



**ACCEPTABILITY OF CAVIES REARING BY WOMEN AS A SOURCE OF PROTEIN AND KEY MICRONUTRIENTS AND AS A SOURCE OF INCOME:  
A QUALITATIVE STUDY CONDUCTED IN THE SABOBA AND GUSHEGU DISTRICTS OF THE NORTHERN REGION OF GHANA**

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DISTRICTS OF THE NORTHERN REGION OF GHANA**

September 2022

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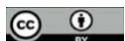
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## CONTENTS

1	EXECUTIVE SUMMARY.....	6
1.1	STUDY PURPOSE.....	6
1.2	STUDY BACKGROUND .....	6
1.3	STUDY METHODOLOGY OVERVIEW.....	6
1.4	ANSWERING THE RESEARCH QUESTIONS.....	7
1.5	RECOMMENDATIONS .....	8
2	INTRODUCTION .....	9
2.1	BACKGROUND.....	9
2.2	THE PURPOSE OF THE STUDY.....	10
2.3	RATIONALE OF THE STUDY.....	10
2.4	DEVELOPMENT OBJECTIVES AND STRATEGY.....	10
2.5	SPECIFIC OUTPUTS .....	10
3	RESEARCH QUESTIONS AND METHODOLOGY OVERVIEW .....	11
3.1	RESEARCH QUESTIONS.....	11
3.2	METHODOLOGY OVERVIEW .....	11
3.3	SAMPLING STRATEGY.....	11
3.4	LIMITATIONS .....	12
4	FINDINGS AND CONCLUSIONS .....	13
4.1	WHAT IS THE KNOWLEDGE LEVEL OF PEOPLE IN SABOBA AND GUSHEGU DISTRICTS ON CAVIES AND THE REARING OF IT? .....	13
4.2	ARE THE PEOPLE OF GUSHEGU AND SABOBA WILLING TO REARING CAVIES, BOTH AS A SOURCE OF PROTEIN AND KEY MICRONUTRIENTS AND FOR INCOME GENERATION?.....	15
4.3	IS CAVIES REARING AND CONSUMPTION ACCEPTABLE AMONG THE PEOPLE IN THE 2 DISTRICTS? .....	15
4.4	WHY?.....	15
4.4	CONSTRAINTS ABOUT CAVIES REARING .....	16
5	DISCUSSION AND CONCLUSIONS .....	21
6	RECOMMENDATIONS .....	24
7	BIBLIOGRAPHY.....	25
8	APPENDICES.....	27

# 1 EXECUTIVE SUMMARY

## 1.1 STUDY PURPOSE

This study's main aim was to explore the acceptability of cavies rearing by communities, in particular as a source of protein and key macronutrients, and as a source of income for women. This was a qualitative study conducted in the Gushegu and Saboba districts of the northern region of Ghana.

## 1.2 STUDY BACKGROUND

The intent of this study was to learn about whether rural farmers, especially women in the target communities will accept to rear cavies, both for household consumption and also for sale. The focus was on selected rural women who are or intends to do farming for both subsistence and commercial purposes.

This study intended to introduce the target subjects to cavies and explore to know if they were willing to rear cavies for consumption and for sale.

## 1.3 STUDY METHODOLOGY OVERVIEW

This assessment pursued the following research questions:

1. What do the people in Saboba and Gushegu districts know about cavies and the rearing of it?
2. Is there potential for people in Gushegu and Saboba to rear cavies, both as a source of protein and key micronutrients and for income generation?
3. How acceptable or otherwise are cavies farming among people in the 2 districts and what factors are responsible for this?

Following from the purpose of this study, a qualitative study of the target groups was conducted, using focused group discussions and key informant interviews as the primary research approach. Data collection process started in early June of 2022 and ended in the last week of August 2022.

In all, 120 face-to-face interviews, 2 Key Informant Interviews and 12 Focused Group Discussions were conducted in 6 communities within the 2 target districts during the period of this study.

All interviews were tape-recorded, and interviews varied in length from 1 hour to one hour and 45 minutes to 2 hours. FGDs took about 45 minutes to 1 hour duration. The interviews were informal and were carried out in a conversational style.

Data was analyzed by themes using Dedoose software version 9.0 (2022).

## 1.4 ANSWERING THE RESEARCH QUESTIONS

### WHAT DO THE PEOPLE IN SABOBA AND GUSHEGU DISTRICTS KNOW ABOUT CAVIES AND THE REARING OF IT?

Limited knowledge about cavies exists in this study area. Most respondents indicated they haven't seen cavies before and that they've only heard of them. A few people said they have seen cavies, but have had no encounter with them.

"I have heard about them, but I haven't seen them before." *(A male respondent said)*

"I don't know how they look like." *(A male respondent said)*

"Do you know them? Can you show/ tell us how they look like?" *(A female respondent asked)*

### IS THERE POTENTIAL FOR PEOPLE IN GUSHEGU AND SABOBA TO REAR CAVIES, BOTH AS A SOURCE OF PROTEIN AND KEY MICRONUTRIENTS AND FOR INCOME GENERATION?

Majority of Respondents agreed that there is potential for cavies rearing in their communities. They also indicated that they were willing to start cavy business including the rearing, marketing, and processing of cavies.

#### Respondents said:

"Yes, we want to venture into cavy farming. It is very profitable; my uncle used to get a lot of money from cavy sales." *(A male respondent said)*

"Me, I think it will be good here, so that we can easily get meat to cook and feed our families." *(A female respondent said)*

"Yes, I agree with you, my son. The way they are small, if I just slaughter one, it can be enough for my family at a time." *(A male respondent said)*

"Here, as you can see, we have a lot of space to construct their houses. Me, I already have accommodation in my house; if I want to start now, it won't be difficult" *(A male respondent said)*

### HOW ACCEPTABLE OR OTHERWISE ARE CAVIES FARMING AMONG PEOPLE IN THE 2 DISTRICTS AND WHAT FACTORS ARE RESPONSIBLE FOR THIS?

Most respondents indicated that cavies' farming is acceptable in their communities. There are no restrictions to cavies rearing, being it religious or cultural.

Also, both males and females can rear cavies, just like they do with cattle, crop farming, and other livestock, including poultry.

#### Respondents said:

"Ooh no, As you've been told, we don't have such restrictions here now. We all work together because we are one and we need to feed our families". *(A male respondent said)*

“If we restrict our wives or children from farming, we are harming our own selves, because we only cannot work to feed our families”. *(A male respondent said)*

“My husband has given me my own land to farm, while he does his own. Here, we are farmers; we, our husbands and children”. *(A female respondent said)*

“My father has cattle; I have fowls and my mother has goats. We rear these animals alongside the farming”. *(A young male respondent said)*

## **1.5 RECOMMENDATIONS**

Based on the findings of this study, the team recommends five overarching approaches to institute and promote the rearing, marketing and consumption of cavies in not just the targeted districts or communities, but in the entire Northern region, which is seen as one of the poorest regions in the country with more people having less access to food nutrients, including proteins, vitamins and other key micronutrients.



## 2 INTRODUCTION

### 2.1 BACKGROUND

The high protein and high concentration of B vitamins found in meat make it an ideal part of the diet, very difficult to replace by plant foods, even with grain legumes that are nutritionally the closest plant foods to meat. Yet production of meat on the small farm almost dictates a way of life with several disadvantages. If small animals are raised in pens, they usually require purchased concentrates or grains used for the family, at least as part of the diet. If allowed to roam freely they make it impossible to maintain a dooryard vegetable garden, and make good hygiene difficult.



Furthermore, if the family cannot eat the entire animal at one meal, refrigeration is required or other preservation techniques (Blumer S., 1999).

The guinea pig or cavy, *Cavia porcellus*, is a rodent that was domesticated in the Andes as a source of meat (Bogdan et al., 2004). Because it is a small animal it can be eaten by a small family in one meal and does not require refrigeration. It is herbivorous and becomes accustomed to many sorts of feed. The meat is much like rabbit, and is low in fat content (Buchanan-Smith., 2012). Furthermore, the cavy multiplies rapidly, but not at the rate that folk literature would suggest. With breeding as recommended here, one pair of cavies could produce about 260 new pairs in 2 years (Martin, 1991). Because of these characteristics the cavy should be tried widely as a source of meat for the household as well as to sell.

Nevertheless, production of cavies requires a year-round source of herbaceous feed. To some extent the feed can be supplied as hay during the dry season or even as purchased alfalfa pellets (rabbit food), or stored roots and tubers can be used. The cavy does not normally eat cooked foods from the table but will eat some of the scraps from uncooked fruits and vegetables. More details of feeds for cavy are given later (Guenther et al., 2014).

While the cavy is often produced almost by neglect, good housing is highly desirable. This includes provisions for maintaining cavies separated by sex and age (see later). Furthermore, cavies do have their parasites and diseases, best avoided by adequate housing (Herman et al., 2014).

Women are key actors in Ghana's agriculture—the proportion of females involved in agriculture (41.2 percent) is about the same in both urban and rural areas across the country (Ghana Statistical Service 2014). In Ghana, crops usually attributed to men are the main staples or those grown for local or international markets, such as cocoa, yam, millet, or sorghum. Women operate small farms and plots of land, and often grow less lucrative but more nutritious legumes and vegetables and soybean crops, and raise small livestock. Women often grow crops for family sustenance and then sell excess produce in the market. Limited access to productive resources, such as land, credit, and extension services, combined with household labor responsibilities greatly limit women's productivity (Glaser and Strauss, 1967).

The gender gap in the agricultural industry globally is severe. Despite women comprising almost half of the agricultural force in developing countries, women-run farms produce 20-30% fewer yields than male-run farms.

The Food and Agriculture Organization (FAO) maintains that this disparity is directly linked to gender-specific challenges (Kraus and Rodel, 2004).

These barriers include lack of access and rights to land, insufficient agricultural training, inadequate working conditions, ingrained gender roles and economic bias, among others. With these challenges, women are unable to reach their highest economic potential.

In Ghana specifically, agricultural gender inequalities exist in land possession, access to seedlings, modern inputs, training and education, financial and extension services, livestock and more. These discrepancies hinder the productivity and earnings of Ghanaian women in agriculture (Kraus and Rodel, 2004).

## **2.2 THE PURPOSE OF THE STUDY**

The study sought to learn about whether rural farmers, especially women in the target communities will accept to rear cavies, both for household consumption and also for sale. The focus was on selected rural women who are or intends to do farming for both subsistence and commercial purposes.

The study in the end introduced these target subjects to cavies and explored to know if they would be willing to rear cavies for consumption and for sale.

## **2.3 RATIONALE OF THE STUDY**

It is anticipated from the review of literature that there are still a lot to learn and gain from cavies farming. This study should examine a number of circumstances in which the rearing of cavies can be situated. The study will reveal the acceptability or otherwise of cavies rearing vis-a-vis the religious and cultural acceptability among others.

## **2.4 DEVELOPMENT OBJECTIVES AND STRATEGY**

To meet the International Potato Center (CIP) vision of fostering a healthy, inclusive and resilient world through root and tuber systems by delivering innovative science-based solutions to enhance access to affordable nutritious food, foster inclusive sustainable business and employment growth, and drive climate resilience of root and tuber agri-food systems.

The overall objective of this study was to explore the acceptability of cavies rearing as a source of protein and as a source of income for women in the Saboba and Gushegu districts of the Northern region of Ghana.

## **2.5 SPECIFIC OUTPUTS**

- 1) Assess the knowledge of people in Saboba and Gushegu districts on cavies and the rearing of it
- 2) Determine with community leaders, women, and men in these 2 districts the potential for rearing cavies, both as a source of protein and key micronutrients and for income generation and
- 3) Explore the acceptability or otherwise of cavies rearing among people in the 2 districts and the factors responsible for this.

The findings from this qualitative study aim to inform CIP future design and support, with specific focus on assisting farmers, especially women and empowering them to be able to rear cavies both as a source of meat/ nutrition and also as a source of income.

## 3 RESEARCH QUESTIONS AND METHODOLOGY OVERVIEW

### 3.1 RESEARCH QUESTIONS

This study explored the following research questions:

- 1) What are the knowledge level of people in Saboba and Gushegu districts on cavies and the rearing of it?
- 2) Are the people of Gushegu and Saboba willing to rearing cavies, both as a source of protein and key micronutrients and for income generation?
- 3) Is cavies rearing and consumption acceptable among the people in the 2 districts? Why?

### 3.2 METHODOLOGY OVERVIEW

This study used mainly qualitative methods to address the research questions, even though it drew upon existing data sources and published research to support. Existing data sources included engagement with the relevant research literature and reports.



#### QUALITATIVE METHODS

We collected qualitative data through 18 focused group d communities, including 6 each among men, women and young girls.

We also conducted 4 key informant interviews with community leaders and former cavies' farmers. These FGDs and KIIs were transcribed verbatim and summarized and analyzed using NVivo software.

We explored their knowledge of cavies and in situations where they lack the knowledge, we then educated them.

These included;

1. Knowing what cavies are
2. Feeding
3. Housing
4. Benefits – (nutrients, income etc); Sale/ cavies business, etc.

### 3.3 SAMPLING STRATEGY

We purposively selected 3 guinea fowl production communities each from the Gushegu and Saboba districts. We also considered these communities's access to irrigation services and also markets. At the end, we settled on Gbagu, Gbagu-tono and Mbatinga communities in the Gushegu municipality and Tanjamile, Namongbani and Demon communalities in the Saboba district Table 1).

Table 1 shows the distribution of the Focused Group Discussions with dates and category of respondents.

**Table 1:** Focused Group Discussions with dates and category of respondents

FGD Date	District	Village	Group Characteristics	
			N°. of Men	N°. of Women
03/06/22	Gushegu	Gbagu	10 (Young & Old)	12 (Old)
04/06/22		Gbagu		8 (Young)
10/06/22		Mbatinga	12 (Young & Old)	14 (Young)
11/06/22		Mbatinga		12 (Old)
24/06/22		Gbagu-tono	9 (Young & Old)	
25/06/22		Gbagu-tono		8 (Old)
25/06/22		Gbagu-tono		9 (Young)
02/07/22	Saboba	Tanjamile	14 (Young & Old)	14 (Old), 14 (Young)
08/07/22		Namongbani		12 (Old)
09/07/22		Namongbani		10 (young)
10/07/22		Namongbani	14 (Young & Old)	
22/07/22		Demon	10 (Young & Old)	8 (Young)
23/07/22		Demon		8 (Old)
				<b>6 Men FGDs</b>

### 3.4 LIMITATIONS

Given time, resource and climatic constraints, the data collection and analysis suffered from two main limitations.

#### LIMITATION 1: DELAY IN DATA COLLECTION PROCESS

I encountered numerous challenges that led to the delay in the data collection process. Because the period of data collection coincided with the rainy season when community members who are mainly farmers would be engaged in farming activities, I had it tough getting the community members at appointed times and this delayed the process of data collection.

#### LIMITATION 2: LESS ACCURATE AND CLEAR NOTE-TAKING DURING DISCUSSIONS

Because I was the only one in the data collection process, it wasn't easy conducting the FGDs and KIIs and recording the process and taking notes at the same time.

## 4 FINDINGS AND CONCLUSIONS

### 4.1 WHAT IS THE KNOWLEDGE LEVEL OF PEOPLE IN SABOBA AND GUSHEGU DISTRICTS ON CAVIES AND THE REARING OF IT?

Limited knowledge about cavies exists in the study area. Most respondents indicated they haven't seen cavies before and that they've only heard of them. A few people said they have seen cavies, but have had no encounter with them.

#### Respondents said;

*"I have heard about them, but I haven't seen them before." (A male respondent said)*

*"I don't know how they look like". (A male respondent said)*

*"Do you know them? Can you show/ tell us how they look like?" (A female respondent asked)*

*"I think I know this animal. I've eaten it before when I was in Yendi. They are very sweet". (A male respondent said)*

This lack of knowledge about cavies among inhabitants in the study area is not surprising. This is because were known and seen about over a decade ago and most of the youth now were either not born or were at their very tender ages of their lives, and so could not have encountered cavies.

Based on this report of lack of knowledge, respondents were then taken through some education about cavies.

These were based on the following headings;

1. Knowing what cavies are
2. Feeding
3. Housing
4. Benefits – (nutrients, income etc.); sale/ cavies' business, etc.

#### Knowing what cavies are

Respondents were taught that cavies (guinea pigs) are bright-eyed cuddly creatures that make an excellent pet.

Guinea pigs are domesticated, tailless rodents native to the west coast of South America. Their wild cousins can still be found in Argentina, Uruguay, and Brazil. So obviously, guinea pigs did not originate in Guinea and they are not pigs. In fact, they are not even relatives of the pig family!

Although guinea pigs are still referred to as "guinea pigs" by scientists in research laboratories, it is ironically the guinea pig owners, breeders, and fanciers who call their pets by their correct name, "cavy". Cavy comes from the species' scientific name, *Cavia porcellis* – a name that combines the cavy's evolutionary ancestry with the misconceptions of the early navigators.

## **Feeding**

Cavies love to eat – in fact, they veritable gourmands. They are also very particular about their food preferences. Unlike many rodents that are omnivorous and will eat almost anything to survive, cavies are strict vegetarians. They are also very selective about what they will consume and they have special nutritional requirements that are quite different from their rodent cousins. Cavies forage throughout the day and consume large quantities of vegetation, including grasses, leaves, and roots. They should always have grass hay and food available. They do not adapt well to limited feeding times.

Good nutrition plays an important role in cavies overall health and longevity. If your cavy does not receive proper nutrition or a balanced diet, it can suffer from a variety of health problems, including premature death. The good news is that you have full control of your cavy's diet – and it is very easy to provide your little cavy a diet that is not only nutritious and balanced, but delicious as well (Vanderlip, 2015).

## **Water**

Depending on where you live, contents of city or well water may vary and could contain additives such as chlorine and chloramines, or high levels of undesirable elements, such as arsenic, or low levels of bacteria. Even if your water doesn't contain these ingredients, it still might taste bad. If the water tastes unpleasant to you, your cavy will probably turn up his nose at it too. The best water you can give your cavy is the same drinking water you take yourself (Niba et al., 2012).

## **Housing**

Depending on your lifestyle and the amount of time and space you have available, you can design a housing setup in your home that is convenient for you and as complex or simple as you wish.

Cavies are easy to please and easy to house safely and comfortably. They will be perfectly happy in most of the wide variety of cage styles available from your local pet store. Or, if you prefer, you can make a custom home for them using readily available material (Vanderlip, 2015).

Cavies don't need much to turn a cage into "home sweet home," but they do have a few basic requirements; escape-proof housing with a secure door or lid; solid flooring; protection from heat, cold, and drafts; appropriate bedding material; a hideaway for privacy; nutritious food and a water bottle and food dish or feeder; a hay rack; and chew toys (Niba et al., 2012).

## **Reproductive characteristics**

Compared to other rodents, the cavy has a relatively long gestation period: 59 to 72 days. The length of a cavy gestation is inversely proportional to the size of the litter. In other words, the larger the litter size, the shorter the gestation period. Also, the larger the litter size, the smaller the individual cavy pups are. The sow has only one pair of nipples located in the inguinal area, yet a healthy mother can nurse and raise several pups (Niba et al., 2012).

The sow has a bicornate uterus. That means that from the cervix, the uterus branches into a Y-shape, consisting of a left and a right uterine horn. This conformation enables the mother to carry offspring in each of the uterine horns (Vanderlip, 2015).

### **Benefits – (nutrients, income etc)/ Sale/ caviés business, etc.**

The high protein and high concentration of B vitamins (especially B12) and zinc found in meat is important in a diet but is very difficult to be replaced by plant foods. Cavies readily provide this at affordable cost. The meat of caviés is much like rabbit, and is low in fat content. Due to its small size an entire family can eat it at once without the need for preservation or refrigeration (Vanderlip, 2015).

The fur of the cavy can be cured conventionally and pelts can be sewed into conventional garments or braided into ropes. The manure from caviés is also used in the home garden.

Cavies multiply so rapidly. One pair of caviés could produce about 260 new pairs in 2 years (Martin, 1991).

#### **4.2 ARE THE PEOPLE OF GUSHEGU AND SABOBA WILLING TO REARING CAVIES, BOTH AS A SOURCE OF PROTEIN AND KEY MICRONUTRIENTS AND FOR INCOME GENERATION?**

This study found that respondents agreed that there is potential for caviés rearing in their communities.

In fact, all respondents indicated that they were willing to start cavy business including; rearing, sale/marketing, processing etc.

#### **Respondents said;**

*“Yes, we want to venture into cavy farming. It is very profitable; my uncle used to get a lot of money from cavy sales”. (A male respondent said)*

*“Me, I think it will be good here, so that we can easily get meat to cook and feed our families”. (A female respondent said)*

*“Yes, I agree with you, my son. The way they are small, if I just slaughter one, it can be enough for my family at a time”. (A male respondent said)*

*“Here, as you can see, we have a lot of space to construct their houses. Me, I already have accommodation in my house; if I want to start now, it won’t be difficult”. (A male respondent said)*

*“Yes, I agree with you, my son. The way they are small, if I just slaughter one, it can be enough for my family at a time”. (A male respondent said)*

*“Here, as you can see, we have a lot of space to construct their houses. Me, I already have accommodation in my house; if I want to start now, it won’t be difficult” (A male respondent said)*

#### **4.3 IS CAVIES REARING AND CONSUMPTION ACCEPTABLE AMONG THE PEOPLE IN THE 2 DISTRICTS? WHY?**

Most respondents indicated that caviés farming are acceptable in their communities. They indicated that there are no restrictions to caviés rearing, being it religious or cultural. Also, both males and females can rear caviés, just like they do with cattle, crop farming, and other livestock, including poultry.

### **Respondents said;**

“Ooh no, as you’ve been told, we don’t have such restrictions here now. We all work together because we are one and we need to feed our families.” *(A male respondent said)*

“If we restrict our wives or children from farming, we are harming our own selves, because we only cannot work to feed our families.” *(A male respondent said)*

“My husband has given me my own land to farm, while he does his own. Here, we are farmers; we, our husbands and children *(A female respondent said)*

“My father has cattle; I have fowls and my mother has goats. We rear these animals alongside the farming” *(A young male respondent said)*

The study also found that there are no restrictions, being it religious or cultural that may hinder the acceptability of covies for rearing and consumption. Respondents were emphatic that such restrictions do not exist.

### **Respondents said;**

“Islam, which is our religion, has not restricted us from eating covies, my grandfather said they used to rear and eat them, but they are no longer there”. *(A male respondent said)*

“Me, I am a Christian; but my pastor has never said the religion frowns on eating covies, or rabbits”. *(A male respondent said)*

“Culturally too, we are not aware of any restrictions. What we don’t eat is meat from animals that are not properly slaughtered”. *(A female respondent said)*

## **4.4 CONSTRAINTS ABOUT COVIES REARING**

The study also sought to look into the fact that when people accept to rear covies, there are unavoidable challenges that they may face. Respondents were therefore asked to indicate some constraints that they may face as they rear covies in their communities. These were put in categories as follows;

### **Feeding – What constraints exist and how will respondents address them? Dry season?**

Respondents indicated that they envisage a constraint of not being able to continuously feed the covies, especially all year round and in the dry season.



## They said;

“Almost all the feeds you mentioned are readily available during the rainy season. But how would we feed them during the dry season?”. *A respondent asked*

“But they also eat maize, and it is available here during the dry season, so we can feed them with it”. *A respondents intimated*

**Potential** – Currently people in the target communities cultivates crops such as; Sweetpotato, water melon, hibiscus, moringa, pigeon pea, cowpea, oranges, maize, etc. All these are potential sources of feed for cavies.

Crops like maize and pigeon pea could also be dried and used during the dry season to feed the cavies.

## Sources of Vitamin C

Table 2 shows the various feeds that could serve as potential sources of vitamins C, an essential element for the survival of cavies.

**Table 2:** Various feeds that could serve as potential sources of vitamins C

Source	Available	Unavailable
Sweetpotato	*	
Water melon	*	
Hibiscus	*	
Moringa	*	
Cowpea	*	
oranges	*	
Chili Pepper	*	
Green Pepper		*
Guava		*
Sweet yellow pepper		*
Papaya		*
Strawberries		*
Maize	*	

## Water Supply



**Picture 1:** Borehole



**Picture 2:** Borehole overhead storage

In terms of water availability, the study found that water is available all year round in most communities, especially those communities near the Oti River. This I think will help to supply water to cavies.

Even though most communities lack access to irrigation facilities, they have access to other sources of water, including overhead tanks, boreholes, dams, and the river Oti (Picture 1 and 2).

### Respondents said;

“We have water here. It is clean and potable. We will give them clean water and it is available here.” *A male respondent said*

“As for water, we don’t have a problem in this community”. *A male respondent said*

“We usually fetch water from the boreholes; that is what we use to feed the livestock”.  
*A female respondent said*

## Housing



**Picture 3:** Sample of housing for cavies

## **Constraints in getting adequate housing/ space**

The study found that there exist no constraints when it comes to land and or space for cavy rearing.

Respondents mostly live in their own houses and have enough space to do other things including backyard farming and livestock rearing.

### **Respondents said;**

*“In terms of space, we don’t have a constraint; it is the materials that is an issue.” – said a respondent*

*“Me, I cannot afford the type of housing you showed us; can I use mud to construct my own cavy housing?” asked a female respondent*

*“I used to rear rabbits; I will use their housing for the cavy if the opportunity comes” – A male respondent said*

*“Our normal local poultry housing can also be used; it may just need little modification.” – A male respondent said*

Also, respondents who were women indicated that they have no challenges when it comes to land ownership and use. Women can own land just like men and so can, with consultations with their husbands, use the land for whatever they wish.

### **Respondents said;**

*“I have my own land where I do my pepper and tomatoes farming. My husband bought it for me and he supports me to farm there” A woman said.*

*“We own the land together, my husband and I; if I ask him for space to do a cavy farm, he wouldn’t say no” Another woman said.*

*“Here, there is abundant land. We can do a lot of cavy farming without any restrictions”. A man said.*

## **Labour**

### **Commitment to caring for cavy**

The study looked into labour issues and commitment to taking care of cavy by respondents. It found that respondents were willing to invest time and resources to cater for the cavy, just like they do with their livestock and local poultry birds.

### **Respondents said;**

*“There's division of labour here. For me, I take care of the animals in the morning before I go to the farm, before my wife also goes to her farm, she also does her part, then the children will take over till we are back.” – A male respondent said.*

“At any given time, somebody must be at home. So we don’t have challenges feeding and taking care of our animals”. *A female respondent said.*

“For, I feed the animals, my wife takes care of their water and the children sweep their room”. *A male respondent said.*

### **Why Cavies rearing failed previously**

The study enquired about the past failures of cavies rearing. This was targeted at former cavies’ farmers who were interviewed as part of the Key Informant Interviews (KIIs) conducted.

Most respondents indicated that they had difficulty getting stock when they needed to expand. Also, some said they couldn’t find space to rear the cavies when they moved from their initial places of abode.

I will say that there was not enough justification for their initial failure from the discussions held. It could have been lack of commitment on the part of the farmers due to unknown reasons.

### **KII Respondents said;**

“I had issues finding space to put up their housing, because I relocated from where I was residing previously.” – *Said a male KI*

“I was initially staying with my uncle when we were rearing the cavies. But I had to move here and I couldn’t get some cavies to start rearing here” – *A male KI said*

### **Manure (feces) from Cavies**

The study elicited information with regards to what the fencens/ manure from cavies can be used for. Respondents said the manure of cavies can be a great source of fertilizer for the cultivation of backyard gardens for crops including pepper, onions etc.

Women especially indicated that they usually use the manure to help fertilise their backyard tomato and pepper farms.

### **Respondents said;**

“Me, I usually will use the feces of the poultry and livestock on my wife’s pepper farm. It enhances the fertility of the soil. I will do same with the cavy feces”. *A male respondent said*

“The cavies’ farces will serve as manure, just like the livestock and we will use it on our farms. Me, I will use it on my tomatoes farm”. *A male respondent said*

“Usually immediately I finish sweeping their room, I ask the children to take the dung to the backyard garden, where I have my pepper farm”. *A female respondent said*

## 5 DISCUSSION AND CONCLUSIONS

This study has revealed that even though there exist limited knowledge regarding cavies, there is a potential for people in the target districts to accept and to rear cavies, not just for income, but for nutrition and key micronutrients.

Cavies have been an important protein-rich food in several places in the world since time immemorial. Compared to other forms of livestock, cavies have numerous advantages which can be harnessed for the benefit of all, especially the vulnerable in society.

Cavies are rodents – and a not-too-distant relative of rabbits. Cavy meat is high in protein and contains lots of polyunsaturated fatty acids that are good for the heart.

In Ecuador, Peru and some parts of Africa, cavies are a popular and traditional food, found even on the menu at top restaurants. In some places, cavies are also believed to have a medicinal value – useful in the treatment of cancer, for instance. However, there is no scientific evidence (Ayagirwe et al., 2018).

Cavies are easy to keep. They do not need much space – a small pen or cage will generally suffice. Alternatively, they can simply be allowed to range freely in a kitchen or room. They are shy animals and will not try to escape at the first opportunity. That is an important consideration when introducing livestock into a non-native environment (Ayagirwe et al., 2018).

Cavies are viewed with certain misgivings in Africa because invasive species can do great harm. Maize and sorghum harvests across the continent have been decimated, for example, by the armyworm imported from South America (see Humphrey Nkonde in D+C/E+Z e-Paper 2017/04, Monitor). The real question, however, is whether cavies should really be regarded as an invasive species in Africa? According to Brigitte Maass, an agricultural scientist who draws on decades of experience in international agricultural research in South America and East Africa, the answer is no. Cavies – she says – have been present in Africa for a long time. Maass also indicates that Africans have long been aware of their farming and commercial potential (Maass, 2018).

In a study in Cameroon, Ayagirwe et al. (2018) stated that Cavies (Guinea pigs, *Cavia porcellus*) are one of the species used as food and nutrition security guarantee for low-income households in many areas of sub-Saharan Africa.

Perhaps the cavy's biggest advantage as a livestock species is that it does not compete with humans for food. That is not the case with chickens, for instance, because the grain they are fed could also be used to feed humans. Cavies are not fussy eaters. They get the nourishment they need from grass and herbs, but will feed equally happily on kitchen waste. Another advantage of cavies is that their manure makes excellent fertiliser. It is nitrogen-rich and also relatively dry, so it is lighter than manure from other animals and thus easier for farmers to transport and spread (Maass, 2018).

In Africa, a conservationist case can be made for cavies. They are an alternative to bushmeat (forest animals which are hunted). Bushmeat is eaten throughout the continent. Cavy husbandry could thus help to protect biodiversity.

The physical size of cavies and the way they are reared are especially advantageous in conflict regions. "If you need to run from danger, you can easily grab a couple of cavies and stick them in your pocket," Maass explains, "you cannot do that with cows, goats or pigs" (Maass, 2018). Bigger animals, moreover, attract thieves.

Marauding groups take interest. In Africa's rural areas, livestock is typically considered a sign of prosperity. Cavies, however, are normally kept indoors, out of sight, or can easily be hidden if necessary.

Disease resistance is another plus that makes cavies an attractive proposition, especially in times of crisis, when food and medicines are in short supply. They are easy to breed and rear, so marketing can be done fast and conveniently should a crisis arise. Literature has shown that some aid agencies have started distributing cavies to refugees and people in war zones (Ayagirwe et al., 2018). The idea is to help them get onto a "livestock ladder" to escape poverty.

In South Kivu Province in the east of the Democratic Republic of the Congo, cavies are raised and sold mainly by women and children (Maass et al., 2014). In many cases, the money is used to pay school fees or make purchases that benefit the whole family. In the Iringa region of Tanzania, some 500 kilometers west of the capital Dar es Salaam, a survey revealed that cavy is the second-most popular meat after beef, on par with pork and chicken (Maass et al., 2014).

Cavies are widespread from Senegal in West Africa to Tanzania in the east. The size of the total cavy population in Africa is very hard to estimate, Maass says, because it changes so fast. "If we assume that Congo has a minimum of 2 million cavies and Tanzania and Cameroon more than half a million each, we are probably talking about a population of around 5 million across sub-Saharan Africa as a whole (Maass et al., 2014). To put that in perspective: there are an estimated 22 million cavies in Peru alone and another 15 million in Ecuador. The two Andean countries now count only cavy mothers because total populations fluctuate too much over a year to permit meaningful statistics. Ghana and more especially the Northern regions can take advantage of this to help address the issues of malnutrition and poverty, which has been not so good in almost all the indicators (Maass et al., 2014).

Most respondents indicated that cavies farming are acceptable in their communities. They indicated that there are no restrictions to cavies rearing, being it religious or cultural. Also, both males and females can rear cavies, just like they do with cattle, crop farming, and other livestock, including poultry.

This study also found that there are no restrictions, being it religious or cultural that may hinder the acceptability of cavies for rearing and consumption. Respondents were emphatic that such restrictions do not exist. This is corroborated by a study carried out in the Western Highlands of Cameroon (WHC) to determine the motivations and contributions of cavy production to the livelihoods of cavy farm families. It found that Religion was not a restriction to cavy keeping. Cavies are valuable species as they improve on the livelihoods of cavy farm families. Cavies rearing motivations are for income generation (45%), manure (30%), consumption (20%) and company (5%). The income generated is used in the provision of planned and emergency household needs and the manure produced is either sold or ploughed onto the family farms for crop production (Yiva et al., 2014).

This study also sought to look into the fact that when people accept to rear cavies, there are unavoidable challenges that they may face. Respondents were therefore asked to indicate some constraints that they may face as they rear cavies in their communities. These were put in categories such as; *Feeding, Water Supply, Constraints in getting adequate housing/ space, Labour/ Commitment to caring for cavies.*

A study by Maass in 2012 corroborates the above findings. The study which was conducted in Cameroon found that the major issues of cavy's animal husbandry were related to animal diseases and lack of feed resources, particularly in the dry season. Lack of feed or forages were unrelated to a particular livestock species. Livestock holdings depended on animal diversity, location, land size available and respondents' education level. The

potential introduction of improved forages is challenged by their dry-season tolerance, compatibility with cropping on small farms; and people's readiness to cultivate forages.

There is no doubt that Cavies farming has a lot of advantages, even though there could be some challenges such as access to water and all-year round feeding. But communities in the target districts could rely on the potential of their closeness to major rivers like the Oti River among others to engage in irrigation farming and to get water for the cavies all year round.

People in the target communities indicated that they are committed to delving into cavies farming and are ready to commit themselves if the opportunity comes.

This study found that Respondents agreed that there is potential for cavies rearing in their communities.

In fact, all respondents indicated that they were willing to start cavy business including; rearing, sale/ marketing, processing etc. This is not different from a study on cavies rearing potential in Papua, Guinea by Belinda Bruce which said that when you think of guinea pigs you might think of cute, cuddly little pets. But for the highland people of South America, and people in parts of Africa and Asia, guinea pigs mean extra food and income. Maybe you would like to try raising guinea pigs.

I think that poor and vulnerable people can engage in cavy farming, just like their well to do counterparts, or even better since they may not really have many engagements.

People living with disabilities may not also be left out. They could be put in groups and made to do group farming of cavies.

I am most especially excited about the way women showed readiness to engage in this venture and am sure that this will serve to empower women the more, to feed their families with good nutrition and to get some income for their upkeep.

## 6 RECOMMENDATIONS

This study team recommends five overarching approaches to institute and promote the rearing, marketing and consumption of cavies in not just the targeted districts or communities, but in the entire Northern region, which is seen as one of the poorest regions in the country with more people having less access to food nutrients, including proteins, vitamins and other key micronutrients:

- 1) CIP support women to develop interest in and commit to start and operationalise cavies' farms in their communities;
- 2) CIP augments and support women with access to finance through supporting approaches, such as blended finance, that encourage lending to high risk sectors, and through supporting NGOs providing lending and financial management training to women in other parts of Ghana to extend their services to women in northern Ghana;
- 3) CIP supports and institutes a package of technical and veterinary support for cavies' farmers in northern Ghana;
- 4) CIP partner with the Ministry of Agriculture and other agencies and NGOs to enhance access to cavies by farmers through subsidies, infrastructure support, social and behavioral communication strategies, and business, management and leadership training;
- 5) CIP partner with other relevant stakeholders to develop and promote business development approaches, including but not limited to marketing and access to markets.



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## 8 APPENDICES

### PICTURES FROM THE FIELD



Researcher conducting a male FGD at Gbagu (Gushegu)



Researcher conducting a female FGD at Mbatinga (Gushegu)



FGD among males at Tanjamile (Saboba)

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