

# **Climate Smart Agriculture (CSA)**

Dairy goat farming in Kitui County, Kyangwithya Vision SHG  
A project Implemented by KUMEA, Kenya component



*A beneficiary welcomes her toggenburg doe to a unit that she constructed*

## **Dairy goats' placement report – September 2013**

Project by generous funding of Rev.Harold Eckhardt of Canada.

Report was compiled by Caroline Sikuku, on technical consultancy.

## **1.0 ORGANIZATIONAL PROFILE**

### **Kumea Background**

Kujenga Maisha East Africa (KUMEA) was established and registered in Kenya in June 2010 as an NGO for the New Apostolic Church; East Africa District. It grew out of the Relief and humanitarian efforts of the church that had been going on for five years. HIV/AIDS and poor climatic conditions are major contributors to rural poverty in East Africa. KUMEA therefore feels duty bound to respond to the needs of these communities.

Although KUMEA is a Faith based NGO, it operates beyond the boundaries of the New Apostolic church. It brings together people of all faiths and persuasions without discrimination. KUMEA seeks to improve the living conditions of vulnerable members of the community through developmental activities. It is a vehicle through which an organization or individual can contribute towards sustainable development in the communities of East Africa. The Objectives of KUMEA include:-

- Enhancing agricultural crop and animal yield through modern, innovative, cost effective and efficient farming techniques and improving sanitation
- Employing agricultural extension officers to train adult Kenyans in modern farming techniques and assisting them acquire managerial skills;
- Drilling boreholes and erecting water catchments reservoirs
- Distributing farm implements free or at subsidized cost to individual or collective members of the beneficiary communities, and actively initiate or participate in activities and projects aimed at economic empowerment of the people within the organisation's sphere of operation.
- Engaging members and the general public in environmental conservation efforts and sensitization.

## **1.2 PROJECT OVERVIEW**

### **Description of Project Area**

Kitui County in the Eastern part of Kenya is a semi-arid region situated 160 km East of Nairobi. The elevation of the county is between 400 and 1800 metres. The central part of the county is characterised by hilly ridges, separated by low lying areas between 600 and 900 metres above sea level. The population of Kitui County is approximately 1,012,709 people (Kenya census 2009).

The area is characterised by rainy periods that are highly erratic and unreliable. The rain usually falls in a few intensive storms. There are two rainy seasons, one from April to June, these are the so-called long rains and one from October to December, and these are the short rains. On average the precipitation in the Kitui County is around 900 mm a year, but

there are large local differences in amount of precipitation due to topography and other influences. The potential evaporation is high, 1800 to 2000 millimetres a year. Virtually all of Kitui County's total area belongs to the Tana River drainage basin. Only a narrow strip along the south and southwest border drains to the Athi River.

There are no perennial rivers in the County except the Tana River. In spite of perennial headwaters, the rivers often run dry due to evaporation and infiltration losses. All of Kitui's rivers, including the Tana River, are strongly characterized with high flows in April-May and November-December and very low (or nil) flows in the intervening dry periods. Most of the streams that drain into the Tana River generally become dry within one month after the rainy season

The income of 63 percent of the population is beneath the poverty line of 1 dollar a day (KIHBS). This is one of the poorest regions of Kenya. The main economic activity is rainfed agriculture. Irrigated agriculture only takes place on small plots on the river banks. During prolonged dry periods the farmers are dependent on relief food from donors. In 2011 up to 50 percent of the inhabitants of Kitui received food aid. Besides farming, the main economic activities are charcoal burning, brick making and indigenous goat rearing.

In the Kitui county, only 6 percent of the inhabitants has access to potable water. Water scarcity forces women and girls to walk up 20 kilometres in dry seasons to water sources such as springs and scoopholes.

The project seeks to promote sustainable food security among households in Kitui through the practice of dairy goat rearing, improving productivity of the indigenous goat and increasing nutrition, income and overall livelihoods of the rural poor with limited livestock asset base.

### **1.3 Project Objectives**

- To improve livelihoods of small-holder farmers through livestock development
- To improve family nutrition and income of poor farmers
- To create employment within target community.
- To increase milk production for household use and for sale

Enhance market access by the poor

#### 1.4 Expected Benefits

- **From a small group of 20 (twenty) members originally funded, it is expected that at least 500 other members of the community will receive goat kids as gifts from funded members. It is also anticipated that at least another 500 families within and outside Kitui county will receive dairy goats bred by the funded community from purchases by other development organizations and as presents from community members.**
- Individual farmers will be able to own the assets (dairy goats), obtain milk for home consumption which will result in improved nutrition for the family.
- Income earned through sales of both milk and animals, and manure will be available for crop production enterprises.
- Milk production will increase from about 250 ml by indigenous goats to 1 litre by F1s and 2 litres by 75% exotic goats.
- An improvement in farmers' income with an increase in the value of the stock owned.
- At the group level the communities will be able to work together and collectively access better services for their farming enterprises, jobs will be created through the breed associations,
- The capacity of the community in livestock management will be enhanced.
- The large quantity of manure collected from the intensive (zero-grazing) goat rearing units will be used in farms, increasing significantly the yields of crops.
- The crossbred male kids which grow faster and mature earlier will increase, through sales, cash earnings for these families.
- The project participants are members of a group where they share knowledge, resources, exchange visits and experiences. Even the poorest members will be able to upgrade their animals. This will improve the socio-economic status of, and cohesion among, farmers.

#### 1.5 Sustainability of the Project

1. Goats placed with the farmers will be provided on 'credit', to be paid over time in cash or kind whereby each recipient farmer will be bound by contract to pass on a goat kid as a gift to another deserving member of the community. The goats kid down fairly fast and this will be quickly realized so that many more community members enjoy the benefits.
2. Working with a small farmer group will ensure accountability and good practice is recognized and rewarded from within the communities. The farmers contribute their time, land and building materials for the goat units.
3. Capacity building within the community in animal management and community organization for development will ensure continuity at the end of the project as income earned will sustain livelihoods of those involved.

4. Raising goats in confinement is environmentally friendly. It needs little heavy work, so can be done by women and men, young and old.

## **1.6 Out scaling opportunities**

- There is opportunity for significant expansion of this program or replicating it elsewhere in Kenya or other countries. There is a high demand for dairy crossbreds by smallholders as well market for crossbred, fast-growing, meat animals in urban areas of East Africa. Land sizes are reducing due to population pressure and so demand for small livestock like goats which require less space for management. Dairy goats eat less and are easier to manage yet they kid down twice a year and have high twinning possibilities. The price of dairy goats is also very attractive not to mention the highly digestible milk which fetches more cash per unit compared to cow milk.

## **1.7 Procurement and distribution of dairy goats**

In accordance with the KUMEA implementation plan to procure and distribute dairy goats among small scale farmers in the target Kyangwithya group of Kitui county (See project proposal), the scouting of dairy goats was done in Meru county in September 2013 by a contracted private technical person. The KUMEA project team followed to vet and collect selected dairy goats. The project team comprised of a project staff and a contracted technical person who set off from Nairobi for Meru County on Thursday, September 12<sup>th</sup> 2013. The team met the technical person in Meru on Friday September 13<sup>th</sup> 2013 for goat selection, goat record reviews and relevant technical and financial documentation for purchases. The project team then proceeded to Kitui County on the same Friday 13<sup>th</sup> September 2013 for placement of the dairy goats to 17 Kyangwithya Vision Self Help Group members. The team along with two group members also made some follow up farm visits with technical advice for care of the placed livestock. The group leaders were encouraged to form monitoring committees in each sub location to scale up the technical information received during the farm visits for better performance. The dairy goats were of Toggenburg /German Alpine crosses comprising 17 (seventeen) does and 2 (two) breeding bucks. These were sourced from six different farmer groups found in Meru County. The six groups had names abbreviated as shown alongside the number of dairy goats purchased from each group. Each goat's identification tag has abbreviation of the group where it was sourced from and an identification number. All the beneficiary farmers had been trained earlier for two days on dairy goat husbandry and had been given time to construct the goat units before placement.

**A summary of the source (sub locations), number and type of goats sourced – Courtesy Dr. Kimani**

1. Mwichiune (MICH)	-	4 dairy goats : 3 does, 1 buck
2. Karachi (KAR)	-	5 dairy goats : 5 does
3. Abegochi (ABE)	-	2 dairy goats : 2 does
4. Nkubu (NKU)	-	3 dairy goats : 3 does
5. Mwangatia (MWA)	-	3 dairy goats : 2 does, 1 buck
6. Kanyokine (KAK)	-	2 dairy goats : 2 does

**TOTALS                      19 dairy goats: 17 does, 2 bucks**

The scouting and goat identification was done by Dr. Kimani, a private veterinarian practicing in Meru. KUMEA team vetted the selection and accompanied the dairy goats to Kitui for placement to Kyangwithya vision self help group.

The 19 selected dairy goats for purchase by KUMEA were held at a temporary holding ground at the St. Pius Nkubu seminary for a week before collection, implying high chances of all does having been mated by the time of collection. This is good because all the does will likely kid down at the same time and allow for mass passing on of the goat gifts. We expect many kids in February/March 2013.



*Some of the selected dairy goats at the temporary holding ground in Meru County*



***Both the selected bucks demonstrated good libido(urge to serve) confirming chances of most does having been bred at the holding ground.***

Good libido of breeding bucks is enhanced by provision of salt lick ad libitum (at all times)



*The two technical persons from supply (Dr. Kimani of Meru) and procurement (Caroline for KUMEA) check technical details*

### **Transport**

The goats were loaded and transported conveniently to Kitui, at a collection point around kitui town where placement of the dairy goats to members of Kyangwithya vision self help group took place the same day of 12<sup>th</sup> September 2013 evening.





*Some of the selected goats loaded on the lorry ready to be transported to Kitui*

#### **Placement of dairy goats with families**

Seventeen families (13 women, 4 men) benefited with one doe each. Two (both women) of the seventeen families also received a breeding buck on behalf of the group. The farmers balloted with the dairy goat tag numbers so that each farmer received the actual goat (doe) whose ballot bore the tag number. The balloting was however guided by the technical person to take care of in-breeding risks. That means that farmers around respective buck keepers would not ballot with tag numbers of Does that came from the same areas as the bucks. The bucks were placed first then Does around each.

The bucks strategically placed with farmers identified by the group members at locations that were accessible to respective luster of farmers, for breeding their does.



*A cross section of beneficiaries holding their goat gifts.*

Note: The collection point was next to a bus park in Kitui town, purposefully, the cars do not belong to the beneficiaries who actually walked their goats home. The car owners will most likely be the first clients to purchase some goats. We were overwhelmed with demand, they took contacts of the group officials.

Kyangwithya group have members spread out in six sub-locations of Kitui County (Annex 1): A comprehensive dairy goats placement record for kyangwithya vision group.

Farmers from Mbusyani, Mulutu and Township sub locations would use the buck (MWA) for breeding whereas farmers from Kwavonga, Muturi and Kwamulungu would use the buck (MICH). The distances between the sub-locations are however significantly long, some farmers talked of planning to transport the does by motorcycles to reach breeding bucks.

### **Farm visits after placement**

Sample farm visits were made by a team comprising KUMEA staff, a technical person and two group officials (**Annex 2**). This was done the day after placement. Beneficiaries who were visited were those around Kitui town in Mututu and Mbusyani sub-locations. A total of six beneficiaries (40%) were visited (3 women, 3 men) - **Annex 3**

### **Findings from the farm visits**

- The team appreciated efforts made by the beneficiaries to put up goat units. This showed immense interest in the project. We also appreciate the difficulty by farmers to get right materials for construction of the goat units yet we encouraged them, giving affordable options since we cannot compromise on the basic technical requirements. All in all, the farmers are ready to go.



Onesmus Ndile Mulo, from Muturi cluster could not hide his happiness.

- Most beneficiaries have goat units in place. However, several modifications need to be done to improve them. These were well explained
- One farmer Joseph Muli Kiwa, had a bad goat unit. It was recommended that the doe he received be re-located immediately until he completes his goat unit. The doe was temporarily re-located to his neighbor (Onesmus) to give him time to complete. He was to take feed and acaricide to maintain the goat at his neighbour's. In case he could not complete his unit in specified time; the group committee would place it with another deserving member.



*The farm visit team recommended immediate relocation of the goat here.*

- The sub-locations were far apart from each other, a challenge for monitoring and evaluation and may be a challenge for breeding.

**Age of the placed dairy goats**

The project intended to purchase yearlings which would benefit the farmers for longer. Each dairy goat had a card bearing important production records including parentage, age, born as twin or single, date mated, group of origin, doe or buck.

**A summary of selected and placed dairy goats by age**

	<b># Does</b>	<b># Bucks</b>	<b>TOTAL</b>
Age 1 year	9	2	11
Age 10 – 11 months	8	0	8
	<b>17</b>	<b>2</b>	<b>19</b>

Ageing by dentation means estimating the age of livestock by looking at the teeth arrangement. This technic along with and farmer records were the means used to determine the ages of selected goats as shown in table above



*The two technical staff perform sample ageing by dentation at the holding ground*

## **Recommendations**

- As a matter of urgency, the farmers need to sign contract forms soonest to bind them to the project commitment of passing on the gift. A relevant contract can be designed ASAP.
- In future, if possible, each sub location with dairy goats should have its own breeding buck. The six sub locations now have two with bucks, four will share these meanwhile.
- Farm visits to all the beneficiaries within the first month of placement is highly recommended. A technical person from the country or on consultancy should be involved for technical backstopping – to go round with group committee who will then continue sustainably. A demonstration of proper acaricide mixing and spraying should be emphasized during the farm visits for health management.
- Training of selected group resource persons, with each cluster represented, on goat husbandry – identification by ear tagging, dehorning, castration, deworming, weighing and recording is recommended.

- Training of buck keepers on record keeping, scaling up buck usage to benefit entire community is recommended.
- Development of a comprehensive identification system for KUMEA assisted farmers and produce cards/record sheets with each goat's breeding records. This requires technical intervention. KUMEA will not continue to use the cards from Meru but will transfer information to developed identification system.
- The capacity of the group leaders to manage the dairy goat project needs to be developed by some training.
- Assist the Kyangwithya group to develop contracts with each beneficiary member with realistic terms that can develop the group.
- Buck rotation or exchange after 15 months – to be from December 2014.
- KUMEA project should make sure that all the beneficiaries access to proper spraying pumps and acaricides for health management.
- The Kyangwithya group should be managed in clusters at sub-location level especially for Mbusyani, Mulutu and Muturi sub-locations since they are far apart. Otherwise, regular group meetings will be a challenge.

### **Annex 1: original beneficiaries of Kyangwithya Vision SHG**

	<b>NAMES</b>	<b>GOAT TAG NO</b>	<b>GOAT</b>	<b>SUB-LOCATION</b>	<b>POSITION IN GROUP</b>
1	Rose Kathyaka	ABE 429	Doe	Mbusyani	Chairperson
2	Julius Mbula Mitau	KAR/J48	Doe	Mbusyani	Secretary
3	Beatrice Mulwa	MICH/090	Doe	Mbusyani	Member
4	Christine Kitongu	NKU/R26	Doe	Mbusyani	Member
5	Cosmas Makasa Mukiti	MICH/77P	Doe	Mbusyani	Local vet/ Member
6	Beatrice Mutua	MICH/C14	Doe	Mbusyani	Member
7	Margaret Philip	MICH/C180	Buck	Mulutu	Member
8	Rose Mwaka	KAK/4108	Doe	Mulutu	Member
9	Elizabeth Kenda	MWA/014ZZ	Doe	Mulutu	Member
10	Lucia Munyau	NKU/135	Doe	Mulutu	Member
11	Kanini Mulei	KAR/49	Doe	Mulutu	Member
12	Anna Katungi	KAR/51	Doe	Kwavonza	Member
13	Onesmas Ndile Mulo	KAK/40	Doe	Muturi	Member

14	Joseph Muli Kiwa	ABE/111	Doe	Muturi	Member
15	Angela Lydia Mulan'ga	KAR/492	Doe	Muturi	Member
16	Charles Mbuvi	MWA/G014	Doe	Kwamulungu	Member
17	Simion Kinyaika Musoso	NKU/006	Doe	Township	Organizing secretary
18	Rose Kathyaka	MWA 014Z	Doe	Mbusyani	Chairperson
19	Margaret Philip	KAR 44K	Doe	Mbusyani	Member

### **ANNEX 2: Team on farm visits after placement**

The team that went on farm visits to beneficiaries after placement included four people.

<b>NAMES</b>	<b>DESIGNATIONS</b>
1. John Aura Shikuku	Project staff, KUMEA
2. Caroline Sikuku	Technical Consultant
3. Rose K. Kathiaka	Chairlady, Kyangwithya Vision group
4. Simon K. Musoso	Organising secretary, Kyangwithya group

It is expected that the two group members would plan for continued farm visits using the technical information given by the technical consultant.

### **ANNEX 3: The beneficiaries visited by the farm visit team**

The six beneficiaries visited were from three sub-locations.

They comprised of 3 men and 3 women.

<b>NAME</b>	<b>SUB-LOCATION</b>	<b>GOAT SEEN</b>
1. Rose K. Kathiaka	Mbusyani	Buck and doe
2. Margaret Philip	Mulutu	Buck and doe
3. Onesmus Ndile Mulwa	Muturi	Doe
4. Angela Lydia Mulan'ga	Muturi	Doe
5. Joseph Muli Kiwa	Muturi	Doe
6. Julius Mitau Mbula	Mbusyani	Doe

### **Appreciation**

The good pictures and information about KUMEA that are included in this report was given by KUMEA staff, without whom this report would not have been complete. With such a dedicated team, any further assistance to scale up this project will definitely touch more lives within the target community meaningfully.

