established with project support.

Production and productivity

Itigi and Manyoni produced 155MT of seed cotton prior to the project. This volume increased to 700MT planted on 800Ha up from 243Ha. The certified volumes are 504 MT produced by 800 farmers on 700 Ha. Productivity increased from 500Kgs/Ha on average to 720Kgs/Ha. During the project period farmer incomes from cotton increased significantly as shown in the table below. The operations have been costed at local rates. The results indicate that organic yields more than conventional while also organic have more field operations than conventional. On the average, organic incomes are slightly higher than conventional (**TZS. 540,000 vs. TZS.455,000**) in USD: **348.39 vs 293.55**. Please find attached in Annex 3 more information on cost calculations conventional vs. Organic.

Farmer sensitizations for increased production

One aim of this project was to increase number of farmers engaged with Biosustain and formalize relationships. During the period, the strategy adopted was the formation of FBGs and discussions about linking them to primary cooperatives and or shareholding with Biosustain. A series of meetings and trainings were organized to deliberate on these issues. The outcome was that farmers preferred to work individually with Biosustain under contracts and in smaller groups, FBGs. This was because they felt shareholding did not add value for them and that primary cooperatives have a history of poor leadership, inefficient service delivery, and corruption. The farmers also accepted to work with organic as opposed to Fairtrade. Fairtrade was however, not attractive to Biosustain since they lacked local expertise which organic had in abundance from within BioSustain and BioRise.

Producer Support extension methodology:

Group approach was used with the formation and strengthening of 7 additional farmer business groups and strengthening the initial 11. Individual farmers were also targeted through field visits and training sessions. BioSustain field staff received training to be able to provide this service. Technical support for

development of training materials (IPM guide with a simplified scouting methodology, handbook on ICS and contract farming guidelines) was offered by Solidaridad, BioRise and COMPACI.

The key areas of training are:

1. Land preparation
2. Soil fertility management
3. Agronomic practices
4. Integrated Pest Management-including care for beneficial insects
5. Seed cotton quality & storage
6. Group dynamics and governance structures for FBGs

Staff Development for BioSustain

The project was designed on the premise that BioSustain should have capacity to deliver services more efficiently to farmers. Such services include extension, delivery of inputs and purchase of seed cotton from farmer groups. In order to achieve this planned activities included computer trainings in Microsoft and tally accounting system. The trainings were done for both administrative and field staff involved in procurement of seed cotton. A total of 12 staff were trained and 3 computers purchased. This has improved the documentation of farmer details especially for input distribution and seed cotton purchases and ginning records. In order to efficiently carry out the activities, transport facilitation for field staff has been improved through purchase of 4 motorbikes and 8 bicycles. This has helped BioSustain to reach more farmers. The organizational needs development was informed by two sets of needs assessments carried out in 2011 and 2012. Informed by these two activities were implemented that maximized benefits towards improving organizational efficiency.

Business model for self-reliance

Through the support of ProCotton, BioSustain carried out company profitability analysis to establish the financing model and business operationalization including marketing strategy. According to the business plan Biosustain would breakeven at ginning level of 8,000MT seed cotton, repaying outstanding loan used to renovate the gin. In order to have a long term sustainable business model, the business plan proposed that BioSustain should seek a strategic partner to inject external equity so as to be able to diversify and move up the value chain. Discussions are underway with Sameer Group of Switzerland towards this understanding. In addition, diversification of cotton production into CmiA and conventional would assist avert market related risks.

Building of market linkages & quality improvement: Since the beginning of its activities, BioSustain sells its organic lint on an “ex gin” basis, thereby removing the need to handle export logistics. BioSustain has secured a forward sales contract with Plexus Cotton to sale its lint [at \$1,895/tonne of lint as Organic and \$1,818/tonne of lint as Conventional during 2012/2013 season]. Other historical buyers are; Devcot, Kassim Textiles, SM Holding, CDI. BioSustain paid a 6.6% premium to organic producers.

Loan guarantee programme: BioSustain continued to get crop pre-financing and a long-term investment for the ginning facility from NMB bank via the joint partnership under ProCotton with Rabobank Foundation.

ProCotton Strategy and methodology for cotton sector

During the inception stage of the project, a regional stakeholder workshop was organized in Singida. Technical experts of cotton from Solidaridad India and West Africa provided trainings to stakeholders. In May 2012, Solidaridad participated in the national cotton stakeholder forum organized by Tanzania Cotton Board and Gatsby Trust. During this workshop, Solidaridad shared about ProCotton's experiences in Tanzania. Solidaridad and Biosustain have also participated in the COMPACI conference in 2013 given that COMPACI now works with BioSustain as implementing partner for CmiA in Tanzania. It is also notable that the ProCotton methodology has been replicated in Uganda through working with TechnoServe and Edun Foundation to improve lives of 8,535 smallholders through capacity building and access to finance. In Kenya, the ProCotton methodology has been implemented with financial support from Liberty Foundation of Netherlands. The project got a boost when it was up-scaled with support from the Farmer Support Program and additional funding from the Dutch government. Other partners involved include Cotton Development Authority and Rift Valley Products LTD. The project targets 6,000 smallholders.

X. PEA MONITORING AND EVALUATION

BioSustain received invaluable project guidance from Solidaridad in form of monitoring and evaluation. From the point of view of PEA, it can be observed that BioSustain model was largely successful and played a key role in moving the company to profitability. However, there was some internal inefficiency of the organization as regards obligations to reporting project progress and financial reports to the PEA and donors.

XI. SUMMARY OF PROJECT OUTCOMES

In general the following are valuable contributions of the project;

Added value to BioSustain

1. ProCotton has helped BioSustain to employ and train 2 Area managers and 12 field agents. This has increased skills and hence service delivery to farmers
2. Computer Tally system has helped BioSustain in procurement and accounting processes for inputs and seed cotton. More transparent and clear processes ensured.
3. Organic cotton production makes BioSustain a brand for sustainability initiatives.
4. BioSustain is a more attractive partner for new investors and development partners.
5. Organic cotton production has been embraced by many farmers and BioSustain is keen to continually improve it.

Added Value to Cotton producers

1. Increased cotton yields 500kg/ha -720kg/ha and incomes (\$ 241- \$348 acre) have improved livelihoods of small scale farmers in Itigi. Combination with rotational crops (sorghum, sunflower, sesame, maize) have improved food security
2. Using ProCotton as a basis, BioSustain have expanded organic production to Shinyanga and Tabora regions reaching 5,000 farmers and 1,500 MT seed cotton.
3. Increased knowledge for cotton and rotational crop production amongst farmers

4. Formations of FBGs have improved training outreach and service delivery to farmers for both inputs and extension services.
5. Crowding in by other programs e.g. COMPACI presents opportunities to more technical assistance and expansion of cotton production.
6. Environmental and health benefits have accrued from use of botanical extracts for pest control
7. Gender mainstreaming and governance have helped strengthen farmer leadership. More women and youth are participating in FBGs leadership, trainings and cotton production.

XII. RESOURCE UTILIZATION YEAR 2 (2013):

Please find below the resource utilization, based on the carry-over of 2012 and the new budget proposal as submitted and approved by the Steering Group of ProCotton and CFC and ICAC for 2013. The 10.000 USD carry-over funds are the remaining funds from CFC and will be used for the impact evaluation and reported to CFC end of June after the assessment has been done.

CFC BUDGET COMPONENT	ACTIVITIES	ORIGINAL BUDGET FOR YEAR 2 (CARRY-OVER FUND 2012)	ACTUAL EXPENDITURES FIRST SIX MONTHS	PROJECT BALANCE (AS AT JUNE 2013)	EXPENDITURE JULY – DECEMBER 2013	BALANCE TO DATE
I VEHICLES, MACHINERY AND EQUIPMENT	Stationary costs & Transport/Accommodation	18.500 USD	13.100 USD	5.400 USD	5,400	00
IV PERSONNEL	External Evaluation	5.000 USD	0.00 USD	5,000 USD	0	5,000
V TECHNICAL ASSISTANCE AND CONSULTANCY	Consultancies & management BioSustain	8.000 USD	1.000 USD	7.000 USD	7,000	00
VI DUTY TRAVEL	Transport BioSustain	10.000 USD	5.780 USD	4.220 USD	4,220	00
VII DISSEMINATION AND	Farmer support & Trainings	37.000 USD	27.000 USD	10.000 USD	5,000	5,000

TRAINING						
VIII OPERATIONAL COSTS	Monitoring and Evaluation PEA Kenya	10.205 USD	5.000 USD	5.205 USD	5,205	00
GRANT TOTAL		88.705 USD	51,880 USD¹	36,825 USD	26,825 USD	10,000 USD

XIII. LONG TERM VISION

In 2011, BioSustain invested in modernization of its Singida ginnery. BioSustain also (in 2011/12 season) embraced the new government initiative to practice contract farming with smallholders. These two initiatives gave BioSustain an opportunity strategically² (i) to upscale its activities through increased farmer numbers and (ii) move into the much larger conventional cotton market to secure the financial viability of the company. To assist move this agenda forward, BioSustain partnered with Solidaridad's ProCotton program to promote and improve organic cotton in Itigi, Singida. This project has since realized desired outcomes. BioSustain has also increased organic cotton farming in Shinyanga region on its own funding and at the moment, total organic farmers reached 6,000.

BioSustain has recently become the Tanzanian partner of the Competitive African Cotton Initiative (COMPACI) program financed by the Bill & Melinda Gates Foundation and managed by the German development institutions, DEG and GIZ. The objective of COMPACI is improving the livelihood of cotton farmers through sustainable production. This is in line with organic cotton and Solidaridad's objectives. COMPACI is banking on experiences in organic cotton as a basis for rolling out the CmiA cotton among BioSustain conventional cotton farmers. Cotton Made in Africa (CMiA) program which links players involved at all levels of the cotton value chain, from cotton growers to textile retailers, who share common values, added to BioSustain's existing partnerships with PROCOTTON which has been in place since 2008 and 2009 respectively. BioSustain focuses to upscale its activities from 4,000 cotton growers in 2010/2011 season to 30,000 in 2017.

XIV. EXIT-STRATEGY

Observations, challenges and proposed exit strategy

Organic cotton sales have not been able to fetch a premium over the last 3 seasons. BioSustain is however, moving with speed to ensure that it secures forward contracts with buyers of organic. The

¹Supporting financial documents for expenditures made in 2013 have not yet been provided by Biosustain and are still to be received.

²BioSustain's strategy is to diversify cotton production so as to have organic, conventional and CMiA. This is to spread business risk and satisfy diverse groups of farmers.

current relationship with Plexus Cotton is a positive move and BioSustain will continue to nurture the relationship. Also, increased farm level productivity will be pursued to ensure that higher net incomes to farmers are sustained and focus not put on premiums. Diversification in production of identity cottons by BioSustain is seen as a strategy to increase streams of incomes from different niche and mainstream markets. Organic, CmiA and conventional production will in the coming years help spread risk associated with market dysfunctions. Strategic partnership with COMPACI/DEG and Sameer Group seeks to move BioSustain up the value chain while strengthening farmer institutions, technical capacity and BioSustain institutional capacity. Expansion of activities and growing farmer numbers, acreages and production volumes in the coming seasons has been planned as can be seen in Annex 2.³ At this level of production, BioSustain supplies will be sufficient to sale as lint, and diversify into oil milling. The introduction of CmiA as a niche market product will also improve BioSustain's bargaining position in the global market. CmiA will replace conventional cotton if the uptake proves sustainable.

XV. PROJECT IMPACT AND OUTCOMES

An independent project impact evaluation shall be carried out to establish the level of achievement of outcomes of the ProCotton project with BioSustain during the month of April, 2014. This report will provide a conclusive indication and on the impact of the project including lessons learnt and recommendations. The report will be disseminated to all key stakeholders and donors.

³Annex 2: BioSustain cotton growth indicators to 2017

ANNEX 1: BIOSUSTAIN COTTON GROWTH INDICATORS

Table: Production focus Itigi

ITIGI (Singida)		2014	2015	2016	2017
N° of farmers		2000	2500	3000	3500
N° of FBGs		23	28	32	37
Yield (+5% pa)	Mtons	0,75	0,79	0,83	0.87
SC produced	Mtons	735	945	1047	1265

Table: Production focus Singida

OVERALL BST ORGANIC PROCUSTION (SINGIDA REGION)					
		2014	2015	2016	2017
N° of farmers		7 000	8 000	9 000	10 000
N° of FBGs		106	121	136	149
Yield (+5% pa)	MT	0,75	0,79	0,83	0.87
SC produced	MT	6 560	7 872	9 299	10 848

Table: Production focus Tabora

TABORA REGION (CONVENTIONAL / /CmiA)		2014	2015	2016	2017
N° of farmers		11 000	14 000	17 000	20 000
N° of FBGs		167	212	258	299
Yield (+7% pa)	MT/Ha	0,79	0,85	0,91	0.97
SC produced	MT	11 613	15 815	20 548	25 866

ANNEX 2: KPI SHEETS

Table CFC: Performance indicators Itigi Project area (additional farmers)

PROJECT PERIOD	NUMBER OF ADD. FARMERS	NUMBER OF ADD. CERTIFIED FARMERS	ADD. CERTIFIED PRODUCTION (MT COTTON SEED)	PRODUCTIVITY PER FARMER (AVERAGE)	INCOME INCREASE (%)
YEAR 1 (2011 / 12)	275	100	00	500 KG/ HA	5%
YEAR 2 (2012 / 13)	1,080	400	289	692 KG/ HA	5%
YEAR 3 (2013 / 14)	1,500	700	504	720 KG/ HA	7%

Overall KPI Sheet ProCotton–Biosustain

OVERALL PERFORMANCE INDICATORS , BST				
PRODUCTION		YEAR 1 (2011/2012)	YEAR 2 (2012/2013)	YEAR 3 (2013/2014)
Number of (active) members over the last five years	ORGANIC	3,775 farmers	6,189 farmers	6,189
	CONVENT	5,501 farmers	10,770 farmers	TBV
Organization's cotton production volume in MT (lint)	ORGANIC	1.500 MT	4.517 MT	5.261 MT
	CONVENT	6.000 MT	8.400 MT	TBV
Number of producers receiving technical assistance/training (organic)		3,775 farmers	6,189 farmers	6,000
Number of producers certified		500 farmers	4581 farmers	5.145
Cost of input per farmer (estimation?)		\$120	\$117	\$133
Certified acreage under cotton production		900 ha	5980 ha	6,000 ha
Conventional acreage under cotton production		7,600ha	12,000 ha	15,000 ha
% cotton that was sold via the PO/ company		100%	85% ^[1]	100%
% of cotton sold with a premium		10%	0%	6.3%
Cotton prices paid to certified farmers (per KG)		\$0.54 & 0.75	\$0.42	\$0.46
Cotton prices paid to conventional farmers (per KG)		0.71 & 0.52	\$0.42	\$0.43

ANNEX 3: COST CALCULATION PROFITABILITY CONVENTIONAL VS. ORGANIC

PRODUCTION COSTS			CONVENT.	ORGANIC	CONVENT.	ORGANIC	CONVENT.	ORGANIC
ITEM	UNIT	UNIT COSTS	QUANTITY		AMOUNT (TZS)		AMOUNT (USD)	
Inputs					79,900	83,650	51.55	53.97
Farm Cleaning	acre	3,600	4	4	14,400	14,400	9.29	9.29
Manure	tons	30,000	0	2	0	60,000	0.00	38.71
Seed purchase, fuzzy	Kg	300	10	10	3,000	3,000	1.94	1.94
Fertiliser	Bag	50,000	1	0	50,000	0	32.26	0.00
Sacks	No.	600	10	10	6,000	6000	3.87	3.87
Pesticide purchase	Litre (pack)	12,500	1	0.5	12,500	6,250	8.06	4.03
Labour costs					130,000	130,000	83.87	83.87
Ploughing 1	acre	30,000	1	1	30,000	30,000	19.35	19.35
Ploughing 2	acre	15,000	1	1	15,000	15,000	9.68	9.68
Planting	acre	3,600	8	8	28,800	28,800	18.58	18.58
Thinning	acre	3,600	4	4	14,400	14,400	9.29	9.29
Gapping	acre	3,600	4	4	14,400	14,400	9.29	9.29
Weeding 1	acre	3,600	4	4	14,400	14,400	9.29	9.29
Weeding 2	Acre	3,600	6	6	21,600	21,600	13.94	13.94
Spraying	acre	3,600	24	16	86,400	57,600	55.74	37.16
Harvesting	acre	50,000	1	1	50,000	50,000	32.26	32.26
Sorting costs	Kg	15	400	350	6,000	5,250	3.87	3.39
Transportation	Kg	20	400	350	8,000	7,000	5.16	4.52
Total Cost					209,900	213,650	135.42	137.84
Operation cost/KG	TZS				322.92	296.74	0.21	0.02
Expected yield	Kgs				650	720		
Farm gate price	Kg				700	750	0.45	0.48
Revenue/ acre	TZS				455,000	540,000	293.55	348.39
profit per acre	TZS				245,100	326,350	158.13	210.55
Profit per Kg	TZS				377.08	453.26	0.24	0.29

FINAL REPORT PROJECT CAZ

I. **PROJECT SUMMARY:**

1. Title: *Improving Productivity and Marketing of Cotton through Strengthening Selected Producer Organizations in Eastern Africa*
2. Number: CFC/ICAC/40/ProCotton
3. Project Executing Agency (PEA): Solidaridad South Africa Regional office
4. Location: Zambia
5. Starting Date: November 2011
6. Completion Date: December 2013

II. **BACKGROUND AND CONTEXT IN WHICH THE PROJECT WAS CONCEIVED:**

A) **Overall project document**

The project was originally designed with the goal of improving the income position of small cotton producers in developing countries by enhancing the social, economic and environmental performance of cotton production. This goal was to be achieved through:

- strengthening producer organizations in the different target countries including Zambia
- developing the Pro-cotton strategy and methodology for the cotton sector,
- establishing a strong institutional basis for the Pro-cotton program (country and regional level),
- disseminating the best practices to other actors in the cotton sector and create the conditions for extension of the Pro-cotton program to other regions in Africa

Solidaridad and its partners have made significant strides towards achieving the activities set out in the proposal. As part of strengthening producer organizations, CAZ was selected as an organization that represented cotton farmers and capacitated to be able to effectively represent producers.

The pro-cotton approach is one of two approaches used in the Zambian cotton sector. However, the project sought to foster this approach in Zambia by:

- Raising awareness on the value of the pro-cotton approach. This was done through the printing of awareness raising materials, hosting of a national workshop on cotton in 2012

- Exchange visits between Tanzania and Zambia project implementers which facilitated the sharing of lessons learnt. It also helped project implementers to gain a renewed understanding of the value of a pro-cotton approach

However, within the Zambian context, CMiA is an approach that is largely accepted by ginners within the Cotton sector. This approach concentrates on building an alliance of international retail companies, which have targeted demand in the global market for sustainably produced cotton, and use this material in their products. This approach differs from the pro-cotton approach which seeks to building the capacity of farmers to produce more.

B) Program Objectives CFC/ICAC/40/ProCotton Project

The Cotton Association of Zambia is a member based non-governmental organization established in 2005 to represent the needs of cotton farmers within the Zambian cotton sector. The organization represents a large number of cotton farmers in Zambia. The farmers pay a membership fee to CAZ on an annual basis although at the time that this report was written only 3,647 farmers had paid membership fees. Through this membership farmers benefit from a range of services including training and advocacy.

The objective of the ProCotton Program is to improve the income position of smallholder cotton producers in developing countries, by enhancing the social, economic and environmental conditions of cotton production. The program offers integrated support to producer organizations that produce, or aim to produce, cotton under “sustainable conditions” preferably for markets that pay premium prices for such cotton. The Zambian project feeds into 3 pro-cotton priorities:

- a) **Technical assistance:** Support to enable farmers to increase production volumes, improve productivity, obtain higher product quality.
- b) **Product diversification and value addition:** Support in product diversification, value-added rotation crops, marketing of rotation crops. This pillar also focusses on supporting organizations to move up further in the value chain (e.g. through investment in ginning capacity).
- c) **capacity building :** Making the producer organization more efficient and its operations more effective/profitable

C) Sub-Objectives Year 1

The Zambian part of the project was implemented over 25 months with the project being divided into 2 phases with the main beneficiaries expected to be the small scale farmer. The initial phase (December 2011 to December 2012) aimed to reach out to 13000 farmers and the main objectives were:

- increasing cotton productivity from 650 kgs/ha to 1000 kgs/ha
- Build a strong administrative and linkage structure between IC's, DFA and CAZ secretariat
- Increase membership base of CAZ
- Strengthen extension services of CAZ is offering to its members and making them more effective and efficient.
- promotion, adoption and dissemination of a cotton-based farming system using appropriate integrated crop production and crop pest management coupled with conservation farming technologies by 12,000 farmers

D) Sub-Objectives Year 2

In year 2 in order for the Cotton Association of Zambia to effectively and efficiently deliver services to the cotton farmers new important steps were taken. The geographical area was narrowed down to Mumbwa district focusing particularly on devolution of study cycle groups with about 3,000 farmers into well organized and managed producer organizations under one producer union (1 cooperative). It was envisaged that through this devolution, the producer organizations will efficiently service members and demand for services from the service providers consequently improving productivity and viability of individuals. The specific objectives for this phase of the project were to

- To improve seed cotton productivity through promotion and adoption of good agricultural practices under the members of the CAZ
- To create the organizational structures for producers to organize themselves and enhance the collective performance of the farmers
- Move farmers up in the value chain

III **SUMMARY PROJECT RESULTS ZAMBIA DEC 2011 – DEC 2013**

Table Program performance: CFC/ICAC/40/ProCotton/Zambia

OVERALL PROGRAM OBJECTIVES	OVERALL KEY INDICATORS	OVERALL ACTIVITIES	OVERALL OUTPUTS/ OUTCOMES
<p>PROJECT OBJECTIVE:</p> <p>1.To strengthen Producer Organizations in Zambia for the increase of sustainably produced cotton, sales on added-value markets, reinforcement of the Producer Organizations'position in the value chain and financial independence</p>	<p>OBJECTIVE 1:</p> <p>a) Outreach to at least 30,000 farmers in Zambia and Tanzania, through Producer Organizations (POs)</p> <p>b) POs with improved services to the producers</p> <p>c) Increase of volume of cotton produced in a sustainable way for added value markets</p> <p>d) Financial independence of one PO, other PO to have clear plan to become independent</p> <p>e) Market linkage of PO to added value markets</p> <p>f) Additional revenue/better position in value chain</p>	<p>Identify and train study circle leaders and organizers</p> <p>Conduct extension visits through study circles'</p> <p>Conduct farmer field days</p> <p>Encourage the payment of membership fees to CAZ</p> <p>Encourage adoption of conservation agriculture practices</p> <p>Organize farmers into viable entities</p>	<p>OUTPUT OBJECTIVES 1:</p> <p>a) 1 Cooperative (APEX) established that has improved capacities to service their member farmers of 60 PCS's (connected to farmers ginning company)</p> <p>b) 9.000 MT of cotton produced under improved social and environmental conditions last season (conservation agriculture)</p> <p>c) 12,000 farmers reached with improved extension services CAZ</p> <p>d) Over 350 farmers are given access to own shares in a Farmer owned ginnyery set up by the Government of Zambia</p> <p>e) productivity of farmers increased to an average of 750kg/ha</p>
<p>PROJECT OBJECTIVE:</p> <p>2. To develop the ProCotton strategy and methodology for the cotton sector in Zambia, establish a strong institutional basis for the ProCotton Program (country and regional level) disseminate practices to other actors in the cotton sector and create conditions for extension of the ProCotton program.</p>	<p>OBJECTIVE 2:</p> <p>a) ProCotton methodology and instruments elaborated and applied</p> <p>b) No. of partners and strategic alliances in ProCotton program (co-funder/ strategic partner)</p> <p>c) Communication of best practices to other actors in cotton sector</p> <p>d) Service project proposals for extension of the program</p>	<p>Raising awareness on the pro-cotton methodology</p> <p>Production of communication material</p> <p>Presenting at gatherings on the project</p>	<p>OUTPUT OBJECTIVES 2:</p> <p>a) 2 partners and strategic alliances in ProCotton program (Cotton Board and CAZ)</p> <p>b) 2 events Communicating of best practices to other actors in cotton sector</p> <p>c) 2 Producer exchange visits conducted for exchange of learnings</p> <p>d) New project proposal approved by Dutch Ministry for development food security programme with CAZ, linked to current project.</p>

Detailed Program performance: CFC/ICAC/40/ProCotton/Zambia (CAZ)

OBJECTIVE	PLANNED ACTIVITIES	PLANNED OUTPUTS	OBJECTIVELY VERIFIABLE INDICATORS	ACHIEVED ACTIVITIES	ACHIEVED OUTCOMES
<p>I TECHNICAL ASSISTANCE:</p> <p>To improve seed cotton productivity through promotion and adoption of good agricultural practices under the members of the PO</p>	<p>Planning Meeting and Awareness creation in the existing study circle groups</p> <p>Recruit , train and procure addition 15 bicycle for study cycle organizers under the primary societies</p> <p>Technical support to study cycle groups under the primary</p> <p>Developing Capacity Building training materials for the farmers</p> <p>Provision & distribution of seed inputs for development of entrepreneurship in the POs</p> <p>Promoting access to finance for SH cotton farmers</p>	<p>Cotton production improved through adoption of better agricultural practices of members</p> <p>Strong administrative and linkage structure between ICA, DFA and CAZ secretariat enhanced</p> <p>Extension service provision of CAZ enhanced</p> <p>Support initiatives of linking self-financed cotton farmers to access production inputs and markets.</p>	<p>15 study cycle organizers in Mumbwa recruited and trained by July, 2013 to strengthen extension to farmer groups</p> <p>improved productivity from 650kg/Ha to 750 KG's</p> <p>All farmers working with the CAZ are able to adopt and practice conservation farming methods</p> <p>12,000 farmers have been trained and adopted conservation agriculture practices (no certification)</p> <p>Cotton productivity increased of the 3,000 farmers in Mumbwa with 20% by end of 2014</p> <p>At least 5,000 farmers sell self-financed cotton in 2011/12 season if the pilot with 3000 farmers prove successful.</p> <p>At least 11,000 Hectares of cotton grown under the self-financed scheme by 2012 or 2011</p>	<p>Study organizers recruited, trained and provided with bicycles</p> <p>Technical support/ Extension services provided through study circle methodologies on conservation farming methods</p> <p>Capacity building material developed and translated into local languages</p> <p>Cotton and soybean revolving seed loan</p> <p>3500 farmers sold self-financed cotton into the market</p> <p>At least 3500 ha of cotton grown under the self-financed scheme</p>	<p>Productivity increased to an average of 750kg/ha</p> <p>Improved agricultural practices</p> <p>Diversification of livelihood sources through entrepreneurship activities and planting of soya bean</p> <p>Improved access to seeds</p>

OBJECTIVE	PLANNED ACTIVITIES	PLANNED OUTPUTS	OBJECTIVELY VERIFIABLE INDICATORS	ACHIEVED ACTIVITIES	ACHIEVED OUTCOMES
II: INSTITUTIONAL CAPACITY BUILDING	<p>Ministry of Agriculture training CAZ staff in cooperative management and leadership skills</p> <p>Baseline Development on the needs of producer groups</p> <p>Training CAZ to PO members (Board members and members) in cooperative management and leadership skills</p> <p>Setting up the governance structure of the PO</p> <p>Legal registration of the primary societies and the cooperative</p> <p>Developing a Business tool kit by external consultant Developing of business plan for the PO</p> <p>Adopting and reproduction of operational guidelines for administration at PO level</p>	<p>Legally appropriate farmer body self-governed by base farmer groups established</p> <p>Capacity reinforcement of the primary societies and PO/cooperative to enable the producers to perform better (Board, members and secretary)</p> <p>Improved business and marketing skills of the PO's and farmers linked to ginning</p> <p>100% of membership fee paid is remitted to CAZ secretariat by December of each year.</p> <p>100% of membership payments are documented and declared to all members during the AGM at IC level.</p> <p>Democratic elections are held every two years</p>	<p>1 cooperative union formed in Mumbwa by 3,000 farmers (Apex)</p> <p>60 primary cotton societies formed (50 members per society)</p> <p>180 Study cycle groups organized in primary societies</p>	<p>1 cooperative union formed</p> <p>60 primary cooperatives formed.</p> <p>Capacity building sessions on cooperative management in place</p> <p>180 study circles formed</p> <p>CAZ AGM held every year</p>	<p>Farmers able to own shares in a farmer owned ginnery</p> <p>Farmers are better organized</p> <p>Farmers paying membership fees</p> <p>Improved governance and sustainability of CAZ</p>

OBJECTIVE	PLANNED ACTIVITIES	PLANNED OUTPUTS	OBJECTIVELY VERIFIABLE INDICATORS	ACHIEVED ACTIVITIES	ACHIEVED OUTCOMES
III: MOVING FARMERS UP IN THE VALUE CHAIN	<p>Setting up the governance structure of the PO</p> <p>Legal registration of the primary societies and the cooperative</p> <p>Training the Board of the cooperative in marketing and business skills by external consultant</p> <p>Development of business plan for the PO/ cooperative</p> <p>Adopting and reproduction of operational guidelines for administration at PO level.</p> <p>Mechanisms by which a reserve is generated by the services offered by the producer body</p>		<p>One document spelling out governance tenancy of PO produced and circulated to members by April ,2014</p> <p>At least 60 primary producer organizations are registered by April, 2014</p> <p>At least one training of Board members in marketing and business skills is held by April, 2014</p> <p>A business plan for the PO is developed by April, 2014</p> <p>General cooperative governance guidelines are adopted to PO by Sept, 2013</p> <p>Formation of 80 savings and credit groups is facilitated by April, 2014</p>	<p>Primary cooperative legally registered</p> <p>1 business plan for the cooperative developed</p> <p>80 Savings and Credit groups established</p> <p>Training sessions on marketing and business skills</p>	<p>Farmers have access to some form of finance</p> <p>Farmers are better organized through cooperatives</p>

IV. PROJECT IMPLEMENTATION AND KEY RESULTS ACHIEVED

1. Main Project Results achieved:

A) Improving farmer learning

In 2011 CAZ began working with farmers on increasing their productivity. The approach to increase productivity was 2-pronged. The first prong involved organizing farmers into study circles. The study circle methodology was initially pioneered by Swedish Cooperative Center (now WeEFFECT) as a means of creating a platform for information and skills sharing amongst farmers. The concept of study circles grossly contributes to farmers' acquisition and adoption of different new farming technologies by encouraging peer to peer learning. The method enhances development of solidarity and commitment amongst group members and strong desire to solve common problems.

This method has been effectively by the CAZ for information dissemination and technology delivery. While the goal of using this method was to empower farmers with knowledge and skills by exchanging ideas and experiences and contributing to the improvement of their well-being as well as raising farmers' learning standards and social awareness leading to deeper understanding and greater self-confidence. During the period January 2012 to December 2012 CAZ formed 690 study circles made up of an average of 15 people. However in 2013 this figure reduced as pro-cotton funds now only focused on Mumbwa

Each study circle has a leader who was trained by CAZ on various extension methodologies and group management. This leader has the responsibility of ensuring exchange of information in the group. When the groups met, learning was facilitated through the use of study circle material originally produced by SCC. However, these materials were written in the English language and some farmers found it difficult to comprehend them. CAZ with support from project funds translated these study materials into the local languages Tonga and Nyanja. Copies of the books are attached as an annex to this report.

Table 1: Study Circle formation

	2012	2013	RESULT
Study Circle groups(farmers trained on Good Agricultural Practices)	1,618 cumulatively from 2010	123	Increased the outreach and has added another 1,618 farmers receiving recommended production technologies
Study Circle members	24,756 cumulatively from 2010	1,687	Farmers have applied technologies being promoted such as minimum tillage using hand hoe and ox-drawn ripper at 44% of the total number of SCG members. 76% of the 26,443 SCG participants applied crop rotation. 45% of the 26,443 SCG participants applied CA ~ basin making and ripping.
Study Circle leaders trained	1,618 cumulatively	123	Increased the outreach and has added another 1,618 farmers receiving recommended

	from 2010	production technologies. As a result seed cotton productivity has improved from a base of 650kg/ha in 2010 to 946kg/ha in 2012 and 990kg/ha in 2013
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The study circles were periodically supported by extension visits from CAZ staff. CAZ has 12 field staff who are all cotton agronomists specializing in extension. These staff members were all trained in the study circle extension approach in order to ensure that they could effectively train new groups as they arose.

Table 2: Adoption of new practices

NEW PRACTICE	OLD PRACTICE	IMPACT
Planting with the 1 st rains	Planting either at the onset of rains behind the plough or a week or two later after land preparation.	Planting with first rains afforded the crop a longer growing period in the feed and took advantage of nitrogen flash leading to high productivity and a non-rushed planting. This reduces pressure on the farmers leading to correct application of the plating methods.
Use of minimum tillage	Convectional land preparation by tilling the land 100% using ox plough, tractor plough or harrow or hand hoe. Conventional land preparation waits for the onset of rains as opposed to use of minimum tillage which involves land preparation during the dry season.	-Land preparation can be done by households with no work animals. -has made it possible for farmers to plant with first effective planting rains. -has help in water harvesting during periods of dry spells enabling CA crop to tolerate dry spells leading to good crop yields -gender and HIV sensitive land preparation technology through the spread of land preparation over a longer period of time as opposed to conventional land preparation methods
Crop rotation	Mono-cropping meaning the same type of crop is grown on the same piece of land year after year	Crop rotation has help in soil fertility restoration through use of legumes and residual fertilizers and at the same time reducing pest and crop disease build up on the crop. The impact is improved crop productivity and increased household incomes through reduced production costs
Gender sensitive pest management practices	Use of a 20 or 16litre sprayer for control of pests	The female cotton farmers now use ultra-low volume sprayers which are light and could be used by women.

B) Increasing productivity and incomes

Whilst the implementation of extension through a supported study circle methodology led to better management practices at farm level, it did not necessarily translate to significant increases in yield. This can be attributed to the fact that there are several other variables in crops that are dependent on rain. When the project started in the 2011/12 season farmers had a bumper harvest. In the next season 2012/13 season, harvests were low as a result of erratic weather patterns.

Table 3: Key performance indicators 2011- 2013

PRODUCTION	BASELINE 2010/2011	YEAR 1 2011/12	YEAR 2 2012/13
Change (increase) in number of farmers	12,000	12,000	12,000
Change (increase) In production cotton seed (MT)	7.800	12.878 MT	9.000 MT
Change (increase) in productivity per farmer (average KG's/ha)	650 KG/Ha	1.069 KG/ha	750 KG/Ha
Average (gate farm) price farmers receive for cotton seed	0.46 USD	0.32 USD	0.38 USD
Change (increase) in income (%)	NA	+14%	-17%
Change (increase) in number of producers having received access to seed capital	NA	0 farmers	365 farmers

The yields attained by beneficiaries of the program have consistently remained above the national average however; the yields remain below the potential of the seeds. Despite being cushioned to some extent against low yields, smallholder farmers derive little income from cotton production when compared to other crops and their basic needs. Below is a gross margin analysis based on gross income for the 2012/13 season.

COTTON GROSS MARGIN BUDGET FOR ONE HECTARE			
OUTPUT			
YIELD IN KGS		750	
PRICE/KG		ZMK 2.50	\$ 0.42
EXPECTED TOTAL OUTPUT(ZWK)		ZMK 1 875.00	\$ 315.00
INPUT			
SEED	ZMK	43.00	\$ 8.11
PESTICIDES	ZMK	105.00	\$ 19.81
LAND PREPARATION	ZMK	250.00	\$ 47.17
WEEDING BY THREE TIMES	ZMK	773.00	\$ 145.85
SPRAYING	ZMK	150.00	\$ 28.30
PICKING/BAILING	ZMK	225.00	\$ 42.45
TRANSPORT	ZMK	13.50	\$ 2.55
TOTAL INPUT COST		ZMK 1 559.50	\$ 294.25
GROSS MARGIN PROFIT (TOTAL OUTPUT MINUS TOTAL INPUT)		ZMK 315.50	\$ 20.75

CAZ and Solidaridad recognize that mechanisms need to be put in place in order for the smallholder to benefit from cotton production. These mechanisms would entail creating a platform for smallholders to participate in other parts of the value chain.

C) Impact of a cotton based farming system

The project has noted that by promoting cotton based farming system, farmers accrue more benefits from cotton production. Through the promotion of cotton based farming system farmers enhance food and income security at household level as well as sustainable crop production through taking into consideration environmental issues. In the system the major emphasis is on increased seed cotton productivity through adoption of various good agricultural practices that ensures sustainable crop production and addresses gender.

This approach has led to:

- Farmers planting to enable maintenance of appropriate plant population
- Early and effective weed control in cotton fields throughout the critical stages of growth
- Effective pest management in cotton throughout the critical stages of growth
- Effective implementation of Crop rotation and intercropping.
- Fertilization of cotton crop using foliar or inorganic fertilizers.



D) Income from soyabeans

Farmers have been cushioned against low prices from cotton through diversification to soybean. Solidaridad has encouraged this approach as it feeds into the pro-cotton of diversification. The table below shows additional income that farmers would accrue from planting soya bean as part of adopting the cotton based farming system

Table 4: Yields from **soya bean**

YEAR	2011/12	2012/13
AVERAGE YIELD/ FARMER	600kg	450kg
GROSS INCOME	\$288	\$216
PRICE/ KG	\$0.48	\$0.48

The lower yields in the 2012/13 season were due to poor rainfall. Soybeans was significantly affected due to the fact that it is planted in December but the rain season ended early February. However, with the additional income, farmers are cushioned against the effects of low yields and prices on crops such as cotton.

E) Setting up of a revolving loan

As a way of improving access to quality legume seed and seed cotton, the Association through study circles engaged and trained 1,200 seed growers. Out of this number 320 are also cotton seed producers while the rest are legume (soybeans) seed producers. The Association procured foundation seed for cotton (4.5mt) and soya beans (4.775mt) which it gave out to seed producers. At the end of 2012/13 season, the Association had in its stock 95.5mt of soya beans seed and 178.2mt cotton seed. It was envisaged that this initiative would significantly contribute to improved access and ease access to quality planting seeds during the 2013/14 season.

F) Promoting IPPM within the smallholder cotton sector

This training was conducted in conjunction with the Seed Control and Certification Institute (SCCI) in Zambia and an Entomologist from Cotton Development Trust (CDT). The two institutions are government and quasi government respectively. SCCI is the authority in seed production issues in the country while CDT is responsible for cotton research and development in Zambia. SCCI and CDT conducted a one week training of trainers for CAZ in seed multiplication and inspection as well as integrated Production and Pest Management. As a result of this training CAZ staff trained 12,000 smallholder cotton producers and 600 seed growers on the ground. This training was done through training sessions and in-field demonstrations. The training in the field was supported by an IPPM training manual. A copy of this training manual is attached to this report. As a way of improving profitability, the Association with support of Solidaridad, has embarked on training about 15,000 seed cotton producers up to the end of the current production season in integrated production and pest management so as to reduce pesticide application. The implementation of integrated production and pest management in cotton production has contributed to reduction on the volumes of pesticides poured into the environment, enhancing sustainable crop production and improved crop productivity.

The impact of this initiative has been

- Decrease in money spent on pesticide inputs by USD9.12/season/farmer from USD22.8/season/farmer
- Decrease in number of sprays by 2/season/farmer (40%)
- Gender sensitive spraying practices e.g. pregnant women not being allowed to spray fields

G) Improving entrepreneurship skills to foster improved livelihoods

Since 2012, CAZ has been promoting the adoption of savings and credit groups at farmer level. This program was on pilot basis in Mumbwa district through the formation of 45 groups. The cotton farmers in the savings groups have managed through savings and borrowing to embark on income generating activities such as baking, trading in small livestock and restocking of their small shops with goods. Through these income generating activities, they were able to pay back loans to the group with a 10% interest added. This enabled the building of initial capital invested by farmers. Through this resource mobilization mechanism, a total of 460ha of cotton was self-financed during the 2012/13 production season by 320 farmers of whom 87 are women.

H) Building the organizational capacity and extension services of CAZ

In order to build the capacity of CAZ the project sought to support staff costs and increase the membership base of CAZ. It was envisaged that an increase membership would translate to increase in revenue for CAZ and enable the association to become an effective demand driven farmer organization. CAZ put in place several mechanisms to increase its membership. This has included conducting two awareness meetings. The meetings involved all members of the 1,618 study circles groups with a membership of 24,721 and were able to reach out to 7,279 nonmembers bringing the total to 32, 000. In order to augment the efforts of the meeting by CAZ staff, the Association with the support of PALISH News Agency recorded and broadcasted 12 Association promotional radio programs. The promotional radio programs covered services the Association provided to the cotton farming community and the role members were required to play in order to make the cotton sector viable and where all players are winners.

These interventions have led to a steady increase in CAZ membership of farmers receiving direct access to extension services from CAZ:

Table 5: membership base of CAZ

YEAR	ADDITIONAL PAID UP MEMBERS
2011	0*
2012	2,120
2013	3,647

*in 2011 CAZ received fees from the Ginners. This model changed in 2012 hence we have a base of 0

As a way of enhancing the performance of the CAZ staff in the facilitation of formation and transformation of study circle groups into viable producer organizations/cooperatives, the Association linked with the Department of Cooperatives under the Ministry of Agriculture and Livestock to build the capacity of staff through (ToT) training in cooperative establishment and management

i) Improving farmer organization

In 2013 Solidaridad in collaboration with CAZ began to focus on improving farmer organization in preparation for them to benefit from a farmer owned ginnery which was being established. These mechanisms would lead to the creation of a platform for smallholders to participate in other parts of the value chain.

In 2013, CAZ formed a ginning company called the Mumbwa Farmers Ginning and Pressing Company. This company will promote viable cotton ginning through the company which is owned and controlled by the farmers themselves but is managed competently by a professional management company. This company will provide fair value to the farmers who produce the seed cotton, in the form of offering transparent prices based on world market conditions. In the case of sufficient surpluses, part of these surpluses will be passed on to the farmers in the form of bonuses and or further value addition to their cotton products (oil pressing, etc.).

The company has been established with direct ownership during the startup phase by CAZ, the Zambian National Farmers Union (ZNFU), Citizens Economic Empowerment Commission (CEEC) and the Mumbwa District Farmers Association. After the startup phase CAZ, the ZNFU and CEEC will gradually transfer their shareholdings to the actual cotton farmers themselves who will have been organized into cooperatives, however both ZNFU and CAZ will keep a supervisory role through appointment of trustees. Solidaridad is not providing financial support in the establishment of the ginning facility but the strategy as highlighted above is to work with existing associations and build them in stronger organizations as an additional value from ProCotton. The table below shows progress made towards establishing cooperatives.

Table 6: Facilitation of Formation of Viable Cooperatives under CAZ Structures

REGION	TARGET # COOPERATIVES	TARGETED # FARMERS (MUMBWA)	ACTUAL # OF COOPERATIVES
Mumbwa West	18	1080	18
Magoye	12	720	10
Mumbwa East	10	700	12
Mumbwa Central	8	720	8
<u>Mwembeshi</u>	<u>12</u>	<u>720</u>	<u>12</u>
TOTAL	60 COOPERATIVES	3,240 FARMERS	60 COOPERATIVES

At the time of reporting, these cooperatives were in the process of becoming legally registered entities. In Zambia, the Ministry of Cooperatives accepts applications from interested parties to want to form cooperatives. The cooperatives apply to government and they become legally constituted and recognized. They need to meet a set of requirements that includes having a constitution and a governance structure amongst other things to be registered. The process does not take a long time once

all the requirements are in place. CAZ is working with the cooperatives to set up the minimum requirements for registration. These cooperatives are then registered under the Ministry and are governed by the laws set for cooperatives.

The long-term plan is that these cooperatives will

- Sell their cotton as a cooperative rather than as individuals
- Set up different entrepreneurship activities to compliment h/h income from cotton
- Buy shares in the farmer owned ginning company and receive dividends on a quarterly basis

Currently the farmers sell their cotton on an individual basis so the cooperatives will improve farmer organization. Solidaridad has provided funds for the training. In September 10 staff members of CAZ had been trained and they had in turn trained some study circle leaders. This has led to the formation of some cooperatives as indicated in table 3 above.

V STRATEGIC DECISIONS AND EXIT STRATEGY

The funding from this phase of the project did not support in the establishment of the ginners facility but our strategy is to work with existing associations and build them in stronger organizations as an additional value from ProCotton. Solidaridad remains committed to sustainably increasing cotton production in Zambia. With this in mind, Solidaridad and CAZ have committed to a three-pronged long term vision for their involvement in the cotton sector beyond CFC funding:

1. PPP Food Security & Cotton

Through the approval and financial support from the Dutch government, Solidaridad will continue working with CAZ in 2014 and beyond under a new support program (Public Private Partnership) where the core emphasis will be on food security. Principle is that the cotton farmers also cultivate other food crops. The synergy between food crops and cotton will be further examined, including the market uptake of the cotton and food crops via Mumbwa Farmers Ginning and Pressing Company (MFGPC). In collaboration with MFGPC (ginning company) Solidaridad will continue working with CAZ as main partner in Zambia under this new program. The work and capacity build under the CFC program will be further build on, including using the established producer organizations as entry point for activities and collective marketing of cotton and food crops.

2. Continued support for the Mumbwa Cooperative

The Mumbwa cooperative will serve as a pilot project that will seek to enable farmers to derive better value from their cotton. Cotton Association of Zambia will support the cooperative to contract a ginning company to gin their cotton. After the ginning process the cooperative will still own their lint and seed. Cotton Association of Zambia will facilitate the creation of market linkages between the cooperative and external cotton buyers enabling farmers to receive higher income for their lint. At the same time, Cotton Association of Zambia will facilitate the processing of the seed into products that the cooperative can sell and derive further income for their members. these activities will be further developed and organized under the new PPP food security initiative as mentioned earlier.

3. Replication

Lessons learnt from this phase of the project will be taken into account when Solidaridad supports CAZ to replicate the project in other areas of the country. This will enable farmers to move further along the cotton value chain and strengthen farmer organization at different levels. Project results will be consolidated and sent to all project partners. There are plans to consolidate these into booklets and brochures for sharing with broader communities.

VI: **LESSONS LEARNED**

1. Development Lessons

- A. There are several factors that affect rain-fed cotton farming within the Zambian Cotton sector. Whilst good agricultural practices may improve productivity to an extent, other factors such as seed quality and rainfall have a huge potential to derail benefits. As such, a holistic approach that moves away from rain fed agriculture and provides good quality seeds is needed.
- B. Farmers need to be organized into structures that allow them to be effectively represented within the policy spheres of the cotton sector. It is through this improved organization that farmers will be able to ensure that they receive fair prices for their cotton.
- C. Farmers are eager to move further along the value chain towards ginning and processing. At the same time Governments have begun to realize the benefit of farmers occupying other parts of the value chain. This has resulted in governments in Zambia and South Africa providing funds for the establishment of farmer owned ginneries. This initiative should be supported to allow farmers to benefit.
- D. It is imperative that future programming within the cotton sector look at the agricultural part of family livelihood holistically. Farmers must be encouraged to consider their crops as part of a single business unit that must be managed and costed efficiently. It is only through this approach that farmers can begin to move away from subsistence farming towards a more commercialized approach.

2. Operational Lessons

- A. The price of cotton within Zambia has remained very volatile. This is compounded by an unclear pricing system and no grading at farm gate. This has led to volatility with regards to the number of farmers in cotton production and low quality of seed and lint cotton. Solidaridad would like to look at a program that encourages farm gate grading and a reward/discount price system based on grade.
- B. Grading in Zambia is problematic as there is no locally accepted grading standard. This system has discouraged farmers from not only focusing on volumes but also on quality. Solidaridad

would like to support congruence within the cotton sector actors towards a locally acceptable grading system that will benefit farmers.

Lessons emanating from implementation arrangements and project management including definition of roles and responsibilities of collaborating institutions, financial administration and supervision, external factors that influenced project implementation, as well as project monitoring and evaluation, should be identified and corrective measures proffered.

VII BUDGET EXECUTION

Project Budget execution:

Important to note that the current project balance of USD 103,895 are funds remaining from the contribution from PC partners and not CFC. Attached to this final report a quarterly report is given how these expenditures are spend in Jan-March 2014 within the boundaries of this project and connected to the original targets. An explanation will also be given why there have been delays in the implementation and expenditure of activities. The below budget execution is based on the budget proposal for Year 2 of the project in Zambia, including the carry-over from 2012.

CFC BUDGET COMPONENT I	ACTIVITIES	ORIGINAL BUDGET	ACTUAL EXPENDITURES 2013	PROJECT BALANCE
I VEHICLES, MACHINERY AND EQUIPMENT	Establishment office/ training center in Mumbwa	26.015 USD	17.267 USD	8.748 USD
IV PERSONNEL	Extension staff & Trainers	28.704 USD	8.653 USD	20.0050 USD
V TECHNICAL ASSISTANCE AND CONSULTANCY	Trainings in GAP in cotton & development training materials	24.640 USD	26.222 USD	-1.582 USD
VII DIS-SEMINATION AND TRAINING	Institutional Capacity building of Cooperative Societies in Mumbwa	46.017 USD	13.446 USD	32.571 USD
VIII	Operational Costs (monitoring visits & Project travel PEA)	10.000 USD	5.659 USD	4 341 USD
GRAND TOTAL		135.376 USD	71.247 USD	64.129 USD

CFC BUDGET COMPONENT	ACTIVITIES	YEAR 2 BUDGET	TOTAL EXPENDITURES	PROJECT BALANCE
II				
VII PROMOTION & LEARNING	SP Promotion and learning. (exchange visits) CAZ	17.301 USD	10.244 USD	14.709 USD
VII DIS-SEMINATION & TRAINING	Communication and dissemination	8.000 USD	-	8.000 USD
III MATERIALS & SUPPLIES	Development of programme manual and tools	20.310 USD	-	20.310 USD
VIII OPERATIONAL COSTS	Monitoring Costs	14.000 USD	9.600 USD	9.400 USD
GRAND TOTAL		59.611 USD*	19.845 USD	39.766 USD

VIII. CONCLUSIONS AND RECOMMENDATIONS

CAZ

The project has imparted valuable production skills to the beneficiaries of the project. These skills have cushioned those who have adopted them from negative effects of poor rainfall during the 2012/13 season. Farmers who have adopted the skills imparted by CAZ have fared better than those using other comparative standards. This has shown that peer to peer mechanisms of extension are relevant within the Zambian smallholder cotton sector.

However, cotton production at producer level has not been financially beneficial to the farmers. The profit margins remain very low despite the fact that cotton is labor intensive. Using lessons learnt from this project Solidaridad recommends the following actions

1. Farmers must be encouraged and enabled to move further along the value chain. It is only through this that they can benefit from cotton production through higher profit margins. Proposed new areas along the value chain include ginning and hand looming. Solidaridad through its other projects has seen that once farmers achieve some financial gain they will be eager to adopt sustainable production practices.
2. Farmers must be encouraged to pay more attention to their agronomic practices through the introduction of a reward scheme based on quality of cotton produced. Currently there is no quality assurance system within the Zambian Cotton Sector. Solidaridad would like to work towards introducing and fostering quality standards within the smallholder sector in order to improve cotton production
3. Diversification of livelihood sources beyond cotton as a primary source. Solidaridad's experience has shown that prices for conventional cotton remain very volatile and it is the farmer who bears the brunt of any fall in prices. In order to cushion the farmer, Solidaridad recommends that farmers adopt legumes and staple crops to complement the livelihood that they derive from cotton.
4. Support is needed to ensure that mechanisms are put in place to enable farmers to effectively benefit from MFGPC through cooperatives. Although some work has been done during the life of the project, these mechanisms need to be further embedded into operations at gin and cooperative levels. Some of the work done includes the training of cooperatives on business and entrepreneurship skills which culminated in the production of a manual for use by farmers. However, at least two more cotton seasons of work would be required in order for its impacts to be realized.

ANNEX 1: SUMMARY REPORT CAZ FIRST QUARTER 2014

PROJECT NO. / NAME	Improving Productivity and Marketing of Cotton Through Strengthening Selected Producer Organizations In Eastern Africa. (CFC/ICAC/40/ProCotton)
TYPE OF SUPPORT	Technical and Organizational Support
AMOUNT OF FINANCIAL SUPPORT	Carry-Over 2013: USD 103.895 (PC partners contribution)
DURATION (YEARS)	Start Project in Nov 2011 (almost 2 ½ years)
QUARTERLY REPORT UPDATE JAN- APRIL 2014	1 st January to April, 2014

This report update captures the period of 1 January 2014 until 1 April 2014, which is a follow-up of the activities under the project CFC/ICAC/40/ProCotton. Carry-over funds used for extension of this project is from the PC partners. As indicated in the final report, this project will become embedded in the PPP on food security (FDOV) program.

Output 1: Technical Assistance

1.1. Recruit, train and procure addition 15 bicycle for study cycle organizers under the primary societies

As reported in the July to October report, 20 additional Study Circle Organizers were recruited and trained in the study circle extension methodology and cooperative establishment and management. To enhance mobility of the new study circle organizers, 20 bicycles were procured and distributed to all. As result of the additional SCOs and the training a total of 70 new study circles have been formed for details kindly refer to table 1 below.

Table 1: Study Circle Group status

REGION	TOTAL OF SCOs	NEWLY TRAINED SCOs	TARGET # OF SCGs	SCGs			PARTICIPANTS
				Old	New	Total	
Mumbwa West	8	3	80	9	7	16	272
Mazabuka	11	4	110	55	25	80	488
Mumbwa East	5	3	50	28	9	38	579
Mumbwa Central	5	3	50	8	6	24	316
Shibuyunji	7	5	70	7	23	30	474
Total	36	18	360	108	70	178	2,129

The Regional Managers (field staff) use activity “1.3 Technical Support to study cycle groups and the primary” to provide technical advice both SCOs and the interim Boards for the primary cooperatives on operations of study circles and cooperatives. However in areas where we have no study circles the field staff use this activity for awareness creation and community sensitization as a way of attempting to achieve the target of 60 Cooperatives. The Field staff also used this activity to monitor the activities of

newly trained Study Circle Organizers. The Field staff (Regional Managers) visited each cooperative and study circle group at least twice in a month. At an average of 3 study circle organizer with a minimum of 25 study circle groups, the field staff visited the groups/cooperatives about 50 times. The result from this is 37 cooperatives were formed and 70 new study circle groups bring the total number of study circle groups to 178.

The approach was to facilitate formation of primary cooperatives and have study circles within cooperatives and as such the following cooperatives have been formed. The cooperative updates kindly refer to table 2 below. For cooperatives that choose crop marketing as one of their business lines, the Mumbwa Farmers Ginning and Pressing Company Limited has selected two cooperatives per region to participate in the 2013/14 season crop marketing as buying agents of the company.

Table 2: Facilitation of Formation of Viable Cooperatives under CAZ Structures

REGION	TARGET # CO-OPERATIVES	TARGET	ACTUAL #	ACTUAL # OF FARMERS		
		# FARMERS	OF CO-OPERATIVES	Female	Male	Total
Mumbwa West	18	1080	7	186	182	368
Mazabuka	12	720	10	178	413	591
Mumbwa East	10	700	6	157	299	456
Mumbwa Central	8	720	6	271	130	401
Shibuyunji	12	720	8	242	164	406
TOTAL	60	3,240	37	1,034	1,130	2,164

The project target number of cooperatives to be formed is 60 with a total targeted membership of 3,000, but the Association through its SCOs has facilitated to date a total of 37 primary cooperatives with a total membership of 2,164 which is 61% and 72% of the target respectively.

1.3 Technical support to study cycle groups under the primary

The Field Facilitators have continued to provide technical support to study circle organizers in the facilitation of formation of cooperatives as evidenced under activity 1.2 and also has provided technical support to study circle groups in good agricultural practices related to activity 1.4. The Field Facilitators provide technical support in GAP through provision of translated study material of which copies have been given out to the cooperatives. Further to this support Field Facilitators are called by the study groups to explain pertinent issues not understood by the study groups. The following production technologies are being promoted which application will be reported in the next report:

- a) Early land preparation using conservation agriculture (Ripping and hand hoe planting basins)

- b) Planting early with first effective rains
- c) Crop rotation
- d) Early weed control using implements or herbicides
- e) Incorporation of Integrated Production and Pest Management
- f) Planning and Record keeping
- g) Gross margins analysis

During the one month training in Integrated Pest and Production Management (IPPM) which was hosted by Mumbwa Farmers' Ginning and Pressing Company Limited (MFGPCo LTD) in Mumbwa, the training involved 70 (32F and 28M)cotton farmers under MFGPCo LTD. The farmers who belong to study circles/cooperatives were trained in various aspects of IPM such as pest identification, sprayer calibration, scouting and determining pest thresholds management decisions. The farmers have reaffirmed their skills leading to application of IPPM. This will lead to reduced number of sprays as reported earlier consequently reducing production costs and increasing incomes. Further to this the productivity based on the assessments stands at an average of 750kg/ha better than last year.

1.4 Provision & distribution of seed inputs for development of entrepreneurship in the POs

This activity linked with the previous project which trained farmers in seed multiplication as a business. Through this activity, the Association is building entrepreneurial capacities, viability and sustainability of the Producer Organizations (Cooperatives) being formed under this project. This activity furthermore is adding value to activity 1.2 on technical support to the producers as it is enhancing learning through practice as the primary cooperatives/study circle groups sold seed and insecticides to members on credit basis and will conduct on-farm demonstration of technologies learnt. The Association has conducted crop assessments particularly on cotton as the crop marketing commences early next month. The average seed cotton production expected from the planted crop is 1,334mt of which 630mt is a seed crop. From the crop assessment the project expects about 346mt of seed enough for 23,100ha.

Table 3: Cotton Seed Sales for 2013/14 Season

REGION	TARGET # HA/FARMERS SEED SALES	ACTUAL SEED SALES	FARMER PARTICIPATION GENDER SEGRAGATED		
			Male	Female	Total
Mumbwa West	672	406	135	82	217
Mazabuka	500	487	385	102	487
Mumbwa East	600	341	72	140	212
Mumbwa Central	353	170	112	56	168
Shibuyunji	500	264	157	79	236
Total	2,625	1,668	861	495	1320

The crop is good as a result of favorable weather partners experienced in the operational area and the Association is expecting an average seed cotton productivity of 800kg/ha.

2. Institutional Capacity Building

2.1 Ministry of Agriculture training CAZ staff in cooperative management and leadership skills

In order to enhance and build the capacity of the CAZ staff in cooperative management and leadership skill, the Association conducted joint field monitoring visits with the staff from the Ministry of Agriculture and Livestock under the Department of Cooperatives. This was to ascertain the progress being made by the various cooperatives.

2.2 Baseline Development on the needs of producer groups

The Association floated the assignment of conducting a baseline survey in the project operational area and the assignment was awarded to the In-Service Training Trust. The assignment was concluded and report submitted and kindly find attached the final report for your perusal and action. The remaining activities under output 2 are either on going or dependent on the registration of cooperatives within a year of formation and should have a clear business plan.

2.3 Training CAZ to PO members (Board members and members) in cooperative management and leadership skills.

The activity was planned for the month of March, 2014, but the field staff had to be trained in entrepreneurship skills by Solidaridad and soon after this training moved into one month training by FAO in Integrated Production and Pest Management which started on 10th March and ended 11th April, 2014. However the field staffs have been provided with resources to conduct the training to all cooperative boards and cooperative members which is expected to be concluded by 28th April, 2014. Initially the training was a centralized training but due to funds being inadequate to cover all boards already established and cover 90% of the members, the Association decided to conduct localized training for each cooperative over a period of two days per cooperative. This meant to expose all members to vital leadership requirements for the success of the cooperative as opposed to a selected few.

2.4 Setting up the governance structure of the PO

As the cooperative are formed, one of the requirements of the Cooperative Act in Zambia is an interim Board elected from among the initiators of the cooperative and this Board ceases to be interim once the cooperative has been registered by the Registrar of Cooperatives. At this point the members would have elected or re-elected a new Board. This means therefore that the setting up of the governance structure of the PO (cooperative) is on-going as cooperatives are formed. This therefore means that all the 37 cooperatives have interim boards to govern them to the time of registration and possibly beyond. However there is need to call the 37 primary cooperatives to establish an apex body (Producer Organization Board) which would oversee the operations of the various cooperatives. However the budget does not include such activity which is vital for bring the various cooperatives together a function collectively though autonomous. The apex cooperative body was to initiate the establishment of the farmer ginning facility. It is now however envisaged that the apex cooperative will play the role of farmer facilitation in cotton value addition by crop bulking and warehouse receipt system for farmers to participate in the cotton value chain. Further to this the apex cooperative could buy shares in the company for members to benefit from dividends. However the major role of the apex cooperative body would be to link with the company by mobilizing (crop bulking) and hiring of ginning facility for its members who in turn will continue to own the crop leading to selling of at least two products namely lint

and seed. Plans are in place to call a general meeting for the board members of the 37 cooperatives to facilitate formation of any apex body. We also need to pay Seed Control and Certification Institute for the registration of seed growers under the seed revolving scheme as per the requirement of the Seeds Act about US\$1,875. I may request for varying of some budget lines.

2.5 Legal registration of the primary societies and the cooperative

The 37 cooperatives which have been formed so far were formed at different times having different stages of development hence the on-going nature of legal registration. The process of registration is largely dependent on the cooperative having a functional board in place and a clearly defined strategic plan and business plan which is expecting in the coming months. This is a requirement prior to registration and this slowed down the process coupled with time of the season from September, 2013 to date. As a result of this process and the seasonal challenge only 10 cooperatives have submitted documents for registration. Furthermore the field staff are using the on-going training of cooperative boards and members to facilitate putting together of documents necessary for registration. An update will be provided in the next report.

2.6 Developing a Business tool kit by external consultant

Solidaridad has developed a business skills toolkit that can be used by the farmers to encourage diversification of livelihood sources through entrepreneurial activities. This toolkit was complimented through the delivery of a training on entrepreneurship skills. The training reached out to 30 farmers and CAZ extension workers focusing on basic business principles. Practical business techniques were communicated and participants learned and applied through learning the following activities:

- Market research
- Start-up costing / Pricing
- Cash flow
- Leadership
- SMART planning
- Qualities of a good and potential entrepreneur.
- Customer Services.

2.9 Farmer exchange visits

Solidaridad facilitated an exchange visit between smallholder farmers in Zambia and those in Kwa-Zulu Natal province of South Africa. The objectives of the visit were to enable the Zambians to

- gain insight into how a farmer-owned ginnery operates
- learn about how the ginnery in Makhathini is managed
- learn about the nature of the relationship between the gin and local cotton farmers
- learn about the ginnery's budgeting arrangements
- share knowledge about cotton farming processes used in the region: seeds used, pesticide spraying, potential production levels, etc.
- learn about the details regarding cotton grading and costing

The exchange visit was an eye opener for the Zambians. South African farmers are achieving higher yields per Hectare than their Zambian counterparts. Part of the reason for this is the use of BT/GMO cotton by South African farmers. However different agronomic practices were exchanged including the mechanization of harvesting within the smallholder cotton sector (Zambian farmers use manual harvesting on their farms). Other issues discussed included

- Development of a Zambian seed cotton grading system at farmgate level
- How farmers can benefit from owning shares in a ginnery
- type of cotton seeds used
- spraying of pesticides and herbicides;
- contamination control and cotton grading;
- price setting and negotiation;
- ginnery sustainability

The trip was mutually beneficial to both CAZ farmers and the South African Smallholder farmers. Some of the agronomic practices learnt in South Africa will be selectively applied during the 2014/15 season.

Project expenditure to date

The budget execution below gives the latest overview of the carry-over budget execution for the project with CAZ up to April 2014 with funds allocated by the PC partners (RF). The balance remaining from Rabobank funds will be used for the establishment of the APEX body and the development of the business plans and governance structure.

CFC BUDGET COMPONENT I	ACTIVITIES	ORIGINAL BUDGET	ACTUAL EXPENDITURES 2013	PROJECT BALANCE
I VEHICLES, MACHINERY & EQUIPMENT	Establishment office/ training center in Mumbwa	26.015 USD	17.267 USD	8.748 USD
IV PERSONNEL	Extension staff & Trainers	28.704 USD	13.349 USD	15.355 USD
V TECHNICAL ASSISTANCE & CONSULTANCY	Trainings in GAP in cotton & development training materials	24.640 USD	27.568 USD	-2.928 USD
VII DISSEMINATION & TRAINING	Institutional Capacity building of Cooperative Societies in Mumbwa	46.017 USD	28.547 USD	17.470 USD

VIII	Operational Costs (monitoring visits & Project travel PEA)	10.000 USD	8.416 USD	1.584 USD
GRAND TOTAL		135.376 USD	95.147 USD	40.229 USD

CFC BUDGET COMPONENTII	ACTIVITIES	YEAR 2 BUDGET	TOTAL EXPENDITURES	PROJECT BALANCE
VII PROMOTION & LEARNING	SP Promotion and learning. (exchange visits) CAZ	15.050 USD	14.298 USD	752 USD
VII DIS-SEMINATION & TRAINING	Communication and dissemination	20.310 USD	18.262 USD	2.048 USD
III MATERIALS & SUPPLIES	Development of programme manual and tools	10.251 USD	4.230 USD	4.230 USD 6021
VIII OPERATIONAL COSTS	Monitoring Costs	14.000 USD	12.308 USD	1.692 USD
GRAND TOTAL		59.611 USD*	49.098 USD	10.473 USD

3.0 Conclusion

The Association has conducted most of the activities except those which are on-going. However the number of cooperatives formed and the members are less than the target. The facilitation of formation of cooperatives will continue through the crop marketing season. As a way of building capacities of the cooperatives, the Mumbwa Farmers' Ginning and Pressing Company Limited has decided to pilot with 10 cooperatives as seed cotton buying agents during the 2013/14 crop marketing season. Furthermore the farmers have grown and expect sufficient planting seeds for the next season making the seed revolving scheme a reality. In the case of a legume the field staffs are currently conducting crop assessment to establish the expected production for soybeans.

OVERALL CONCLUSIONS CFC/ICAC/40 – PROCOTTON PROJECT

Management response Solidaridad on external evaluation studies Biosustain & CAZ

INTRODUCTION

Since 2011, Solidaridad partnered with the Common Fund for Commodities (CFC), the Rabobank Foundation and the International Cotton Advisory Committee (ICAC) in the Procotton program, aiming at improving the productivity and marketing of cotton through strengthening selected producer organizations in Eastern Africa. It was believed that income derived from cotton production would increase by strengthening producer organizations in their service delivery to their members. After two years of implementation, Solidaridad, ICAC, the Rabobank Foundation and CFC asked selected external evaluators to assess the results of the Procotton project implemented in Tanzania and Zambia by its partners Biosustain and the Cotton Association of Zambia. The reports were based on Terms of References with specific research questions on areas the evaluation should focus on and careful selected external evaluators.

THE BIOSUSTAIN PROJECT (TANZANIA)

EVALUATION RATIONALE

Solidaridad is the Project Execution Agency (PEA) of the project and has therefore commissioned an external impact evaluation. Key objectives of this evaluation for Solidaridad are threefold. Firstly, to get a clear picture how the project activities have contributed to the main objective of the project to improve livelihoods and the income position of cotton farmers by strengthening Biosustain, farmer groups and by promoting organic cotton production. Secondly, the aim of the evaluation is to gain a better understanding of the feasibility and profitability of organic cotton farming in *Singida* versus conventional farming systems. Finally, the Procotton strategy is focused on the development of formalized producer groups as entry point for farmers to access services, input and to collectively market cotton. As this is considered as an alternative business model for Solidaridad, the third aim of the evaluation is also to gain better understanding whether this has been realized within the boundaries of the project and can indeed be considered as an alternative business model for cotton farmers.

REPORT'S MAIN FINDINGS & CONCLUSIONS

The project has contributed to modest production improvements of the organic cotton by farmers with rates up to 720 KG/Ha, as targets set at 1000 KG/Ha were too ambitious for a 2-year program. The overall goal of the program to improve the income position of small scale cotton producers in Tanzania by enhancing the social, economic and ecological performance has however been achieved. Income increases ranging from 5 to 7% (on average) compared to the 2011/12 cotton season have been achieved. Furthermore, enhanced household food security, via crop rotation (green gram, maize sesame) practices embedded in the trainings has to be added as an important contribution of the project.

Also, agronomic advantages of the profitability of the organic cotton production system over the conventional one have been observed. A great achievement of the project was to demonstrate that

organic cotton production systems can be agronomical competitive when embedded in national cotton strategies, and if surrounding production circumstances (availability of biomass, manure, soils) are available. A large proportion of the integrated newcomers are female farmers, the women's participation in the project region amounts to 35% of the participating farmers. Though unintended, the project thus had a beneficial development effect and contributed to gender equality.

The project has helped Biosustain on its way to become a financially independent organic cotton actor. Facilitating the link with Rabobank to access capital for developing a ginning facility in close proximity of the farmers, has contributed to this. Improving the extension system of Biosustain and skills of the extension team also contributed to this objective of the project. The project facilitated the link with the COMPACI program, providing Biosustain with a new window of opportunities to expand cotton production (both conventional and following the *Cotton Made in Africa* standard). A weakness of the project was the difficulty to create a stable market linkage for the organic cotton produced. A lack of market uptake contributed to several losses for Biosustain, due to the fact they had to sell organic cotton as conventional.

Finally, the development of formalized farmer business groups was not realized during the project lifetime. Although 18 groups have been organized, developing them into legal entities was not realized. The number of active organic cotton farmers did increase, due to the contract farming model and good relationship between Biosustain and the farmers, from 3,775 to 6,189 producers in 2 years time.

SOLIDARIDAD'S VIEW ON KEY FINDINGS

One of the key findings of the evaluation suggests that farmers have obtained higher production levels and consequently a higher income derived from cotton. This is an important outcome of the project. However, this needs to be put in perspective. Cotton is an annual crop and like the study also suggests, it is very difficult to conclude that production and income improvements can be attributed completely to the 2-years project. Solid conclusions and attribution of these improvements could only be drawn over a longer span of time (3 to 5 years). However, since the CFC project was a continuation of earlier support activities by the PEA in organic cotton production, the increase of active cotton farmers, increase of the adoption rate of good agricultural practices and organic certification, does show a positive impact of the activities on the performance and modest improvements in practices, skills and production of the farmers. Taking into account the relatively short period of implementation, this is considered as an important outcome and achievement for Solidaridad and means that part of the project objectives are met.

A second important observation from the study is that organic cotton farming in *Singida* (under the current circumstances) can be a profitable business and generate higher production outputs than conventional cotton. Again, this needs to be put in perspective. It is clear that the actual project costs have been higher than the additional revenue for farmers gained from organic cotton (160 USD cost/farmer vs. 48 USD profit/ha). The reason why the project cost are high is that start up investments were needed in order to introduce the organic farming system (extension system Biosustain, introduce ICS, organizing farmers in FBG's, GAP). Taking into account that *Singida* region is also one of the poorest regions in the country, the project outcomes can be considered as a contribution and important step in providing the basics for organic cotton farming in Tanzania.

Due to the serious lack of markets for organic cotton which was the main weakness in the project, Biosustain faced challenges to sell the cotton, consequently resulting in less income. If a stable and

longer term market linkage would be realized for organic cotton and the positive trend of the production rates can be continued (taking into account the high adoption rates achieved), this picture can become totally different. These external factors need to be taken into account when comparing both production systems and should be emphasized. Therefore Solidaridad believes it is not realistic to draw final conclusions about these production systems (and what works well) after 2 years only.

Although the formalization of farmer business groups was not achieved during the project (and was considered by Solidaridad as alternative business model for farmers), it seems that the business model used by Biosustain (contract farming model) has proven to be a successful model for provision of inputs to farmers, extension services (GAP and organic) and marketing the cotton collectively on behalf of the farmers. The high adoption rates in organic cotton farming practices and increased number of registered farmers that actively produce cotton are clear positive indicators of the approach of Biosustain. Furthermore, the relationship with Rabobank/NMB Bank for the provision of capital and pre-harvest finance, contributed to lowering transport costs (direct ginning close to the farmers), economic independency of Biosustain, value addition and direct payments to farmers based on their cotton harvest delivered.

EVALUATION RECOMMENDATIONS & FOLLOW-UP

According to Solidaridad an important recommendation given in the study is to more closely compare alternative business models like the contract farming model used by Biosustain as opposed to the model of formalized producer groups initiated in Zambia with the Cotton Association. This could be still a relevant case for further investigation based on both evaluations and to link to Solidaridad Network as learning case for developing different business models for service and input provision to smallholder farmers.

Secondly, it is imperative that well established M&E systems should be in place over a longer period of time to be able to draw conclusions about different production systems and the impact on production levels and income of farmers. The recommendation to use the Internal Control System (for organic cotton) as an important source for data collection should certainly be taken into account by Solidaridad when additional organic cotton projects are supported by Solidaridad and integrated in the M&E systems of Solidaridad.

Finally, it is clear that Biosustain has reached a certain performance level (in terms of cotton volumes and organizational capacity) as a cotton ginning company, to become a competitive player in Tanzania. The support that will be provided by COMPACI on the long run should enable Biosustain to expand its conventional and organic cotton production in *Singida* and expand to new production areas. Next to COMPACI's support, the continuous access to finance via NMB also gives Biosustain a solid basis to further grow as a profit-making company and to become economically viable on the long run. The newly developed business plan demonstrated this potential and gives a clear exit-strategy for the company to become independent.

The two most important areas of weaknesses of Biosustain, according to Solidaridad, that need continuous support are i) improved access to markets for organic cotton and ii) sufficient management capacity and systems in place to be able to manage the production, sales and farmers, based on the expansion plans of Biosustain. Since these areas will be addressed by COMPACI, Solidaridad considers

its support via Procotton in 2009-2010 and via CFC and Rabobank in 2011-2013 as a valuable contribution towards making Biosustain an effective service provider for small-scale farmers and a solid foundation for organic cotton farming in *Singida*.

THE CAZ PROJECT (ZAMBIA)

EVALUATION RATIONALE

Solidaridad is the Project Execution Agency (PEA) of the project with the Cotton Association of Zambia (CAZ) and has therefore commissioned an external impact evaluation. Key objectives of this evaluation for Solidaridad are threefold. Firstly, to get a clear picture how the project activities have contributed to the main objective of the project to improve livelihoods and the income position of cotton farmers by strengthening existing producer organization structures under CAZ, strengthening CAZ as extension service provider to farmers and by promoting conservation agriculture in cotton production. Secondly, the aim of the external evaluation is to provide a better understanding of the value addition of formalized producer organizations as a vehicle for improving cotton production as opposed to the dominant out growers business model in Zambia where farmers receive extension support and enter into contract agreements with ginning companies. Finally, the rationale of the evaluation for Solidaridad is to gain a deeper understanding of the profitability of cotton production for farmers in Zambia, under the specific circumstances in the project.

REPORT MAIN FINDINGS & CONCLUSIONS

Impact on cotton production and income

The extension services provided in the Procotton project by CAZ have had some, though limited and uneven, productivity and production effects among the targeted farmers organized in study circles and cooperatives. These effects were produced in difficult climatological conditions and an overall declining trend in cotton production in Zambia. With respect to productivity rates, we can observe that average yields went up with around 13 % from 962 kg/ha to 1.091 kg/ha in 2011/2012. This figure is above the national average of around 650 kg/ha in 2010/11, according to national statistics. The national average yield in 2012 was 503 kg/ha, which is less than half the yield in the CAZ study circles. Application of new farming practices and techniques, as was learned in the study circles has increased significantly from around 75% at the start of this program to around 90% at the end, and these figures are almost the same for men and women. While the cash-income effects of the Procotton project have been limited there have been important other social-economic effects of the project on the farmers' livelihoods, food-security and also self-esteem. Part of the farm system approach of CAZ, supported by Solidaridad, was the promotion of integrated approach practices in cotton as well as intercropping cotton with food crops, making farmers more resilient.

Organizational Strengthening

The strong focus on a smaller number of cotton growers in a reduced geographical area, during the second phase of the project, has enabled CAZ to reach better results in organizing farmers in study circles, saving and loan groups and cooperatives and to vertically integrate these farmers in an alternative cotton value chain, through the *Mumbwa Farmers Ginning and Processing Company*. Therefore, the Procotton project with CAZ shows an important alternative for empowerment and position improvement of smallholders in the cotton value chain. Direct outreach was still limited compared with the outreach that

can be achieved through the ginneries. This is the first conclusion drawn from the study suggesting that the business model of producer organizations in Zambia has limited results.

Strengthening CAZ as Extension Provider and independent association

CAZ has not progressed sufficiently in increasing its own membership base and therefore improving its own financial sustainability, as it is still only generating a very small income from its membership. While the evaluation has not looked into detail in the sustainability of CAZ as an organization (this was not part of the ToR), data on membership and particularly due membership payments shows that CAZ is facing challenges to secure the continuity of its work in the future, independently from other external funding sources (which CAZ until now is still able to secure). The extension work provided by CAZ, supported by Solidaridad, has had some but limited and uneven productive effects among targeted farmers organized in study circles and cooperatives. However, these effects were produced in an overall declining trend in cotton production in Zambia, particularly in the past two and ongoing cotton-cycles, due to difficult economic and climatological conditions. Therefore these results should be interpreted against this overall declining trend and then should be considered substantial.

SOLIDARIDAD'S VIEW ON KEY FINDINGS

Impact on cotton production and income

As stated in the study the CAZ field methodology via study cycle groups has proven to be an effective methodology to transfer skills in basic cotton production and conservation practices to farmers. This has led to increased in production levels, when comparing cases of sampled cotton farmers with the average productivity rates in Zambia. According to Solidaridad, it should be clarified that the project has contributed to stabilizing the production and not necessarily to increasing it, since production levels were already high at the start of the project. Also, the production data is not complete and therefore caution is necessary when it comes to drawing conclusions from the production data. Measuring key indicators over a period of 3-5 years would be better to make claims about whether the project impacted the productivity and income, as effects of the project intervention can take a few years to show. However, the fact that production was stabilized is an achievement of the project, taking into account the difficult external developments cotton farmers faced during the implementation of the project (bad weather conditions in the final year, low prices, etc.).

In this adverse context of the cotton sector in Zambia, it is not surprising that the study concludes that no major impact has been made on the income position of farmers.. Prices obtained for cotton in the final year were much lower than the first year, while input costs increased. This resulted at national level in a major shift of thousands of farmers from cotton to sugarcane and other cash crops. These are developments that, while not in the span of control of the project, explain that incomes of farmers did not increase. A very important contribution and added value of this project was to focus the methodology of trainings and extension services provided by CAZ not only on improving cotton production, but also on diversification activities to improve the food security for cotton farmers. Taking into account the volatility of the cotton market prices and extreme changes in weather and climate, Solidaridad believes that this strategy is necessary to improve farmers' resilience.

Organizational Strengthening

Solidaridad believes that producers should be able to have an alternative business model for producing cotton collectively (as opposed to the out growers model) which raises the question whether producer organizations in Zambia can provide a good alternative as service provider and enabler for farmers to improve cotton production and to strengthen their negotiation position against the ginning companies. Based on the findings of the study, it is clear that the producer organization model is a bottom-up approach, owned by the farmers involved, that can become an alternative business model for farmers. However, the organizational capacity of the targeted associations is still weak and more support is necessary to develop these entities into businesses with sufficient capacity. Also, the outreach is still limited as most of the farmers are contracted by one of the bigger Zambian ginners. This makes it difficult to draw conclusions on whether this model is proven to be an alternative for farmers. If the cotton producers have a clear interest and benefit to further develop producer organizations this should be supported.

For Solidaridad, the study cycle methodology is a practical and effective way to organize and mobilize farmers and transfer knowledge, which should be carried on by the Cotton Association. The farmers owned ginning company Mumbwa provides an alternative value chain for cotton farmers to add value to their cotton, but business development is still necessary to reach a level where the company can become a viable entity.

Strengthening CAZ

Solidaridad believes that the mandate of the Cotton Association of Zambia to empower cotton farmers and to provide extension support to the farmers should be continued. This has proven to be a valuable alternative as extension support for farmers in Zambia. CAZ is however not yet an financially independent entity and still relies on external support. As part of the strategic / business plans of CAZ, a strategy should be formulated for how CAZ can become an independent player in the sector. Although this has not been included in the study, the membership fees paid by the farmers to CAZ should contribute to making operations more sustainable, especially if CAZ members believe that the support CAZ provides to them contributes to better production circumstances. Furthermore, CAZ could play a valuable role in working closely with the Cotton Board to translate cotton policy into practical solutions for cotton farmers and lobby for the position of the farmers in the value chain.

RECOMMENDATIONS EVALUATION & FOLLOW-UP

The following recommendations by the evaluation study are considered important by Solidaridad:

a) More exchange of best practices and learnings should be facilitated between the extension work CAZ is doing which has proven to be beneficial to farmers and the COMPACI program that support ginners and farmers to adopt the *Cotton Made in Africa* standard. Developing complementary activities could contribute to even more impact at farm level.

b) An important condition for CAZ to engage more in advocacy is to increase its membership base. This will require improving membership registration and fee-payment mechanisms. Although CAZ is aware of the need to do so, more systematic actions are needed to further advance in this area. This can contribute to more sustainable operations of CAZ.

c) CAZ and FMGP are recommended to analyze the current different approaches/ business models in setting up primary cooperative organisations in communities. This will only be possible when the

cooperative organisations have gained some experience, e.g. in 2015 or 2016. If research would point to specific approaches being more effective in organising farmers, this should be translated in stronger and more systematic approaches and methods on cooperative organisation in the further future. Solidaridad has included a component in the new developed programme with CAZ to further investigate this point.

d) An important message of the Pro-cotton project is develop cotton as a farming system and a comprehensive economic option for smallholders, increasing food security, cash income and improving soil fertility. It is recommended that CAZ finds allies in the agricultural sector to advocate for further development and more support to cotton farming systems vis-à-vis a historic focus of the Government on food-security and particularly maize production.

With regard to the final point Solidaridad has taken further steps and developed an exit-strategy with the Cotton Association of Zambia as important partner, to further promote diverse production systems that can contribute to improved cotton practices, but at the same time promotes production of food crops contributing to food security. Developing value chains for food crops and using farmer organizations as important entry point in this approach will be further supported under this program. This gives Solidaridad an opportunity to further elaborate on some of the recommendations given in the study and to further develop training curriculum that includes a more integrated approach to combine production of cash and food crops. In the extremely difficult local context for cotton farmers in Zambia, this might be a valuable strategy to improve production circumstances for farmers and increase their income derived from cotton and food crops.

LIST OF MATERIALS/ DOCUMENTS DEVELOPED BY THE PROJECT CFC/ICAC/40

BIOSUSTAIN

1. Business Plan Biosustain
2. New/ adapted Business Plan Biosustain
3. Internal Control System Guide
4. FFS Guide
5. Organic Production Guide

CAZ

1. Training manual cooperative development
2. Basic Business Skills Booklet
3. Training Manual Good Agricultural Practices
4. Baseline Report CAZ Producer Organisational Development
5. Business Plan Mumbwa Ginners Company
6. Summary ProCotton stakeholder meeting
7. Proceedings Stakeholder Cotton Forum