

# PAZESA HORTICULTURAL COMMUNITY

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**"Viable Agricultural Innovations for Sustainable Climate Change Adaptations to enhance Food Security, Income and Nutrition among marginalized households" (VICCA-FIN Project)**

## **"World Connect" Project Report**

PAZESA Horticultural Community is pleased to have received this grant from World Connect at the right time when the community most needed financial, capacity building and material support. We at PAZESA, are particularly thankful to World Connect staff for the professional working spirit in philanthropy. The grant beneficiaries in Kalichero, Zamanga and Tazwela villages send their greetings and appreciations in local language through Headman Chitseko, Mr Dickson Zulu during the Banana Tissue Culture training at PAZESA Resource Center. Traditional authority Headman Chitseko, Mr. Dickson Zulu (wearing a white shirt on the picture) said:



1) Headman Chitseko Mr. Dickson Zulu (in white shirt) with Dolopa Zulu holding banana Ex-corm (2) Feed the Future/Peace Corps Food Security Coordinator, Mr. Obster Tembo, (Holding his waist), Peace Corps Volunteer Alicia Buchanan (in pink T-shirt) and Forestry facilitator, Adelia (white head dress) observing participants during practical. (3) Emma Sakala (in Jean skirt), District Forestry Officer assisting a farmer (Edwin Ngoma) while Moses Soko, Agriculture Extension Officer instructs the farmer what to do during Banana Tissue Culture Training.

**"ZIKOMO KWAMBIRI** kwa **World Connect** ndi PAZESA Community potipasa maphunziro abwino otere! Taphunzira maluso ambiri abwino otithandiza upeza ndalama komanso cakudya cambili kuti ticose umphawi mu mabanja mwathu.

Ucokela pamene tinayamba ugwirisira nchito maphunzilo otere, taona usintha kwakulu pa kuteteza cakudya, kapezedwe ka ndalama komanso mmene tingacepesele umphawi ndiponso mmene tingapewe mavuto a kusintha kwa nyengo. Maphunzilo aku PAZESA Horticultural Community pamozi na thandizo yaku World Connect ni abwino cifukwa sabisa njila zothandiza, alimbikisa ugwirisila nchito zamene tili nazo, atiphunzisa mcinenero cathu, cakuti atibweresela mapindu ambiri.

***Mwacisanzo mu 2016-2017 tapeza cakudya cambiri, tiyembekezelanso upeza ndalama zoonjezereka kuti tilipile ana kusukulu...***

**Tiona kuti ngati thandizo iyi ingapitilize, utithandiza zipangizo zothililila, mbeu, ulimi wa ziweto, mitengo ya zipaso komanso fataleza, pofika mu 2020 umoyo wathu utasintha, utakhala wabwino, wo ziimila pa tokha. Conde pitilizani! Zokomo kwambiri!.”**

**Translated as:**

“(Thank you so very much to World Connect and PAZESA, for letting us learn viable and sustainable skills to help us raise income and improve food security hence, alleviate high poverty levels in our households.

Ever since we started utilizing what we learn from these trainings, we have witnessed, that we can attain all year round household food security, we can improve our household income, and we can combat climate change and build community adaptation and resilience to climate change. Skills learnt from PAZESA Horticultural Community with support from World Connect are viable, straight forward - without hiding technical know-hows, encourages utilization of locally available resources.

Most encouraging is that, we are trained in our own local language so we understand better such that we have multiple benefits. For example: ***In 2016-2017 season we have bumper food security, we expect increased income from the bananas and citrus, so we can send our children to high schools.***

**If this support continues, including support for irrigation equipment, seeds and inputs, fruit trees and fertilizer, we, therefore, envision improved standards of living, self-sustainable by 2020...**

**Thank you very much!))”**



(1-3) Participants food security training preparing ex-corms for Banana Tissue culture (4) Female participants with a US peace Corp volunteer during training.

## Challenges

1. High prices of the needed materials due to devaluation of the kwacha in relation to the dollar, increasing inflation. This constrained procurement of goods and services for the procurement of planting media.

**Suggested Solution 1:** We had to prepare and teach the participants how to prepare homemade “Tissue Culture Grow-Media” as PAZESA staff were trained by IITA.

2. Climate Change and Low water tables caused growth irregularities in banana plant growing season thereby constraining sustainable livelihood. Last year all banana plantations everywhere in Eastern Province of Zambia had 72% “Miss Shaped Bananas” (Deformed Bananas). But this year after conservative project interventions, only 37% deformed bananas exist among project beneficiaries as compared to 60% among non-intervened areas, the control. However, this challenge is still unbearable for productive poverty alleviation efforts.

*The negative effects of climate change at:*



*1) At Dolopa Zulus's: Brittle floral parts falling due to inadequate water/climate change. (2) At PAZESA: Deformed bunch which failed to emerge and was successfully operated on “through plant surgery” (seizer) techniques by Paul Phiri PAZESA (Director) is growing vigorously supported by fibers and stakes. (3) At Tazwela: Deformed bunch falling- No intervention done the whole bunch worth K600 (\$60 USD) is a total waist.*

**Suggested Solution:** We need to integrate sustainable irrigation systems to curb the effects of climate change.

3. Inadequate resource materials for Banana Tissue culture due to limited funds and high prices. Overwhelming community response, meant we needed to procure more poly pots and resource materials than we planned and budgeted for. Therefore, we had to advise farmers to use locally available materials of any sort workable so as to stick to the budget planned targets and encourage leveraged resource mobilization for sustainability.

**Suggested Solution 1:** We encouraged the community to use the locally available material like beer packs, plastic containers and gourd shells to culture banana tissues and plantlets.

**Suggested Solution 2:** Set up community banana/tree nursery and train beneficiaries in Tissue Culture, budding, Grafting and plant layering for effective livelihood, food security and income generation.

**Suggested Solution 3:** Increase procurement of Resource Materials: poly pots, ex-corms, plant Grow-media and introduce propagators

**Suggested Solution 4:** Leverage resource mobilization and fundraising. We have been working closely with department of forestry in Zambia, US forestry Department through the CBRI Community Based Reforestation Initiative to leverage services from World Connect Washington.



## Lessons Learnt

1) There is urgent need now (when community interest and need in sustainable development is at peak) to increase resource mobilization and fundraising to accommodate huge community interest and need in such development, at the time community interest in development is still fresh and eagerly needed. **ACT NOW!**

2) Bananas Tissue Culture integrated with sustainable cost effective sugar cane production INTEGRATED with irrigation, innovative green initiatives, conservative horticulture and improved arboriculture improves both food security and income generation as it ensures quality planting materials, early maturing crops, creates sustainable community resilience and adaptation to climate change to enhance poverty alleviation.

## Project Outcomes and Impact and beneficiaries profiles/success stories.

1. Innovative climate smart green initiatives in Banana Tissue culture and Sugarcane Production ensures early and sustainable food security, quick income generation and encourages project beneficiaries to adopt the techniques. Julius Mbewe, an orphan keeping 6 other orphans planted Tissue cultured bananas as early as possible and by July 2017 he managed to harvest high quality marketable sweet bananas. The first bunch weighed 53kgs and was valued at K612 (\$61 USD) as opposed to the native traditionally cultivated bananas which produce K10-K15 (\$1-1.5 USD) per bunch. The enterprise if managed well can produce create a stream of K612 (\$61) weekly to his family as opposed to his previous enterprise which gave him less than K200 weekly. The enterprise has encouraged Julius to embark on serious banana cultivation for both food security and poverty alleviation. He plans to plan a lima of sweet bananas and a hectare of sugarcane.



**Julius Mbewe of Tazwela village lifting his first banana harvest the quality banana bunch**



**Orphans at Julius Mbewe's household admiring**

3. Yandikani Ngoma: 18years old orphan of Kalichero village has benefited a lot from the project but did not get banana planting materials due to inadequate resources and switched to sugarcane production by utilizing green initiatives successfully. He planted sugar cane by December and by July 2017 he is harvesting and selling quality sugar cane. On average Yandikani earns K180 (\$18 USD) per day from sugar cane as compared to K10/week (\$1 USD) before he was trained by PAZESA. Yandikani's 3 years' plans are to procure irrigation facilities to establish all year round food production, procure farm inputs and build an improved house with tin roof.





### **Future plans**

Establish a viable banana and tree nursery. The community has embarked on establishment banana and tree nursery below are community members making fence for the nursery (pitures 1-3) and 4 show community efforts in tree planting



### **PROPOSED ACTIVITIES FOR 2018**

#### Objective 1:

To train 100 households in Kalichero area on integrated customized banana Tissue culture and cost effective cassava production techniques by December 2018

#### Activity 1:

Train 100 households in sustainable integrated BANANA tissue culture at a cost of \$200.

#### Activity 2:

1. Procure cost effective irrigation facilities manual pressure pumps to combat climate change at a cost of \$400

#### Activity 3

2. Integrate cassava production into the program at a cost of \$150 and train participants in productive cassava production

**Total amount requested \$750**