

# FINAL TECHNICAL REPORT / RAPPORT TECHNIQUE FINAL SCALING-UP IMPROVED LEGUME TECHNOLOGIES IN TANZANIA (SILT): FINAL TECHNICAL REPORT

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**FOCUS GROUP DISCUSSION REPORT**

**SILT PROJECT**

**OUTCOME EVALUATION OF THE SCALING UP THE USE OF IMPROVED  
LEGUMES TECHNOLOGY IN TANZANIA**

**Prepared by: Neema Fute**

**OUTCOME EVALUATION OF THE SCALING UP THE USE OF IMPROVED  
LEGUMES TECHNOLOGY IN TANZANIA**

## **1.0 Introduction**

### **1.1 The scope of the study**

The focus groups were conducted in the Manyara Region and Arusha Region. There were a total of 4 Districts, and two villages were visited in each District, for a total of 8 visited villages. The district and village names are:

<b>REGION</b>	<b>DISTRICT</b>	<b>VILLAGES</b>
Arusha	Arumeru	Makiba and Migandini
	Karatu	Changarawe and Bassodawish
Manyara	Babati	Arri and Gallapo
	Hanang	Gitting and Endasaki

### **1.2 The moderators**

The FGD moderators were: Neema Fute, Heriel Lazaro, Linda Temu, and Joachim Japhet.

### **1.3 Objective**

The study aimed to identify and evaluate issues regarding the production of common bean and the way the radio programs influenced farmers' knowledge, attitudes, and practices on these issues.

It also looked at the impact of the different media used to disseminate information on common bean production, including radio, demonstration plots, leaflets, and comic books.

### **1.4 Study method**

The study was based on Focus Group Discussions which involved a total of 168 women and men in 8 villages. In order to ensure freedom of expression, women were interviewed separately from men.

## **2.0 Findings**

### **2.1 Babati District - Manyara Region**

#### **2.1.1 Arri village**

Participant farmers included 8 men and 7 women.

#### **Common beans and uses**

All 7 women who participated in the discussion are growing common beans. They mostly grow Soya njano and Iringa. They like Soya njano because it has good market price, while Iringa is resistant to weather, diseases, and pests, and good for food.

Women said the biggest challenges in bean farming are pests, diseases, and the weather (especially in the first season of the year when there are prolonged periods of sun or when the rains are late.) that attack the plants in the field (pests diseases and bad weather), and poor quality of seed that they buy from the markets.

They select seeds from the previous harvest and store for the next season. They do not know if the seeds are improved or not, but recall hearing about it (the seeds they are currently using) from the next village about 3 or 4 years ago.

Seven men out of 8 grow common beans in Arri village. The mostly commonly grown varieties are: Jesca, because it's quick-maturing, tolerates drought, and tastes good; Soya njano, because it is marketable, and Grey soya. They obtain seed from their harvests or from markets but do not buy from agro vets.

Men said the challenges with bean farming are diseases and pests, late rains, low yields, poor quality of the harvests and poor seeds (difficulty in accessing improved seeds).

### **Farming practices**

The women and men from Arri village had different views on the different farming practices;

- Row spacing for common bean:  
All 7 women said they do not use measured row spacing but plant following an animal plough. They know about row spacing and have learned about it from the beans demonstration plot in the village but because they have small farms, using row spacing would reduce their farming space.

Six out of 8 men plant by following an animal plough and 2 plant beans by broadcasting.

- Fertilizing common beans:  
No women fertilize their beans or use fertilizer when the plants are in the field. Rather, they apply organic fertilizer during land/farm preparations. They have seen just a few people in the village using fertilizers during planting.

Two of 8 men use cow dung during farm preparation and 1 uses DAP during planting.

- Weeding:  
All farmers weed their plants, normally 2 weeks after planting or by looking at the plants when they have two leaves. They use hand hoes for weeding.

All men weed about 2 weeks after planting and use hand hoes.

- Control of diseases:  
Beans are affected by various diseases as clarified by the women from Arri village. Diseases include yellow leaves, fungus/virus in the roots, and white coverage on the leaves. For some diseases, they use pesticides; however it's on a trial and error basis, as not all pesticides treat the diseases. But most farmers do use pesticides to control the diseases.

About 7 of 8 men use pesticides to control diseases. The pesticides include Karate, super corn, and Multalph.

- Timing of harvesting:

Women from Arri say they harvest beans 3 months after planting. Men said they harvest after 3 months when all the leaves are yellow and when the plants are dry.

- **Storing common beans:**  
It's not common to store beans for a long time. Most is sold after harvest. Stored beans are used for food or for the coming season. They normally store storage bags and mix with pesticides.

Only 1 man uses pesticides (Shumba) to store the beans, while the rest store them in sacks without pesticides.

- **Intercropping:**  
This is a practice identified by the women from Arri village as a popular farmer practice that was not listed in the questionnaire. Women normally intercrop beans with maize and cowpeas.

### **Challenges in growing common beans**

Pests and diseases were identified as the major challenges in bean farming. This is because not all diseases or pests have pesticides that can manage them completely. Women from Arri said they visited agro vet and explained what they saw in the plants and asked for pesticide that would help on a trial and error basis, and did not apply pesticides for some diseases.

Another challenge is prolonged sunny periods and delayed rainfall. These have caused some farmers to sow seeds with no return when the rains were delayed.

Women said there are challenges in that men want to take the lead in selling beans and sell without the women's consent. Thus, women are forced to store a few buckets of beans during separating dusts and beans without men's knowledge, in order to sell them to get some money to help the family or children at school.

Generally the post-harvest challenge with beans is that the price that is set by the buyers. The challenge with youth to engage in farming is that they do not have farms.

Men said the challenges with bean farming are diseases and pests, late rains, low yields, poor quality of the produce and poor seeds (its difficulty to access improved seeds).

Men also said women have a challenge in that most of them do not own land, which is owned by the husband or family. Also, women get tired because they need to take care of the family and also work in the farms. Like the women, men said youth have challenges in bean farming because they do not own farms.

### **Sources of information and radio listenership**

Four of 7 women have heard of the *Jukwaa la mkulima* on Radio Habari Njema. In the past, they received information from extension officers, agro vet shopkeepers, farmer to farmer, and also

learn from their long-time practice. Through the beans radio program, they heard about correct spacing and how beans require space to yield better, and about good seed selection (separating good seeds from those damaged by pests.)

All the women said the most important method for encouraging changes in common bean production is demo plots where people can see what is happening, as well as leaflets and radio shows where one could hear. These can go together since each is important and not everyone can attend the demo but might see the leaflets or listen to the radio and ask questions which will be answered. They believe multiple combinations would help reach more people at different times and serve a purpose.

Two of 8 men listened to the *Jukwaa la mkulima* radio program on Habari Njema. In the past, men got information from their fathers' practices. But also they mentioned hearing radio programs that added value. Six men attended the bean demonstration plots while four read the Shujaaz comic book.

All 8 men said that demonstration plots are the most important method to help farmers understand the practices as they can see and actually practice them. The second best was the leaflets, and then radio programs. They also suggested using Radio free Africa as it covers the larger areas compared to the radios used.

### **Implementation and recommendations**

The radio helped farmers to learn something about bean farming, including spacing, but they have not tried it due to their limited space on their farms, and because of this, they continue to practice intercropping to make all they want to plant fit in. However, one woman said she noticed that without spacing and intercropping, the beans do not produce as much as when used proper spacing, and that she also had difficulty weeding when intercropping without proper spacing.

Women from Arri village recommended that specific pesticides for diseases and pests be shared with farmers so they know exactly what to use rather than doing trial and error, and also that it be disclosed which markets to sell at, what prices to sell at, and which good agricultural practices would increase productivity for beans.

All men suggested that there should be more coverage on markets and prices for beans, but also about pesticide use as most farmers do not know the exact pesticides for certain diseases and pests.

Men also said that they have learned the uses of fertilizers in beans farming, how the plants remains on help improve soil fertility from the radio programs and demo plots.

### **2.1.2 Gallapo village**

There were 19 participants in this village, of which 10 were men and 9 were women. The findings are presented below.

### **Common beans and uses**

All 9 women grow common beans. They mostly grow Soya njano because it has a good price in the market compared to other types, and Punda because it is resistant to drought and diseases compared to other bean seeds. They mentioned that acquiring seeds is a challenge. They buy seed at high prices from the markets and also store from previous harvests when there are high yields.

All 10 men in Gallapo village grow common beans. They mostly grow Soya njano and Punda beans seeds since they are productive, less gassy after eating, taste good and take less time in the farm. They obtain seeds from previous harvests although at times seeds from previous harvest do not yield much and buy from the markets when their harvests are not enough to store.

### **Farming practices**

- **Row spacing:**  
Women do not use measured spacing, but follow the animal plough as it creates rows. Two men use a tractor 5 use animal plough while 3 men plant by broadcasting the seeds.
- **Fertilizing common beans:**  
About 5 of women said they apply animal dung or organic fertilizer during land preparation.  
  
About 4 of men said they use organic fertilizer as they prepare their farms. The rest do not use fertilizers either during planting or preparing the farm.
- **Weeding:**  
All women said they weed when the beans plants have about two leaves and use hand hoes. They normally weed once, but later when the weeds are few uproot using hands  
  
Men weed 2 or 3 weeks after planting.
- **Control of diseases:**  
Women do apply pesticides that they buy from the agro dealers shops, although not all times the pesticides work. They do not know specific pesticides for specific diseases. Men do use pesticides on beans for some diseases and pests, and some conditions they do not know what to use.
- **Timing of harvesting:**  
Women harvest beans after 3 months or by waiting till the leaves turn yellow and the plants are dry. Some harvest earlier during the planting season for crops like maize, when they harvest beans and sun dry them.  
Men harvest beans after 3 or 4 months when the beans are dry.
- **Storing common beans:**  
Women store common beans in sacks and apply pesticides, although with the change of rains and prolonged periods of sun, they harvest a small amount for consumption, sale, and for children at school.

Men store beans in sacks and uses pesticide during the storage time.

- Intercropping:  
Women use this practice widely, intercropping beans with maize and/or cowpeas.

### **Challenges in growing common beans**

Women said the great challenge they face is poor soil fertility, prolonged droughts, and the changing weather, including rains coming so late that the seeds grow but dry up before they mature. For this reason, some farmers are withdrawing from bean farming. Other challenges include pests and diseases.

Another challenge for women is how little they are involved involvement in selling the beans, in spite of the fact that they are the ones mostly doing the farming.

Other challenges are high seed prices and poor production to the extent that households have no beans for sale.

Men mentioned that challenges are beans become yellow and rust and some plants do not produce the beans seeds (they think it's the weather problem), some stored seeds from the previous harvests have low yields. Changes in weather, currently there are prolonged sun periods that dry up the beans plants.

### **Sources of information and radio listenership**

Two of 9 women have heard some episodes of the *Jukwaa la mkulima* radio program on Habari Njema, and remembering hearing about seed selection and farm preparation. In the past, they received information from extension officers and what they learnt from families, and the radio to a small extent and sharing experience with their fellow farmers, their daily practices.

Women said they would like the combination of information would be demonstration plots where they can learn practically a particular practice, radio episodes with experts can answer questions from farmers, and leaflets that people can go back for reference.

Three of 10 men have heard about *Jukwaa la mkulima* radio program that was aired on Radio Habari Njema. In the past, men received information from their families, neighbors and buyers (mostly the market price information) and one mentioned to watched Shamba shape( a TV program)..

### **Implementation and recommendations**

Two women said they have learned how to select seeds from the previous harvest and from markets. They would like more to be covered on pests and diseases so farmers know which diseases and pests can be treated with particular pesticides since farmers do not have knowledge of what pesticides can control which pests and diseases.

3 Men said they have heard about the radio program. However they suggested that there can be introductions to the people in the villages right when the programs are about to start being aired. They also suggested to have Radio Free Africa and TBC fm radio for radio programs as they can be heard well in their area.

## **2.2 Karatu District- Arusha Region**

### **2.2.1 Bassodawish village**

14 men and 8 women participated in the FGDs. The findings are below.

### **Common beans and uses**

All 8 women who participated in the discussion grow common beans. They mostly grow Soya Njano and Punda, but prefer Soya njano because it has a good market price (currently about 220000/= TShs for a 100kg sack), but also like Punda as it is resistant to weather, diseases, and pests.

Acquiring seeds is a problem since if one does not harvest, they can't store seeds and have to buy them from markets, or from other farmers where they get them for high prices.

All 14 men grow common beans however, but say that for the past years, it has not been very successful. Challenges faced in bean farming are long drought seasons, seeds, diseases, and pests such as insects that feed on flowers, maggots, and fungus in roots.

They mostly grow Soya Njano because it has a good market price, and Punda because it can tolerate drought, pests, and diseases.

### **Farming practices**

- **Row spacing:**  
Women do not plant with measuring spacing, but follow the animal plough as it creates the rows.  
3 of 14 men uses a tractor or animal plough and planting with measured spacing, while 11 men plant by broadcasting the seeds.
- **Fertilizing common beans:**  
All women normally apply animal dung or organic fertilizer during land preparation. Three men use organic fertilizer as they prepare farms, and the rest do not use fertilizers, neither during planting or preparing the farm.
- **Weeding:**  
Women said they weed when the beans plants are about to flower and they use hand hoes. They normally weed once, but if they will repeat weeding, they would be uprooting using hands since the weeds are a few.  
Men weed 2 or 3 weeks after planting.
- **Control of diseases:**  
Women do not use pesticides although there are pests and diseases, including rust. This is because of the uncertainty of harvesting due to weather, but also because they do not know specific pesticides for specific diseases.  
  
Men do not use pesticides on beans. Most of those who use pesticides use it on maize.
- **Timing of harvesting:**  
Women harvest beans after 3 months or by waiting till the leaves turn yellow and the plants dry. Some harvest earlier during planting of maize and other crops, and sun dry beans.  
Men harvest beans after 3 or 4 months when the beans are dry.

Storing common beans:

Women store common beans in sacks and apply pesticides, although with the changing rains and prolonged periods of sun, they harvest only a small amount that is used for consumption, sale, and for children at school.

Men stored beans in sacks and use Shumba (pesticide) or mix ashes with beans and store them.

- Intercropping:  
Women widely implement intercropping, intercropping beans with cowpeas and maize.

### **Challenges in growing common beans**

Women said the great challenge they face is poor soil fertility and late rains with prolonged periods of sun, such that sown seeds grow but dry up before they mature. Because of this, some farmers are withdrawing from bean farming. Other challenges include pests and diseases. Women also face challenges related to their minimal involvement in selling beans, though they are the ones mostly doing the farming.

Other challenges include high seed prices and poor production to the extent that there are no beans to be sold in households.

### **Sources of information and radio listenership**

Three of 8 women listened to some episodes of the *Jukwaa la mkulima* radio program on Habari Njema. In the past, they received information from extension officers and what they learnt from the families, farmer-farmer experience exchange and to a small extent from the radio.

All the women said the best combination would be demonstration plots where people can see the effect of a particular practice, radios where episodes talk about different farming practices and experts can answer questions from farmers, and leaflets for people to refer to when they need to.

Ten of 14 men listened to episodes of the *Jukwaa la mkulima* radio program on Radio Habari Njema. In the past, they received information from their families, neighbours and buyers. Three mentioned radio as another source of information.

### **Implementation and recommendations**

Three women learned how to select good seeds from the previous harvest or when they buy from the market. They would like pest and disease issues to be covered clearly so that farmers know which diseases and pests can be treated with specific pesticides, as farmers are not aware.

Men said they had heard of the radio program but have not practiced what they heard yet. They would like the radio programs to cover pests, diseases, and pesticides, good seeds, and where they can find them.

#### **2.2.2 Changarawe village**

There were 14 participants: 7 men and 7 women. The findings follow.

### **Common beans and uses**

All 7 women said they grow common beans. They mostly grow Soya njano because it has a good price in the market comparing to other types, and Punda because it grows well with the soil in

their area and is more resistant to diseases and drought than other bean seeds. They said that acquiring seeds is a challenge. They buy seeds at high prices from the markets and also store from previous harvests when there are high yields.

All men grow common beans. They mostly grow Jesca, Bwanashamba and Kachumba since they are productive, less gassy after eating, taste good and take less time in the farm. They obtain seeds from previous harvest and buy from markets when they do not store enough.

### **Farming practices**

- **Row spacing**

All women plant in rows following the animal plough, but not with measured spacing. They learned about spacing from the demonstration plot and radio but did not implement it because of the small size of their farms and the crops they want to grow.

About 40% of men use 1 ft X 1 ft row spacing is 1ft to 1ft. If beans are intercropping, they use 1.5 ft within rows, and 90cm between rows.

- **Fertilizing common beans:**

Five of 7 women apply the organic fertilizer or cow dung during land preparation, while the rest do not apply any fertilizer.

Two of 7 men apply organic fertilizer or cow dung during land preparation but not during planting. The rest apply fertilizer if they have access to it.

- **Weeding:**

All women said weed twice – by hand hoe when the plants have 2 leaves and later when the beans plants starts to flower, although the second weeding is done when needed and hey uproot using hands.

Men weed 2 weeks after planting using a hand hoe.

- **Control of diseases:**

80% of women use pesticides to control diseases when they know what pesticides will work. If they don't know that pesticides can control the disease, they do not use them.

90% of men use pesticides like dabband, duduban, and dudumeticin when beans are attacked with diseases and pests.

- **Time of harvesting:**

All women and men harvest the beans when they are dry and have yellow leaves.

- **Storing common beans:**

All women and men store the beans in sacks and mix with pesticides to store them.

- **Intercropping:**

Most women and men intercrop maize, beans and cowpeas. Moreover, women said more knowledge is needed on how it can be practiced in a productive way by elaborating the space needed, and its pros and cons.

### **Challenges in growing common beans**

Women identified pests, diseases and drought (late rains) as the major challenges in growing common beans, since some farmers may plant but will not harvest due to the drought that is affecting agricultural practices. Also, acquiring beans seeds at high prices in the markets is a challenge because production is low and farmers cannot store enough seeds from their harvests.

A challenge for women is their limited involvement in selling beans when they are ready for the market. Men tend to take over selling them, and at times not even share the revenue from selling with their wives. Women said they are forced to hide a couple of buckets of beans to use as food or to sell when they need something. They also complained about the limited participation of men during production. At times, men will not get involved in buying pesticides and women may not have money; thus, they just leave the beans in the farm as they are.

Almost all men said drought, pests, and diseases are the major challenges facing beans farmers in the area. Also, the prices of improved seeds is high, and there is a lack of good markets. Buyers come with set price and sell at higher prices than farmers. At times the farmers sell 100kg of beans for 60,000/=Tshs.

Engaging youth in bean farming is a challenge, first because they do not have farms but also because they are more involved with activities like motorcycle businesses than farming.

### **Sources of information and radio listenership**

Four of 7 women have heard *Jukwaa la mkulima* on Radio Habari Njema. From the program, they learned timely planting, planting by spacing, and seed selection. In the past, they accessed information from experts through village meetings, or through their families by seeing how they have been farming for years.

Two of 7 men had listened to the radio program *Jukwaa la mkulima* on Radio Habari Njema. Men learned planting on time and use of pesticides in the farms from the radio programs. Their source of information in the past was extension officers, practices by their fathers and families, radio, and SMS.

### **Implementation and recommendations**

Women said that, from all they have learnt, they have implemented selecting the best seeds, but have not implemented the rest of what they learned. They suggested having demo plots on time and in convenient places or having at least two. The last demo plot was held on one side of the village and was not accessible by many. They also suggested that the radio programs be promoted so that more farmers become aware of them.

Men said they recommend these efforts to get reliable markets with good prices for their produce. Also, they wanted the programs to do more education on good farming practices for beans. They suggested that the best combination would be radio, phone, and using extension officers.

### **3.1 Meru District- Arusha Region**

#### **3.1.1 Makiba village**

There were 27 participants: 17 men and 10 women. The findings follow.

#### **Common beans and uses**

All of the women participants grow common beans, mostly Kariasee and Bwanashamba because they are resistant to drought, have a good market and high productivity. They are not improved seeds. They are used for consumption at home and as a source of income.

All of the men grow common beans, mostly grow Kariasee (about 90%) because it has high productivity, resistant to drought, and is in demand in by the market. They also grow Soya njano because it has a good market. Neither are not improved seeds. Beans are used as a food crop and also as a cash crop.

#### **Farming practices**

- Row spacing  
Women plant by following the animal plough, but do not use measured spacing.  
About 80% of men plant by following the animal plough and without measured spacing, and the rest plant by broadcasting.
- Fertilizing common beans:  
No men or women use fertilizers for beans, although some do apply organic/animal dung during land preparation.
- Weeding:  
Women weed with hand hoes 2 or 3 weeks after planting.  
  
Men weed when beans are intercropped with maize.
- Control of diseases:  
About 70% of men do not use pesticides to control pests and diseases.
- Timing in harvesting:  
All men and women harvest after 3 months and when the beans plants are dry and have turned yellow.
- Storing common beans:  
Harvested beans are stored in sacks and mixed with pesticides for storage, but those for eating are not mixed with the pesticides.

#### **Challenges in growing common beans**

Almost all women said the major challenges in bean farming are pests, diseases, poor information about the market, low prices, drought, and not enough extension officers in the village. Other challenges include the tough work of irrigating the farms which requires preparing channels and lack of money for buying improved seeds. Women said the challenge with youth is that they do not have their own lands and as a result end up working on other people's farms.

All men said the major challenges in bean farming are pests and diseases, and limited access to good seeds as the current ones are obtained from harvests and markets. Men said the other challenges were the absence of extension officers and an unreliable market.

### **Sources of information and radio listenership.**

About 95% of men and women did not listen to the radio program aired at Radio 5. A few remember having heard about it but did not listen. Most women say they have been practicing bean farming from their families and parents. Women suggested that the best combination of media would be demonstration plots and radio programs, and that farmers should be made aware of the radio programs.

### **Implementation and recommendations**

Almost all men and women said that more coverage is needed on the proper use of pesticides, the type of pesticides needed for specific diseases and pests, and on markets for beans. They suggested that the demo plots cover soil test, row spacing, and land preparation.

#### **3.1.2 Migandini village**

There were 30 participants: 20 men and 10 women. The findings follow.

#### **Common beans and uses**

All women participants grow beans. They mostly grow Kariasee because it is drought-resistant, Soya njano because it has a good market, Bwanashamba because of the high yield. Soya njano, Kariasee and Bukoba are improved seeds in women's view. Harvests are used for consumption at home and also as a source of income. They get beans seeds from previous harvests and marketplaces, although prices are high.

All men in the focus group grow beans, including Kariasee, Bukoba and Bwana shamba because they have high yields and good market demand. These are not improved seeds. They obtain seeds from the market and their harvests. Beans are used mostly for income generation and for consumption at home.

#### **Farming practices**

- Row spacing:  
All women and men use an animal plough for planting but the spacing is not dimensional by using measuring ropes. Animal plough is method they have been using all times and mostly when they do intercropping.
- Fertilizing common beans:  
Almost no men use fertilizers in bean farming. A few apply cow dung during land preparations but not at planting.
- Weeding:  
90% of women and men weed 2 or 3 weeks after planting when the bean plants have at least 2 leaves. The second weeding is done when needed by uprooting or using pesticides.
- Control of diseases:

All women and men use pesticides to control pests and diseases. Although not all pesticides work effectively on the pests and diseases in the farm.

- Time of harvesting:  
Almost all women and men harvest beans after 3 months, and a few harvest and dry them in the sun.
- Storing common beans  
Though not much is stored for long, about 95% of women and men store beans in sacks and apply pesticides.

### **Challenges in growing common beans**

All women said that the major challenges in bean farming are diseases and pests, poor market, prolonged droughts, and limited access to improved seeds. Women also said that, after harvest, men make the decisions, though women are mostly involved in production. Women said there are no challenges engaging youth in agriculture as they are participating in agricultural activities, including bean farming.

Almost all men agreed that the major challenges in bean farming are lack of access to improved seeds, pests and diseases, drought, and unreliable markets. Men said women face challenges such as transporting harvested beans from farms to home and cleaning the beans from dust and unwanted things. Men said some youth do not have access to land and thus cannot engage in bean farming.

### **Sources of information and radio listenership**

70% of women had heard of the program, although did not follow up and do not remember, others did not listen to it at all. In the past, women said they practiced what they saw or learnt from their fathers or families, although a few paid attention to radio programs. They think demonstration plots would inform people as people can participate in them.

About 90% of men did not listen to the radio programs. In the past, they got most of their information from their fathers and do what they have always done.

### **Implementation and recommendations**

All men and women recommended more radio programs on diseases, land preparations, proper bean storage, and how to recognize improved seeds. Regarding demonstration plots, farmers wanted to know how to implement row spacing properly, and proper measurements for pesticide applications in the farms.

## **4.1 Hanang District – Manyara**

### **4.1.1 Endasaki village**

There were 21 participants: 11 men and 10 women. The findings follow.

### **Common beans and uses**

All women and men participants grow beans, mostly Soya njano, Short and long soya, and Rosekoko. They prefer these because they have high yields, the seeds are easily accessible, they

are for a short time, and they are in high demanded in the market. They obtain the seeds from their harvest and from markets, although the price is high. The major uses of common beans are as a cash crop with the remainder for consumption.

### **Farming practices**

- **Row spacing:**  
About 30% of women said they plan on row spacing while 70% plant by following an animal plough.  
  
All men plant beans by following the tractor or animal plough and don't use measured row spacing.
- **Fertilizing common beans**  
About 50% of women use cow dung in land preparation but not during planting. Others do not apply anything.  
  
All men use cow dung during preparation, but not at planting nor for growth.
- **Weeding:**  
All women and men weed their bean farms, normally with hand hoes when the beans plants have 2 leaves. The second weeding depends on whether they see a need to do it regarding the amount of weeds in the farms.
- **Control of diseases:**  
100% of women and men use pesticides to control pests and diseases, although some pesticides do not seem to work for some diseases. They get information on these pesticides from agro vet dealers.
- **Timing of harvesting:**  
All women and men harvest beans after 90 days (3 months). They harvest when the plants are dry, the leaves have turned yellow and when the beans plants shade leaves.
- **Storing common beans:**  
Almost all women and men store the beans in sacks after they are cleaned. Others with small yields sell on time and do not store for long.

### **Challenges in growing common beans**

Almost all women said that the major challenges in beans farming are the unpredictable weather (they do not know what is the best season for high yields), plus pests and diseases which affect the beans a lot without clear pesticides to help neutralize the situation. Other challenges are high seed prices during planting season, the absence of help from extension officers (there are too few for all the villages), the government closes some borders for beans market, and that buyers propose low prices compared to production costs.

All women said men tend to take over after the beans are ready to sell and that they are less involved in decisions. The challenge with youth is they do not have access to land, although others are attached to families and practice agriculture with the family. But the yields are for the family and not the youth alone. Other youths are involved with motorcycle business.

All men said the big challenges in bean farming are pests and diseases, unpredictable weather that highly affects bean farming, and poor markets.

### **Sources of information and radio listenership**

Three of 10 women listened to the radio programs although they did not pay attention to them. In the past, women got information on bean farming through farmer-to-farmer sharing or by practicing what they saw from their elders. They recommended that a combination of demonstration plots and radios would be the best medium for information. They said radios are good if people are aware of the programs and pay attention. They said they learned a few things from the programs, including keeping the plant residues on the soil to add fertility, spacing (though very few practice it), and where to buy seeds.

No men had listened to the radio programs. In the past, they got information from elders and the practices they used to see from their families. They encourage using extension officers for information. Men said that if there are radio programs on bean farming they will listen - they only need to be made aware of them.

### **Implementation and recommendations**

The women who had listened to the radio said the programs should cover topics like land preparations, how to combat pests and diseases, and where to find reliable markets.

The men said they would like to learn more about proper bean planting, weeding, proper storage, and the right pesticides for bean pests and diseases.

#### **4.1.2 Gitting village**

There were 20 participants: 10 men and 10 women. The findings follow.

#### **Common beans and uses**

All men and women participants grow beans, mostly Soya njano because it takes a short time to mature, has a good market and is good for food, and Lyamungo-90 because it is drought-resistant, disease- and pest-resistant and in demand in the market. They obtain the seeds from previous harvests, or by buying them from markets or neighbours. These seeds are not improved varieties. Beans are used for home consumption and as a source of income.

#### **Farming practices**

- Row spacing:  
Almost all women broadcast seed.

About 30% of the men use measured row spacing that they learned from Selian and AFAP demo plot. The rest plant using animal ploughs or broadcast.

- Fertilizing common beans:  
About 90% of women and men use cow dung during land preparations, and the rest do not apply anything. None use fertilizer for planting.
- Weeding:  
All women and men weed with hand hoes 2 to 3 weeks after planting. The second weeding is optional, depending on whether the field needs weeding. Those with small farms uproot and others apply pesticides.
- Control of diseases:  
85% of women and men use pesticides to control diseases, although not all pesticides are effective for all diseases; they keep visiting the agro vets for more. Others do not apply pesticides.
- Timing of harvesting:  
All men and women harvest 3 months after planting.
- Storing common beans:  
Both women and men store beans in sacks. Some use pesticides to store the beans they will sell in the long run.

### **Challenges in growing common beans**

All women said that the major challenges in bean farming are diseases, pests, poor markets, prolonged droughts, and limited access to improved seeds. Women also said that once the beans are harvested, the men make all the decisions, though they are mostly involved in production. Women said there are no challenges engaging youth in agriculture because they participate in agricultural activities, including bean farming.

Almost all men said the challenges they face in beans farming are no access to improved seeds, diseases, pests such as cutworm, drought, unreliable markets, and the absence of supportive equipment such as planters. Men said there is a challenge engaging youth as some youth do not have access to land and thus cannot engage in bean farming.

### **Sources of information and radio listenership**

Five of 10 women have listened to the radio program on Radio 5, *Fahari ya mkulima*. In the past, women got information from extension officers, from demonstration plots and learning from elders. About 5 women who listened to the radio and those who participated in the demonstration plot learned things like timely planting and how to use row spacing.

Two of 10 men listened to the radio program. About half of the men say they get information from other radio stations such as Radio Free Africa. About 80% says that using radio demonstration plots is the best combination for information sharing. A few who attended the demonstration plot said that they learnt how to harvest beans, bean storage, and land preparation.

### **Implementation and recommendations**

All men and women recommended more radio programs on diseases, land preparation, proper bean storage, testing soil health, and how to recognize improved seeds. Regarding demonstration plots, farmers wanted how to implement row spacing properly, and proper measurements for pesticide application.

## **CONCLUSION**

### **Common beans and uses**

From the 8 villages visited and conducted discussions most farmers (men and women) are beans growers but also Soya bean was the most preferred beans seeds because of its good price in the market compared to other types, followed by Punda, Iringa because of their resistant to drought compared to other seeds. Beans uses include home consumption, sell at the market (w

### **Farming practices**

Some of the farming practices from the farmers discussions do not differ very much such as in all the villages no farmers were/are using measured spacing in beans plants, most of them follow the animal plough, a few using tractor, some broadcast.

Most farmers from the discussions are not using the fertilizers on beans growing, although some have pointed to apply animal fertilizers during farm preparations.

**Weeding** is one among the practice that almost all farmers from the discussions are practicing weeding, however the second round of weeding is done if necessary.

**Control of diseases** is a practice that some farmers do not know specific pesticides that could combat some of the diseases and pests, thus they buy pesticides if they work it's a success and if it does not they have to buy other pesticides, and to some places they do not apply anything.

**Timing of harvesting common** beans farmers have identified to be harvesting beans in 3 months after planting, and when the leaves have turned yellow.

**Storing common beans** most farmers from the discussions have pointed to store beans in sacks and mix with pesticides for storage, however if beans are for consumption they do not apply pesticides.

Moreover some villages such as Changarawe, Bassodawish and Arri have mentioned intercropping as a practice that most farmers use. Farmers have mentioned to intercrop beans with maize, cowpeas.

### **Challenges in growing common beans**

The mostly identified challenges by farmers (women and men) from discussion include how to get good seeds, diseases and pests, drought (prolonged periods of sun), markets with low prices. Some challenges were specifically for women were they said at times of selling the beans men tend to take over and not share with them decisions also revenue obtained.

### **Sources of information and radio listenership**

Farmers from the discussions have listed to get farming information from extension officers, agro vet shops, farmer-farmer experience, all time farming experiences, radios and tv shows (shamba shape up). Moreover farmers suggested the media combination of radios and demonstrations plots for farmers to learn practically follow up on radios and leaflets for follow ups.

### **Implementation and recommendations**

Most farmers had recommendations in the following areas, diseases and pest management, proper beans storage, soil testing, how they recognize improved seeds, land preparations, uses of pesticides in the farms.