

# HORTICULTURE IS MONEY

... *From their testimonies*



AFRICAN INSTITUTE OF CORPORATE CITIZENSHIP



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## THE A.B.C. OF MICRO INVESTMENT

Small-scale horticulture farmers in Mndolera Extension Planning Area (EPA), have adopted the Micro Investment concept that comprise the drip irrigation technology and improved inputs as part of building resilience to climate change while enhancing production. The African Institute for Corporate Citizenship (AICC) introduced this concept to horticulture smallholder farmers in partnership with Norwegian Church Aid (NCA) under Commercial Agribusiness for Sustainable Horticulture (Cash) Project. The major goal of the project is to boost production and productivity to an extent where some of the profits can be re-invested for further growth.

Drip irrigation is a type of micro-irrigation system that has the possibility of saving water by allowing it to drip slowly into the soil near the roots of plants. Other innovators, recognize the technology as trickle irrigation since it involves dripping water onto the soil at a very low rate. The system comprises of small plastic pipes fitted with outlets called emitters or drippers. Water is dripped close to plants, so that only part of the soil in which the roots grow is wetted, unlike other irrigation methods, which involves wetting the whole soil surface. With drip irrigation water, applications are more frequent as it provides a very favorable high moisture level in the soil which is suitable to the plants. Drip irrigation is most appropriate for horticultural

crops where one or more emitters can be provided for each plant. It is adaptable to any slope of the land and also suitable for most types of soil. The technology mitigates the problem of surface water runoff as it provide the appropriate lateral wetting of the soil. The main goal of Drip irrigation is to place water directly into the root zone and minimise evaporation. Chibvumbulutso Incubator is one of the farmers group who have embraced the technology in Chichoza Village,

knowledge support. Commercial Agribusiness for Sustainable Horticulture project Manager, Henry Mlinde reported that, “So far the project has manage to create sustainable entrepreneurial opportunities for the youth and women involved as agripreneurs. This is enabling the project to meet its overall goal of contributing towards sustainable horticulture production that will result in smallholder farmers’ increase in income and consequently leading to poverty reduction in Mndolera EPA in Dowa.” Using the Micro



*Holding their drip kit*

Traditional Authority, Dzoole, in Dowa District. “We like this technology because it is not labour intensive. In our local language, we no longer have to use watering cans to irrigate our crops. This helps us save time to do other day to day assignments to improve our living,” Chairlady of the group Linesi Aron disclosed. AICC and NCA have sourced and made available the micro-investment kits, which are complete in terms of inputs and

investment concept; the project has engaged smallholder farmers as potential business entities and as investors in horticulture business. The project has adopted the horticultural value chain diversification approach and is accommodating women and youths in the horticultural production as effective approaches for improving their livelihoods.



## CASH PROJECT PROMOTES HORTICULTURE DIVERSIFICATION

The African Institute of Corporate Citizenship (AICC) in partnership with the Norwegian Church Aid (NCA) has been implementing a Micro Investment project called Commercial Agribusiness for Sustainable Horticulture (CASH). One of the objectives of the project is to increase the productivity and profitability of horticultural produce. Horticultural small scale farmers can achieve an increase in productivity and income, if they are encouraged to cultivate different horticulture crops. Before the project, farmers in Mndolera have been producing tomato as their only horticulture crops. However, due to different farmer trainings conducted by agronomists, a good number of farmers in Mndolera are now growing other horticulture crops like cucumber, okra, water melon, leafy vegetables as well as tomato.

Farmers in Mndolera have been facing marketing problem, due to high supply of tomato that surpluses its demand. After introduced to other horticulture crops, farmers are now experiencing a marketing improvement, as the production of various horticulture crops is trying to link them to readily available markets like local markets, restaurants and motels within and beyond Mponera trading center. Farmers in Mndolera have been advised to produce more and aggregate their products, in order to supply them to different institutions like boarding schools around Mndolera EPA.

Mr. Sadalaki James is a 43 year-old horticulture farmer from Kaponya village Traditional Authority Dzoole in Dowa District. He has been an active CASH project farmer, who belongs to Mlengwe section which is under Mndolera

EPA. Mr. James has been a traditional tomato grower for more than 10 years. He has been realizing low income regardless of producing a lot of tomato, due to poor quality of his produce. Since the inception of CASH project, Mr. James started cultivating other horticulture crops, after been instructed by an AICC agronomist. He is cultivating cucumber, okra, and leafy vegetables. Due to this diversification, Mr. James is now a local supplier of horticultural products to different restaurants and community members around Dzoole area. So far he has managed to buy a solar electricity system for his house and he is also into pig production from the income realized within a year. Mr. James is reinvesting in horticultural production as he started with one kit but now he has four kits. "My ambition is to invest more in horticultural production so that I can achieve my developmental dreams" disclosed Mr. James while smiling.



*Sadalaki James behind his pig kraal*

## INCUBATION MODEL ENHANCED HORTICULTURE PRODUCTION

*“We are expected to gain skills which will increase productivity, income while cultivating leadership, business management and other important skills of farming as a business. We will continue sharing the knowledge to other community members in our area,”*

Horticulture forms the backbone of our agriculture system. However, the agriculture sector faces numerous challenges like: low productivity caused by a lack of training and access to quality inputs, and unprofitable market, among others. Rural horticulture farmers are excessively affected by these challenges, which can cause them to consider farming as an occupation for uneducated, tedious, unprofitable, and old-fashioned. To address these constraints and encourage rural horticulture farmers to consider horticulture as a viable career option, African Institute of Corporate Citizenship (AICC) has been working with Norwegian Church Aid (NCA) in implementing a Micro Investment project called Commercial Agribusiness for Sustainable Horticulture (CASH) in Mndolera Extension Planning Area (EPA) in Dowa District.

The Project is using and promoting micro investment concept using drip irrigation technology using an incubator model. An incubator comprises of 12 farmers who

organizes themselves to invest in horticulture production with 12 Micro Investment (MI) kit which include the drip kit, fertilizer as well as quality seedlings. The group is formally trained by an AICC agronomist to effectively install the technology. They are trained in the technical know-how of the technology. After the adoption of the technology, farmers are able to identify existing opportunities in the horticulture sector and capitalize on available markets.

One of the incubator is Tiyanjane. The incubator started in June 2019 and cultivated tomato and cucumbers which enabled them realize an amount of money that made the group venture into pig production. “Although each one of us established our individual horticulture gardens, we agreed to maintain the incubator for us to cultivate other value chains like Okra, Water melon, green pepper and others, since we only grasped skills of two horticultural crops,” said the group chairman Mr. Harry. Currently the group has also planted Tomato, Cucumber, green pepper and water melon. The group hopes

to eventually establish a permanent horticultural club that will help in sharing of knowledge and experience with other interested community members in their area. “We are expected to gain skills which will increase productivity, income while cultivating leadership, business management and other important skills of farming as a business. We will continue sharing the knowledge to other community members in our area,” disclosed a 31 year old Alick Moliyati, an incubator member.

The main objective of the Project is to contribute towards sustainable horticulture production that will result in smallholder farmer’s increase in income and consequently leading to poverty reduction. “The project has proven to be unique and with a great potential as people are able to notice the difference between watering using drip irrigation system and their conventional methods which are generally labor intensive and tedious,” revealed the AICC project manager. By working with rural farmers, AICC is helping them contribute to the growth of the country’s economy through profitable horticulture opportunities, boosting their local communities while improving their own skills.



Tiyanjane incubator field and members on the other side



## LABOUR SAVING TECHNOLOGIES SAVE THE ELDERLY

Considering that Malawi depends on agriculture and that the sector currently accounts for about 42 percent of the Gross Domestic Product (GDP), AICC introduced innovative small scale irrigation to increase the productivity of the sector. The initiative called Micro Investment (MI), also known as Commercial Agribusiness for Sustainable Horticulture (CASH) has been implemented in Mndolera Extension Planning Area (EPA), Dowa District. The initiative is currently encouraging elderly women to adopt better ways of farming that are labor-saving and easy to manage. The project is offering an option to elderly farmers who have been less involved in agricultural activities because of diminishing personal energy due to old age.

The main focus of the intervention has been to reduce hunger and increase the productivity of smallholder farmers through small-scale irrigation. Margret Petulo, a 52-year-old widow from the Bwana Mowa village, Traditional Authority Dzoole, was one of the farmers who adopted the initiative in 2019. A widow with five children, her main source of income is horticulture.

She adopted MI technology when she appreciated the incredible benefits of modern drip irrigation, more importantly, the less work it involves. At first, she bought two kits which she used to cultivate leafy vegetables and tomato. She used her proceeds from the first production to procure two more kits, buy food for her home and start livestock production.

With the low labor involved, Margret has been able to do other

chores to make sure that she sustain the family as she is the breadwinner. “This kind of horticulture farming is very easy compared to old

horticulture ways of farming,” said Margaret. Margaret is but one of the many elderly women who have now adopted this technology to make ends meet in their respective families.



Margaret holding a goat she bought from MI



## MI INCREASES WOMEN INCLUSION IN COMMUNITY ACTIVITIES

Women inclusion in sustainable community activities has always been a challenge in Poloto village in Mponela. Being a village heavily infested with traditional Gule Wankulu, women's duties have mostly been house chores and clapping for Gule Wamkulu. In this village, women were not expected to make a decision on their own but rather wait for men to make decisions. Women were only expected to water horticulture gardens but left selling to men. Women were not duty-bound to ask how the money had been used as they had always been in the receiving end.

AICC's introduction of MI in this village changed the norm. Men and women were being treated equally in making micro investment decisions. Men were being trained to always regard women as equals. The community was made aware that even women can be productive and can surpass men in some undertakings. In this regard, men started allowing women to be part and parcel of micro investment.

They started making their own decisions with regard to micro-investment.

One Gertrude Chalambalala, aged 46 was one of the female farmers who became early adopters of Micro Investment in Poloto Village. She learnt sustainable horticulture practices from Mr. Steven Elemiya who is a lead farmer. "Mr. Elemiya's productivity moved me. I wanted to be part of this," said Gertrude when she was asked why she was convinced to be part of MI. "Easiness in irrigating, the fast growth of crops were other reasons that made me be part of this," added Gertrude.

Gertrude first cultivated cucumbers and she realized MK 112, 000.00 from her sales. From this money, she purchased 3 more MI kits which she used to cultivate tomato and leafy vegetables. "I do not remember when I had returned with my produce from the market. My produce sells faster due to the quality of my produce," said Gertrude when she was asked if

marketing is a challenge to her. From her second harvest, Gertrude bought goats, food, paid school fees for children among other things. This was an unusual undertaking by a woman in her village. Women could not manage to buy things for their families as they were being excluded from productive activities. From this outcome, other women admired her and were regarded as a role model for them. Gertrude together with Mr. Elemiya started training other women in MI with the assistance of AICC's agronomist. From this initiative, 5 women invested in tomato production while 3 women invested in leafy vegetables. They thought of forming a group to increase their bargaining power when selling their produce. After their first harvest as a group, they managed to start a Village Savings and Loan Association (VSLA) with an amount of MK 350,000.00 where they borrow each other money to uplift their lives. The women are also envisioning to procure tanks in the near future to engage in large scale horticulture irrigation.



Gertrude, one of the early women adopters of MI

## MI INCREASES HORTICULTURE PRODUCTIVITY OF JACKSON BANDA

Jackson Banda hails from Kolozinjoyi Village, TA Dzoole. For thirty years, he has been practicing horticulture production through primitive cultivation methods. Although he was continuously making little profit, Jackson was still cultivating horticulture as he had no option. He only hoped that a brighter day would come when he would be productive in his endeavour.

Last year in July, Jackson came across MI through a village meeting that AICC field agronomists conducted. During the meeting, agronomists were teaching villagers on sustainable methods of producing horticulture whilst increasing profits. The agronomists also taught the villagers better ways of conserving the environment

through this intervention.

Jackson showed interest in this technology as he was already in horticulture production but was not making considerable profits. He booked a one-on-one meeting with the agronomist and sought more understanding for this intervention. He then bought 6 drip kits of which he cultivated tomato and leafy vegetables. The field agronomist was visiting him on a weekly basis to assist in good agriculture practices as well monitor his investment. “This technology is easy to use. I do multiple works at once due to this technology,” Jackson reiterated when he was asked to comment on the project. “I have been cultivating horticulture for years but this technology has changed my life. I am able to produce 75 fruits from

one tomato tree,” added Jackson.

From the proceeds, Jackson has been able to feed his family. He also managed to buy pigs and has managed to pay school fees for his grandchildren. Jackson disclosed that the technology has helped him to produce better quality horticulture produce that fetches him better prices. Furthermore, improved seedlings that AICC managed to link him with, has helped him to be productive.

AICC facilitated private sector partners that have been able to provide environment. The private sector players have equally been providing private-extension services that Jackson benefited from. “OSHO chemicals is one of the AICC’s partners that is sell us pesticides at a reasonable price,” said Jackson.



*Jackson pouring water in his drip kit*



## MICRO-INVESTMENT AS AN OPTION FOR RAIN-FED AGRICULTURE

Malawi is mostly dependent on agriculture. From all agriculture commodities, maize has been the most grown crop in most villages including Mtonda village, Traditional Authority Mponela. The village is located in Mwachiswa section of Mndolera Extension Planning Area in Mponela, Dowa. Laston James has been one of the farmers who has been practicing rain-fed agriculture in this village. However, productivity has always been a challenge due to intermittent rainfall as well as land degradation. Since 2009, Laston has been considering shifting from rain-fed maize farming to something else that would make him more productive. Community members advised him to adopt tobacco farming as they were convinced other farmers were making a fortune out of it. Laston was persuaded to start this ventures but he was afraid since it is labour-intensive, it does not conserve the environment and it takes much time for a person to make sales. As such, he was reluctant to venture into tobacco.

Due to peer pressure, Laston started cultivating tobacco on a small scale. He made a considerable profit in

the first year and he reasoned to cultivate again in the next year. Contrarily to his expectation, poor rainfall hit him hard. He harvested low volumes of tobacco and made a brutal loss. Laston regretted this endeavour and he had difficulties making ends meet.

Ever since, Laston has been having challenges with farming until he

in the morning and late afternoon he would just feel the MI basins with water that trickled down to the plants while he was doing other things. Laston has been managing to feed his family, pay school fees for children as well as start livestock farming through this intervention. "I never knew I would learn easy ways of farming like this one. I will never live in lack again," Said Laston.



*Some of the pigs that Laston has managed to buy from MI*

came across Micro Investment through AICC. Laston was taught how a small investment would afford him a considerable fortune and how environment conserving the technology is. He thought it was not late for a 33 year old like him to learn new agriculture methods and to change the destiny of his life. Laston procured his first kit and cultivated tomato. Each day

Despite hard work and productivity that Laston has showed ever since he adopted the MI technology, he has attained leadership skills through hosting Sadzu incubation that is teaching others in micro-investment. Laston stand as a model of stopping reliance on rain-fed agriculture and adopting small scale irrigation.



*Laston inside Sadzu incubation field*



## HORTICULTURE FARMERS ATTAIN A QUICK PAYBACK THROUGH MICRO INVESTMENT KIT

Many small scale farmers are risk averse and are always reluctant to invest in new innovations unless the returns are twofold. The challenge in growing

different sections under Mndolera EPA in Dowa District.

The Micro Investment has shown that it has a quick payback period.

highest number of kits installed. Mr. Feliasi Staniele is a 42 years-old CASH project horticulture farmer in Sese section under Mndolera EPA in Dowa District. Mr. Staniele bought one kit form AICC. With assistance from agronomist, he cultivated tomato on a one bed. To his surprise the technology required

little amount of water compared to traditional way of watering. After following all the instructions from the agronomist, the farmer was very impressed as the five weeks' crop stand gave him hope that significant high yields will be realized. His 15m by 1m bed had 106 plants of tomato with

each plant producing 75 fruits. He sold all fruits and realized MWK112, 000 after harvesting. From the money, he managed to buy basic household needs and bought extra four kits as part of reinvesting in horticulture production.



*Feliasi Staniele in his reinvested horticulture garden*

maize, for example, is the length of time between each harvest and the risk of oversupply and low prices. Farmers are always encouraged and easily adopt an innovation when it is proved profitable compared to what farmers are conventionally practicing.

As part of enhancing farmers' investment decision, the African Institute of Corporate Citizenship (AICC) in partnership with the Norwegian Church Aid (NCA) introduced Micro Investment project called Commercial Agribusiness for Sustainable Horticulture (CASH) in

The quick payback period has contributed to farmers' habit of reinvesting some of the profit established right from the start. This has contributed to the current rate of adoption in Sese section of Mndolera EPA which has the



*A picture illustrating a drip irrigation tomato bed*



## DUMPING TOBACCO FOR HORTICULTURE: STORY OF SHADRACK SANDRAM

Cultivating tobacco has been the only business that one Shadrack Sandram ever knew since he was born. Hailing from Masiya Village, Traditional Authority Dzoole in Mponela, tobacco has been the main cash crop for his community. As early as 18 years old, Sandram started cultivating tobacco and he was convinced that no other crop had the capability of bringing returns than the popular green gold.

Even in the wake of faltering tobacco market, Shadrack was hopeful that one day the market would rebound. Confidently, he was taking loans annually to assist his tobacco farming from tobacco purchasing companies. However, tobacco marketing frustrations never left him. He reached a point whereby he could not qualify for a loan from tobacco purchasing companies. He could not manage paying back loans even after selling the leaf due to low returns. Shadrack then turned to community banks popularly known as “Bank Mkhonde” for a loan. However, he

failed to pay back the loan again. Life became hard for him, his wife and his seven children.

Events took a U-turn at the age of 41 when Shadrack was introduced to Micro Investment (MI) through AICC in partnership with Norwegian Church Aid (NCA). AICC’s field agronomist marketed the concept to him and reasoned with him the probable returns he would make from this investment. Shadrack acted as a Thomas Didymus as he never believed that horticulture would change someone’s life. He also only knew that NGOs usually give handouts and thus telling him to make an investment, was a non-starter.

After seeing that a village headman in his village had made good returns from the first MI kit

he purchased, Shadrack followed suit. He procured his first kit. He mounted the kit at the backyard of his



Shadrack pouring water in his MI kit

house to closely monitor his first unusual investment. He cultivated tomato. AICC’s field agronomist was frequently paying him a visit to assist in good agriculture practices as well as to motivate him in his new endeavour. After 3 months, Shadrack harvested his tomato and managed to realize MK 115,000.00 from an investment he made with an average of MK 15,000.00. Shadrack became amazed. For the first time in three months he had cultivated a crop and made considerable profits yet tobacco took him over 9 months only to be graced with a demoralising loss. For the first time, Shadrack used a small piece of land (15 metres by 1 metre) to cultivate a crop but made a lot of profit. For the first time, Shadrack cultivated a crop using labour saving technology. “I was convinced that tobacco was only wasting my time and I made a decision to damp it” Reiterated Shadrack when AICC communications team visited him.



Part of Shadrack's 19 MI kits



## ZERO COOLING CHAMBER AS RELIEF TO HORTICULTURE FARMERS

*“Before being instructed by AICC agronomists on the use of the Zero Cooling Chamber in September 2019, we were losing a lot of produce every week because of over-ripening at the farm and the produce being stored at an ambient temperature in an open room of our houses,”*

Much of the post-harvest losses of horticulture products in Malawi are due to lack of proper storage facilities. Horticulture produce is lost during harvest and storage which reduces the growers share. While refrigerated cool stores are the best method of preserving horticultural products, they are expensive to buy and difficult to run especially in rural areas where there is no electricity. Storage of fresh horticulture produce after harvesting is one of the most pressing problems of horticulture farmers in Mndolera EPA. As one way of mitigating the storage problem for horticulture farmers in Mndolera EPA, AICC through CASH project is promoting the use of the Zero Cooling Chamber as one of the better alternative for storage of horticultural produce.

Zero cooling chamber is an on-farm rural oriented storage structure which operates on the principle of evaporative cooling and is constructed using locally available raw materials such as bricks, sand, bamboo, rice straw, vetiver grass, etc. The chamber is constructed above the ground and comprises of a double walled structure made up of bricks. The cavity of the double wall is filled with riverbed sand. The upper

part of the chamber is covered with vetiver grass mat on a bamboo/tree frame. Zero cooling chamber is a double wall structure having space between the walls which is

and heat takes place and the energy for the evaporation process comes from the air stream, hence cooling the produce.

*“Before being instructed by AICC agronomists on the use of the Zero Cooling Chamber in September 2020, we were losing a lot of produce every week because of over-ripening at the farm and the produce being stored at an ambient*



NCA and AICC officials appreciating a zero cooling chamber

filled with porous water absorbing materials like sand or charcoal. The charcoal or sand is kept constantly wet by applying water. When unsaturated air passes through wet sand/charcoal, transfer of mass

temperature in an open room of our houses,” stated Margret Petulo, a host farmer of Talandira incubator and one of several hundred of farmers benefiting from the project.



Picture illustrating horticultural products in a zero cooling chamber.



## A CHART WITH THE MI MANAGER ON THE MI CONCEPT



**HENRY MLINDE - MI Manager**

### ✓ Briefly, how can you describe the Micro-Investment concept?

*Micro investment is the concept that is using drip irrigation technology. Farmers are approached and requested to make investment decisions to buy the micro-investment (MI) kits. The MI kits comprises of; the drip kit, fertilizer as well as quality seedlings.*

### ✓ How flexible is the technology?

*The flexibility is based on its simplicity, profitability and affordability.*

### ✓ At what rate are the farmers adopting the technology?

*Since its inception in March with cumulative target of 850 smallholders by December 2019, the project has registered and recruited 950 (512 males and 438 females) investors across nine sections. So far the project has reach out to 636 households with average membership of 6 per household and direct reach out to 5341 household members in Ndolera Section. Based on the population per section, number of registered investors also vary across section with Sese Section contributing 14 percent of total reached farmers seconded by Dꞑoole Section with 13.58 percent while Vumo has lowest contribution of 6 percent of total reached farmers.*

### ✓ What are some of the successes so far achieved after implementing the technology?

*Since the inception of the project, there have been some farmers who have made profits and reinvested the profits into more micro investment kits while others invested into other assets. Some of farmers that sold their first harvest indicated that they have managed to use the money in procuring high quality inputs in readiness for the rain fed production of Maize and other crops. However, a number of farmers are able to re-invest by buying more number of kits after harvest while other choose to satisfy household food requirement.*

### ✓ Are there some challenges encountered during the implementation of MI Concept?

*Before the project, farmers were cultivating horticulture crops using local methods and they were cultivating tomato only. It has been so difficult for farmers to adopt the new methods regardless of AICC's different trainings in horticulture management, chemical and fertilizer spray program, collective marketing and tailor made capacity building,*

### ✓ How do you intend to address the challenges for sustainability of the concept/ initiative?

*Farmers in Mndolera are generally traditional producers of horticultural crops. They are traditional tomato growers and that's why most of them decided to go for tomatoes. However, using business cases and different trainings developed by agronomists and disseminated to potential smallholder farmers will yield results as number of farmers growing other value chains will definitely increase. This is attributed to profitability of other value chains like Cucumber, Okra and Water melon as compared to traditional value chain (Tomato) which has been affected by price due to supply. The project anticipates number of farmers growing water melon and Okra to increase in the coming season due to it market potential.*





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