SECURE WOMEN'S LAND RIGHTS IN RWANDA: INVESTIGATING ITS IMPACT ON FOOD SECURITY

APPOLONIE MUKAHIGIRO February, 2015

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ABSTRACT

Women's land and joint land titling programs are viewed as potential means to enhance women's land tenure security and food security. Although these land rights are given to women, Rwanda has been for long time dominated by patriarchal society. Men have been considered as most powerful members of Rwandan society, where only men must have say first and women would obey everything said by men. This might hinder the enjoyment of women's land rights and exercise control rights on the land women own to improve household food security under the statutory tenure system.

As owners and joint owners of land, it is believed that women may gain power and have greater influence to make decisions on how to use the land. Experiences have shown that women are more likely than men to make decisions that improve food and nutrition needs. This research investigated the registration of land rights for women in Rwanda on food security at household level. The focus was on how women perceive land; if and how women make decisions for food crop production; and programs that influence women's decision making on food crop production.

Results show that women perceive land as being a primary source of food, source of livelihoods, and that it increases the status of women in the society. Moreover the titling program in Rwanda completed, women have obtained tenure security and are aware of their land rights, especially that their consent is required prior to disposal of land. However, tenure insecurity is felt when it comes to the limitations or restrictions on land use in the land law. On making decisions on food crop production, majority of women never make decisions, or sometimes make decision on food production. The crop intensification programs by the government influence decision making in relation to food crop production, hence little room for freedom to grow food crops of their choice. This has implications on food security at household level. Those growing food crops of their choice observe no increased harvest since the land registration program. Notwithstanding this, the study also shows that programs such as cooperative provide opportunities for women to access credit with which they invest in off farm activities.

Key words: Women, land rights, secure tenure, decision-making, food production, food security, Rwanda.

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LIST OF ABBREVIATIONS

CIP	Crop Intensification Program
CNF	Conseil National des Femmes(Rwandan National council of Women)
ECA	Economic Commission for Africa
FAO	Food and Agriculture Organisation of The United Nations
FCP	Food crop production
GoR	Government of Rwanda
HH	Household
IFAD	International Fund for Agricultural Development
ITC	Faculty of Geo- information Science and Earth observation
LAS	Land Administration Systems
LTR	Land Tenure Regularisation
MINAGRI	Rwandan Ministry of Agriculture and animal resources
NISR	National Institute of statistics of Rwanda
RNRA	Rwanda Natural Resources Authority
SACCO	Savings and Credit Cooperative

1. INTRODUCTION

1.1. Bacground and justification

The problem of improving food security in Africa has been addressed regularly (Maxwell et al., 1999; Gladwin et al., 2001; Rao, 2006; Godfray et al., 2010; Quisumbing, 2013). Additionally, different policies continue to focus on Millennium development goal one which is to eradicate extreme hunger and poverty by 2015. However, the challenge of ensuring food availability, access, and use for all, especially in sub-Sahara Africa, is yet to be met (Rockson et al., 2013). Therefore, special attention to the pathways towards improved food security is being taken by different researchers (Maxwell et al 1998; Owusu et al 2011; Gladwin et al 2001; FAO 2006; Rockson et al 2013; van der Molen 2013). Maxwell et al (1998) has conceptually shown cyclical fashion relationship between land tenure and food security once land tenure is secure, would play much role in increasing food security. Other studies have taken a center of attention on current concern of improving family or household food security which means ensuring households have the means to produce sufficient food of acceptable quality for their own consumption (FAO, 2006). This depends on food availability and it is known that most rural areas in Africa depend on subsistence agriculture and practiced by mostly women(Roberts, 1995).

Securing women's land rights are repeatedly explained as means to enhance food security in rural communities. Given that they gain power and greater influence on decisions in crops and food production. Women are more likely than men to make decisions that improve food and nutrition needs (Allendorf, 2007). Furthermore security of tenure by women increase likelihood that those women will invest much time and resources in the land they own for production of crops for food and adopt environmentally sustainable farming practices (Guertin, 2013). A positive link has been documented by (Allendorf 2007; Agarwal 2003; Deininger et al 2008; Daley 2010; Ali et al 2014; Menon et al 2014). Sraboni et al (2014) has found that empowerment of women in agriculture activities has a greater role in increasing food security in Bangladesh, where they could make decisions over land, increased participation in farming activities and raised the food productivity. Rao (2006) has also found that; for women to contribute to higher agriculture production in India depends on their access to secure land rights translated into women's decision making over land they farm. Even though, secure women land rights are critical to improve household food security in developing countries, it is often an overlooked factor by policy makers. Even where laws against women's discrimination on access to land are passed, without change in terms of decision making by women on the land thy own, food production declines and achievement of household food security fails (Rao, 2006).

In Rwanda, estimates indicated that 52 percent of households in Rwanda were food insecure in 2006. The vast majority of Rwandans is engaged in subsistence agriculture practiced on small family plots and most are living below the poverty line. Women comprise 52% of total population (NISR, 2012). They are mostly subsistence farmers; they depend on agriculture for their livelihoods, since economic activity in Rwanda is mainly based on subsistence agriculture by 80% of active population. Most of the rural households' farmers who depend on this agriculture are food insecure. According to NISR (2012b), 52% of households are food insecure and vulnerable, among them 42% are concentrated in rural areas. Furthermore, rural subsistence farmers are facing challenges to increase food crop production, to improve livelihoods as Rwandan living under poverty line is still high on 44% in 2012(NISR, 2012b).

Food security is a priority for the government of Rwanda to feed 11Million(NISR, 2012). Thus, government seeks to improve food security in its initiative of setting different strategic programs and interventions to fight food insecurity. In those strategic programs come; providing to women, rights to land which is intended enhance women's land tenure security. Indirectly, this would also contribute to household food security through directly food crop production since they gain powers and motivation to invest in land (Daley et al., 2010). The Crop Intensification Programs (CIP), which focuses on production of priority crops such as maize, bananas, cassava, beans, potatoes, rice, wheat likely to increase food availability, and coffee, tea as cash crops. Additionally, fertilizers and seeds are distributed to the farmers. Another strategic program is vegetable garden per rural household, where each household in rural areas must have a kitchen garden to grow vegetables. Thirdly is the one cow per household aiming to distribute one cow in rural areas to the poor families in order to get manure and dairy products. However, all these programs are intended to assist who own land among the poor households and land is already scarce resource in Rwanda (Polavarapu, 2011).

In Rwanda, until 1999, land rights for women were not recognized (Uwayezu et Al., 2011). To remedy this, the Matrimonial Regimes, Liberties and Succession Law introduced in 1999 with aim formalize the way in which inheritance was regulated and introduced within the regal system of the state, and mainly to break with important aspects of customary law which prevented women to own land. First, it granted daughters the right to inherit land from their parents just like their brothers equally; additionally women are entitled to a share of family land when their parents die, however this law was not retroactive. Secondly, the law gave wives rights to matrimonial property (Polavarapu, 2011). In addition, national land policy of 2004 and land law of 2005 amended in 2013, stipulates that all Rwandans should enjoy equal rights of access to land without discrimination, specifically men and women will enjoy equal rights to land and households are eligible for joint spousal land titles (GoR, 2005). Although these land rights are given to women, Rwanda has been for long time dominated by patriarchal society. Men have been considered as most powerful members of Rwanda society, where only men must have say first and women would obey everything said by men. This might hinder the enjoyment of women's land rights and exercise control rights on the land women own to improve household food security under the statutory tenure system.

This research investigated whether securing women's land rights in Rwanda resulted into women's decision making in food crop production to improve food security in the study area. The research identified the meaning and importance of land for women, whether they are aware of their land rights because when they are aware of their rights, they might also know how to protect their rights, together with perceived tenure security which helped the researcher to investigate their decision making over land they own with focus on food crop production. This was nuanced; on whether they can themselves or jointly, make decisions on their land, for example they are supposed to decide on types of crops to farm, where to farm them, inputs use, farming technology and practices independent from instructions from their husbands and relatives. Additionally cooperation of women with other programs and intervention aiming to improve food availability in place is investigated to find out their influence on women's decision making in food production.

1.2. Research problem

Before 1999, in Rwanda women used to farm on land which was not theirs in terms of land ownership. According to Rwandan custom, land ownership was privilege of men and land rights was inherited from father to son (Rurangwa, 2002). This system prevented a woman from land ownership where they were entitled only to use rights over family land (Ali et al., 2014) and decisions on the land were being taken by male. In past, traditional thinking and behavior have excluded women from the planning and implementation of development activities(Randolph & Sanders, 1992). Those social behavior and practices characterized the culture of Rwanda still exist in households. Men dominate by having a final say on the properties they own, even the widowed women wait their sons children to have a final say in the households, thus those obstacles inhibit widespread women and men equality in practice (Polavarapu, 2011). In Rwanda, women contribute up to 70% of the labor in Rwanda's agriculture sector and 80% of them are food producers (Santos et al., 2012). Women do most of all activities of crop farming, without making their own decisions on them (Polavarapu, 2011).

The new inheritance law published in the Official gazette No. 22 of 15th November 1999 has given women the right to inherit land. Article 50 states that "all legitimate children under the civil law shall inherit equally without any discrimination between male children and female children" (Daley et al., 2010). LTR has implemented equal ownership of land rights for all Rwandan citizens, stated in Organic Land law of 2005. Their land rights are registered, now women are land owners equally with men and entitled to make their own decisions on their land independently. The national land policy state that secure women land rights would empower them (Republic of Rwanda, 2004), so that they can influence decisions concerning the needs of food, provide them more confidence and willingness to invest in land. Furthermore they would gain an access to other opportunities like selling land, access to credit to purchase improved seeds, fertilizers and hire labor to produce enough food. Additionally they might increase income from yields to purchase of more and better quality food.

Much research has been conducted after LTR implementation. (Uwayezu & Mugiraneza 2011; Santos et al 2012; Daley 2010; Ali et al 2014) are researches conducted in the field, however, their studies were primarily interested in focus on whether and how finally women land rights are formally recognized and registered during LTR. Thus they didn't provide an insight on how that equally influences food security and actually see whether women could make decisions independently regarding food crop production which was dominated by men due the social and culture beliefs in Rwanda (Polavarapu, 2011). Although women have their land rights and their names are included on land titles, cultural practices required women to do most of all the work at the farm persists and women may comply with those practices without being part of decision making at the farm level. Now they have land rights, this study investigates the impact of secure women land rights in relation to food crop production. It focused on whether women could make their own decisions in food crop production such as the choice of crops to grow on their farm to improve food availability, where to farm, agriculture input use, fallowing, irrigation and decisions on the harvest. Thus, the study aimed to contribute to a more general understanding empirically the impact of secure women's land rights to food security.

1.3. Research objectives

1.3.1. Main objective

Main objective of this research was:

• To investigate the impact of women's land rights regularized in Rwanda on food security by providing an insight on women's decision making over land for food crop production in the sector of Muyumbu.

1.3.2. Specific objectives

From the main research objective, the following specific objectives are written down in order to fulfil the aim of this study:

- 1. To describe women's perceptions of their land rights.
- 2. To identify women's decisions in terms of selection of crops, where to farm, agriculture inputs in food production and control of harvest from land.
- 3. To determine the programs and interventions which might have had an impact on women's decision making in food production.

1.4. Research questions

The following are research questions which used in this research in order to realize the mentioned specific objectives:

Table 1-1 Research questions

Specific objectives 1.To describe women's perceptions		Research questions
of their land rights	a) b) c)	What is the meaning of land for women? Are women aware of their land rights? How do women perceive their land tenure security?
2. To identify women's decisions in terms of selection of crops, where to farm, agriculture inputs in food production and control of harvest from land.	a) b) c)	Do women make decisions to exercise their control rights on the land they own? What are the decisions in terms of selection of crops, where to farm, agriculture inputs and farming practices? What is the impact of these decisions in terms of enhancing food production?
1. To determine the other programs and interventions which might have had have an impact on women's decision making in food production	a) b) c)	What are the programs and interventions in place aiming food production enhancing? What types of support do they receive? How important are the supports compared to secure land rights in terms of enhancing food production?

1.5. Research matrix

To be able to answer the defined questions, there was a need to organize the information needed, identification of required data and research techniques used to collect that information and anticipated results were outlined. The research matrix used in this research was presented in table 1-2... The table 1-2 gives an overview per specific objective and questions:

Table 1-2 Research Matrix

Specific objective	Research questions	Data required& source	Data Collection Technique	Anticipated result
	1. What is the meaning of land for women?	Primary Data: women views	Semi-structured interview	Described meanings of land for women
1	2. Are women aware of their land rights?	Primary Data: women views	Semi-structured interview	Insight whether women are aware of their land rights
	3. How do women perceive their land tenure security?	Primary Data: women views	Semi-structured interview	Women's perceptions of their tenure security
	4. Do women make decisions in food production as their rights to exercise control rights on the land they own?	Primary Data: women views	Semi-structured interview	Proportion of women who make decisions and who don't make decisions in food production
	5. What are these decisions in terms of selection of crops, where to farm, agriculture inputs and farming practices?	Primary Data: women views	Semi-structured interview& observations	Indicated decisions that they make in terms of selection of crops, where to farm, inputs, irrigation, fallowing, usage of harvests
2	6. What is the impact of these decisions in terms of enhancing food production?	Primary Data: women views	Semi-structured interview& observations	Determined benefit of these decisions in terms of increased harvest
	7. What are the other programs and interventions in place aiming food production enhancing?	Primary Data: Leaders of the Muyumbu sectors responses And women views	Semi-structured interview	Determined programs, interventions in food production, and the benefit for women
	8. What types of support do they receive?	Primary Data: Leaders of the Muyumbu and women views	Semi-structured interview& observations	Identified supports they receive from those programs and interventions
3	9. How important are the supports compared to secure land rights in terms of enhancing food production?	Primary Data: women views	Semi-structured interviews& observations	Determined importance of secure women land rights and titles registration including their names on titles compared to the support from those programs and interventions in food production.

1.7. Thesis structure and research Framework

The following figure 1-1 indicates the research framework and the chapters in which this thesis was arranged.



Figure 1-1 Research framework and structure

This figure 1-1 shows the specific process of how this study has been conducted. The following is a short description of the content of each chapter:

Chapter one: Introduction.

This chapter provides an overall introduction to investigate the impact of secure women land rights in relation to food security; background and justification of the study, research problem, objectives, research questions, and analytical framework.

Chapter two: Literature review.

This chapter describes the concepts of secure women land rights, women's decision –making status in food crop production, food security and the rationale of women's land rights and their significance to research. It reviews literatures and provides an overview of land tenure reform in Rwanda, to outline land tenure regularization and its impact on women's tenure by regularizing their land rights.

Chapter Three: Methodology.

This chapter presents and explains the methodology used to collect data; this includes techniques of data collection, sampling technique and limitations in data collection.

Chapter Four: Results presentation.

This chapter presents and analyses the results of data from field work, which concern the opinions, views and observations from fieldwork. Data analysis methods was applied to come up with scientific and trustworthy information.

Chapter Five: Discussions.

This chapter discusses the results presented in chapter four; it give information whether secure women land rights has impacted food security in positive way or not based on the results found and presented in chapter four.

Chapter Six: Conclusions and Recommendations.

This chapter evaluates the achievement of research objectives by providing a reflection on the answers to the questions posed in this study. Limitations of this study will be outlined while recommendations for further research were given in this chapter.

2. LITERATURE REVIEW

2.1. Introduction

This chapter deepens the concepts of women land rights, and the role of women in agriculture production in developing countries. It further describes land tenure reforms undertaken by Government of Rwanda to give equal rights to land between women and men. Literature review shows what has been done in previous research and clarifies the meaning of concepts used in this research in order to build theoretical departure points

2.2. People and land relationship

People and land relationship are how people organize land. In some way people must relate to land. It include the way people in certain society think about land (Williamson et al, 2009). People perceive land in different way. Williamson et al (2009) gives different understanding and definitions to the concepts of land which could be found in societies. However, few studies have questioned the meaning of land for rural women. In India, land is recognized to be crucial means for food production and rural income and women have been demanding land rights since 1970s (Agarwal, 2003), but there are also example of where women did not identified this as a priority (Rajgor, 2008). In Guatemara, and India, land was recognized as mobilizing force, security and legacy while in Sierra Leone they stated that land has no value(ActionAid, 2013). The way women define land is important for land Administrators to perform their most significant task, the management of women's land rights.

It is important that women reveal their own thinking about land and importance of owning land for them (Rajgor, 2008). It may be possible that women do not understand the importance of owning land on their own (Rajgor, 2008), however, land ownership, access to land by women, lead women to recognize the importance of land and be encouraged to optimal use of the land (Brown, 2006). Thus, hearing rural women own voices about the meaning of land for them, is supported by the fact that, the way people think about land is necessary for LAS to perform their most significant task, the management of how people think about land (Williamson et al, 2009).

2.3. The concept of perceived tenure security

Women may perceive tenure insecurity where the form of land laws ensure women's land rights and approve equity for women or prohibit discrimination against women (Polavarapu, 2011). The subjective perception of security is important. This is because, women may not enjoy tenure security even when laws against discrimination of women on access to land are in place and legal tenure security in the society (Simbizi et al., 2014). Even where women are titled to access to land and given land rights by laws, they may still face challenges in practice due to expensive means to exercise their rights and sometimes the resistances to change by surrounding people (Polavarapu, 2011) which may be the source of threats by families. Land and agriculture policies intended to enhance land use management and food security, may be making decisions on land they own (Pritchard, 2013), thus prevent women to exercise their rights on the land.

Despite the land policies which provide registration and titling; inheritance without discrimination and allowing the invocation of the coercive hand of the state in the case infringement of women's rights, women may see things differently. The literature define perceived tenure security as form of household

level chance estimate towards the perceived probability of eviction by the state or land owner sometimes complimented with others factors that may cause involuntary relocation such as threats from land conflicts with neighbors, or family members (van Gelder 2007; FAO 2002).

2.4. The rationale of women's land rights to food security

2.4.1. The role of women in agriculture production

Various studies show how rural women are much playing an engine role in agriculture in developing countries. Rural women play key role by working in production of crops from the soil preparation till post harvest activities (Sraboni et al., 2014). Their activities also include tending animals, processing and preparation of food (Deere et al., 2010). It is estimated that in Africa women do most of agriculture work and they provide between 60% and 80% of agriculture labor in Africa (Nnadi et al., 2012). Despite women's critical contribution to the family food and income through productive activities, no recognition is given to them as important food security contributors (Enete & Amusa, 2010). This is found to be influencing strongly the decisions on the nature of crops to grow on the land.

In developing countries the main source of food production is agriculture with 80% of active people working in agriculture (Nnadi et al., 2012). Women constitute most of that agriculture labour force. Even though women have been major player in agriculture, her involvement in decision making in food crop production activities is seen to be minimal. It is already seen that if women given opportunity can be a very helpful for change to improved home and a better society (Deere et al., 2010)

Women need access to land and to make their own decisions to be able to produce food. They need to decide themselves what crops to grow which are likely to give better outputs(Deere et al., 2010). They need to buy improved seeds and fertilizer, and to hire labor and in all cases land can be used as collateral to gain money to buy those needs(Sraboni et al., 2014). All these needs for improving agriculture outputs need control rights over land, especially in developing countries where considerable gender bias exists (Deere et al., 2010). IFAD (2010) argues that women's secure access to land is the basis of sustainable food production in developing countries, because women get power to decide regarding the needs of food, mainly what crops to grow and they are motivated to invest in sustainable agriculture by using selected seeds and technologies.

2.4.2. Women's decision-making on land and empowerment

Kabeer (1999) conceptualize women's decision making power as three points in time. According to Kabeer (1999), the first comprises pre-conditions or resources, second one is taking actions, decisions and choices by themselves, and the third one is outcome from the actions done. Kabeer (1999) divide these pre-conditions into sources and settings of empowerment. The author explain that sources of empowerment of women are objects and assets which women have that improve their security or influence their household decision making power and facilitating empowerment more broadly. Settings of empowerment are defined as characteristics of women's past and current environments that facilitate empowerment such as education of her parents.

Allendorf (2007) based on this understanding, state that women's rights to land act as source of empowerment. By increasing women's access to land and security, result in increasing their control over the land they own by making major decisions such as decisions on the crop to grow, and other inputs, and technologies to use in their farms. Moreover, Allendorf (2007) found that other sources and setting of empowerment are associated with a greater empowerment. All above explanations make somebody

understanding the rationale of women's land rights and other supports to allow women to boost their household's food security.

Enormous evidences exist that households do not act in a unitary manner when making decisions which means that women and men within households do not have the same preferences always (Sraboni et al., 2014). That difference in preferences creates a gender gap in control of agriculture inputs which have implications for productivity. Although the debates on how women's land rights can improve food security are still going on (Rao, 2006), positive links have been documented by different studies (Nnadi et al., 2012). The growing evidence suggests that, increasing in women's control over land has positive effect on a number of development outcomes including raising productivity (Sraboni et al., 2014). Women's land rights are increasingly put forth to promote development by empowering women and increasing productivity. The theoretical background on women's land rights put into view that women's land rights will increase the women's ability to make decisions on the land they own, called again empowerment of women (Kabeer , 1999).

However, researchers evaluated little on this issues (Wiig, 2013). Allendorf (2007) and Wiig (2013) provide initial steps towards a greater empirically understanding whether women's land rights indeed empower women. Allendorf (2007) found that women, who own land in Nepal, are likely to have a final say in household decisions as a measure of empowerment.

Rao (2006) argues that in India women's land rights is development, however, that meant to allow men not to have responsibility for household food security and it appears also to be leading to an enhancement of work burdens without much change in terms of decision making authority.

Women's input to the survival of the family is invaluable. Ericsson (1999) compares the contribution of women for their families as high, even more than the husbands do, however, it may not always be possible to count their work done in money. The author gives an example of energy and resources that women spend in their houses although are difficult to estimate. Women always take care of the children, and most of the time when the family is dissolved, the children go with their mother (Allendorf, 2007). Beside the fact that in Africa by traditions and customs, the married couples stay in the husband's house, a place to stay for women needs to have a place to stay in with her children, to grow the food crops to be able to feed her children.

Although increasing women's control in agriculture is a key to raise productivity, regulating other environments is necessary to contribute to facilitation of their ability of making decisions in food crop production. This is because rural women are the poorest in the among rural population. The lack of means to buy agriculture inputs, small size of their farm, and big size of their family, are major challenges to attain food security.

2.5. Barriers for women to enjoy their land rights

Case studies and surveys carried out by FAO and other development organizations such as IFAD show that women do not have equal rights to land (FAO, 2013). FAO supported studies in developing countries clearly indicate that women's access to land and other productive resources is limited. Despite efforts to protect women rights, legal, economic and social-cultural obstacles persist (FAO, 2002). Even, where legal framework supports women land rights, social and political structures may continue to delay the achievement increased food crop production. The following shows the outlined barriers for women access to land from FAO studies.



Figure 2-1 Institutional barriers (FAO, 2002)

The figure 2-1 shows that women face the obstacles not only in formal legal system, but also in different institutions. How the laws made are enforced and implemented would play much role, if these land laws are applied without taking into account of existing beliefs, religion, domestic accustomed and the overall economy and education status, women would continue to be discriminated.

2.6. Agriculture production and food security

"Food security is achieved when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for a healthy and active life. This can be achieved at individual, household, nation, regional and global levels" (FAO, 2001). National food security involve both the production and the ability to import food from global markets to meet a nation's consumption needs (Maxwell, 1996). Household food security was also defined as ensuring households have the means including access to land to produce sufficient food of acceptable quality for their own consumption for all household members in the year-round (FAO, 2006).

This research focus on this level since the household is the institution through which mainly people have access to both land and food. Additionally, subsistence farming is mainly practiced in the study areas. This shall be understood in this research that increasing food crop production at household level will ensure sufficient availability and access on household food security, including other three dimensions of food security i.e. stability, utilization, and access (FAO, 2006). FAO (2006) argues also that increasing food crops production has a major role in achieving food security.

However, even though major players in agriculture are women in developing countries, they encounter difficulties in decision making process in agriculture. It is reportedly that male continue to dominate the decision making in agriculture even where women are largest providers of farm labour. This is what (Enete and Amusa, 2010) called counter-productive because when women, the key actors perform farm tasks without being part of the decision making, especially when the decisions fail to recognize their other household responsibilities. Men may decide to grow cash crops while women needs to grow food crops because it is her responsibility to prepare and food each and every day.

2.7. Women and land rights in the case of Rwanda

2.7.1. Land Tenure Reform to procure women's land rights

Land tenure is defined by FAO as "the relationship, whether legally or customarily defined, among people, individual or groups, with respect to land". Moreover, FAO, explain land tenure as institution; they clarify this statement in these words: "rules invented by societies to regulate behavior. These rules of tenure define how property rights to land will be allocated within societies. They define how access is granted to rights to use, control, and transfer land, as well as associated responsibilities and restraints". They conclude stating that in simple words land tenure systems determine who can use what resources for how long, and under what conditions (FAO, 2002).

Land rights can be defined as rights to own land, to use, to control and associated freedom to lease out, mortgage, sell, purchase and bequeath land that are legally and socially recognized and enforceable by external legitimized authority, it can be on village level, institution or executive body of the state(Agarwal, 1994; Meinzen-Dick et al 1997). For women to exercise these rights should not require consultation or approval beyond that required of men (Daley, 2010).

Securing women's land rights in the case of Rwanda can be understood in this research as rights given to women since inheritance law of 1999 allowing access to land and property equally with their brothers and spouses. Land tenure regularization by registering land rights including women as allowed legally owners since land rights are registered in both names men and husbands as co-owners or family co-owners once inherited land (Daley et al., 2010). Ali et al (2014) found that the program of land tenure regularisation improved land access for legally married women and prompted better recordation of inheritance rights without gender bias. Thus, government of Rwanda undertook land tenure reforms and LTR where women had joint land ownership proved by land title certificates given to them and registered in official land registries (Daley et al., 2010; Ali et al., 2014).

2.7.2. LTR, registering women's land rights

Land tenure regularization meant in the case of Rwanda as land registration program. The program started in November 2005 and ended in 2013, registering all land for all and for the first time by surveying systematically all land parcels (Gillingham, 2014). It provided land titles to all rightful claimants, women and men, without any discrimination based on sex. It aimed to clarify and protect the existing rights on the parcels. This process was guided by Land law of 2005, where rights on land are defined and customary tenure effectively abolished but rights previously obtained were protected (Kagitega & Rurenge, 2012).

Women land rights are now recognized officially for the first time in Rwanda land laws and formally registered, through implementation of the land law determining the use and management of land in Rwanda as stated by Rwanda national land policy. Land Tenure Regularization program has resulted to the formal land ownership by women. The study of gender desegregated land tenure regularization in 2012 showed that 81% of land was owned jointly by men and women; 11% owned by only women and 6% only by men and 2% for non- natural entities such as churches and others institutions (Dillingham, 2014).

2.8. Conceptual framework

Conceptual framework which was used in this research to show the relationship between the concepts base of this research is shown in figure 2.1.



Figure 2-2 Conceptual framework

This conceptual framework, figure 2-2, should be read as follow: The LTR program secured women land rights. This would result in increased women's decision making power in food production and leads to food security through increase of food production. However, there can be a difference between rights as defined in statutory law and the rights as actually practiced on the ground.

2.9. Summary

In this chapter, the theoretical needs to achieve the objectives of this research have been presented. It reviews literatures on women's land rights and its role of to empower them. It argues that women would improve food crop production if they were empowered to take decisions themselves in food crop production and control of harvest. The role of women in food crop production has been described in this chapter. Land reforms in Rwanda to procure women land rights and registration for the first time of their names on land titles and the objective to increase food security have been talked about. This research aims to investigate the impact of the women land rights given with respect to women's decision making on the land they own, in food crop production and thereby the link the impact of land registration on food security. As elucidated, land is major resource for food production in developing countries, particularly for rural women who plays a major role in agriculture. Even though women are major actors in food production in Africa, they may still face challenges to make their own decisions on land. Moreover, where the access is procured by legal framework, they may still face the barriers in other institutions as discussed in this chapter.

3. RESEARCH METHODOLOGY

3.1. Introduction

A research is a process carried out to systematically collect, analyze and interpret information in order to enhance understanding to answer predefined questions (Sahu, 2013). To achieve the research objectives, case study approach was used and rural women in the sector of Muyumbo have been the targeted population and qualitative approach to identify the points of view of women on their everyday interactions in decision making in food production, awareness and perceptions towards land rights and tenure security was used based on literature review found and Data collected on field with interview and observations.

3.2. Data collection

In this research qualitative research method was adopted in order to gain an insight on the impact of women land rights on food crops production in Rwanda. According Flick (2014), only qualitative methods are able to provide the actual scientific explanation of facts and they are especially appropriate for answering micro questions. Thus the proposed research used qualitative methods and descriptive analysis methods were served to analyze the answers from respondents. Women are themselves who have specific information and experiences in relations to the impact of land rights given to them on their decision-making in their dairy activities for food production. Muyumbu sector in Rwamagana district, Eastern province were the study area used to collect data. To meet the objective of this research, the researcher collected data from field such as semi structured interviews and observations, group discussion. Collection of the data for this research were divided into primary data based on research focus on interviews and observation, collection of parcels owned by interviewed women as secondary data. Literature review was performed to build departure points of this research.

3.2.1. Study area

The Study area was in sector of Muyumbo, district Rwamagana, Rwanda country. Rwanda is organized in 4 provinces and Kigali city, 30 districts, 416 sectors, 2148 cells and 14837 villages respectively. Rwanda is still largely rural, with 92% of population living in rural areas. With the exception of Kigali City which is the capital city of Rwanda, the majority of population of each province lives in rural areas as figure 3.1 bellow indicates it and it is clear that the Eastern province is the most rural province in all provinces with 93% of population living in rural areas which mostly influenced the study area choice.



Figure 3-1 Percentage of people living in rural areas and urban areas in 2012

The choice of study area was adopted multi-stage non random sampling procedure. First, Eastern province was selected because it is the most rural province in all provinces.



Figure 3-2 Location of Study area

Muyumbu sector was selected based on time and financial basis as it was easily accessible among the rural sectors. This sector has five cells which are Akinyambo, Nyarukombe, Ntebe, Bujyujyu and Murehe cell.

It has an area of 50.3 square kilometer, its population is 15 763 people while its dominant land use is subsistence agriculture with 83% of land use. Lastly two cells in Muyumbu sector were selected purposively because were ones which data of women's ownership on land were available, those cells are Akinyambo and Nyarukombe. The study area is shown in figure 3-2.

3.2.2. Sampling strategy

Base on literature, usually the desired level of accuracy, time and cost allocated must be considered when formulating the sampling strategy. Bearing this in mind, the sample was based on the *non-probability sampling strategy* (Sahu, 2013), purposively and judgmental on the basis of rural women farmers who registered their land. The population of interest was rural women farmers who own land either jointly or individually. A sample of women respondents was needed and the limited time for the field work and nature of information needed determined the sampling of 20 women farmer in the 2 cells and 5 sector level leaders were chosen by a researcher to be able to answer research questions counting 25 interviewees.

First selection of agriculture parcels were selected from the list of all parcels in the 2 cells owned by women either jointly or single ownership, got from RNRA, and then using purposive quota sampling was used, 5 for single owned by women and 5 for jointly owned (woman and husband or others), the total number of 10 parcels in each cell, counting of 20 parcels. Availability and willingness to answer the questions were also considered, where the people did not want to participate in interview, the replacement strategy was used to find another one so that the number of 20 interviews could be filled. The agriculture parcels had been chosen to work on with their owners to be sure that the women who participated in interviews are the real owners of the land in the case they don't want to bring their land titles



Figure 3-3 Organizing interviews with CNF at Muyumbu Sector

Thus, sample size comprised 20 women farmers who are owners of land either individual or jointly in 2 cells based on first 20 selected parcels, 5 local leaders, amounting to a total of 25 sampling units in the sector. It included to meet them and spent with them some time to do field observations. Prior to that, talks with the leaders to inform them on this research and to get permission and support from them have been performed. The main persons met before starting interviews and observations were executive secretary of the Muyumbu sector and executive secretaries of the 2 cells, the woman in charge of CNF, and agronomist. Thereafter, the selection of parcels to work with the women owner was performed. Table 3-1 shows the selected parcels.

Table 3-1 Parcels selected in Akinyambo Cell from RNRA

	Parcels owned by interviewed women in Eastern, Rwamagana, Muyumbu, Akinyambo Cell		
	Owned by only		
No	women	Other parcels she owns	
1	1509	1519, 906, 2581	
2	1968	2071, 2034, 1623	
3	385	1166	
4	811	812, 822	
5	921	920	
	Owned Jointly	Other parcels they own	
6	1473	1466, 1666, 1467, 1468, 1472	
7	1664	1665	
8	2166	2166, 2186	
9	1032	1032	
10	597	2372, 2535, 2510, 2091, 2099, 599	

Table 3-2 Parcels selected in Nyarukombe Cell from RNRA

	Parcels owned by interviewed women in Eastern, Rwamagana, Muyumbu, Nyarukombe Cell				
No	Owned by only women	Other parcels she owns			
1	1312	none			
2	2826	none			
3	1666	none			
4	376	none			
5	371	none			
	Owned Jointly	Other parcels they owned			
6	1183	1117, 3128, 3124, 3126, 3251			
7	1692	1705			
8	2045	3670			
9	2832	2646			
10	550	4151			

The tables above, 3-1 and 3-2, show the parcels selected owned by women and mainly observed during field observation. Women were being asked whether they are aware of land rights they have, perceive tenure security, on all parcels the own and whether they make decisions on anyone of the land they own to exercise control rights.

3.2.3. Primary data collection methods

3.2.3.1 Semi-structured interviews

Interviews with rural women were main source of primary data in this study. This technique allowed interviewing a number of 20 rural women farmers who own land and other 5 key informants on programs and interventions in agriculture production were interviewed to obtain an insight on those programs and interventions and how they cooperate with women in the areas and the supports given to those women for full involvement in decision making in food crop production; these people were executive secretary of Muyumbo sector, Agriculture extensions officer, in charge of CNF, education, land Notary and Manager of Sacco Muyumbo. Semi-structured interviews were served to collect the data from respondents; questions were drafted before field work, and unstructured interviews were served for local leaders.

3.2.3.2 Pilot interviews and refine questions

After reaching on field and getting permission to undertake interviews with women in the area, a technique of pilot interviews were served to test whether questions are appropriate to get the answers quickly and women would not struggle to find what to answer, this trial has been conducted in two days and the researcher realized that questions prepared before were too many and were making them to think a lot to answer, where it resulted into changes in the way of making them more effective and efficient.

3.2.3.3 Farm visit and observation method

Observations is other source of primary data, this method were used to observe fields where women are working on, to identify the impact of their decisions, technologies used to farm food crops, and to observe their attitude during answering questions. During observation researcher had time to write down the observations such as crops grown in their fields, technologies used to farm and crops grown. The following figures shows owned parcels by interviewed women which were observed.



Figure 3-4 Location of visited women's pardes, akinyambo cell

3.3. Literature review

Literatures were used in this research as it is an essentially step which begins in building a body of knowledge, it is about searching previous research to understand how far the people in the field of interest have gone though the issue(Flick, 2014). Thus a review was carried out in order to find out what have been searched on women land rights, securing women land rights and the documented impact on food security, this is done through analysis of journal articles, books, conference papers, officials reports and documents. Analysis was being through content analysis. Findings of impact of securing women rights in Rwanda on decision making by women in food production in Muyumbu sector were discussed with the support of literature review.

3.4. Data analysis and results

After fieldwork, data obtained through interviews were organized, analyzed and results were presented. The open questions were documented in transcripts whilst closed questions were documented depending on the chosen answers, by interviewee, which were coded with numbers. Thereafter, Open answers were analyzed using text based methods. An open coding process (Flick, 2014) has been followed to get the sentences or words that sum up what have been said in the text. According to Flick (2014), this process includes identifying or discovering categories that emerge from the transcripts, verifying them, confirming and qualifying them by searching through the whole data and repeating the same process to identify further categories. In addition, verbatim response approach was also used to report what interviewee responded word to word; it refers to the exact words spoken by the respondent. Moreover, closed questions were documented and analyzed using various software, such as excel and SPSS and Excel were used to process data and analyze them using descriptive analysis. The results are presented using table,

graphs and summarized key thoughts, some open-questions were having pre-coded responses and categories used by interviewer, but not these ones were read to interviewees.

4. **RESULTS PRESENTATION**

4.1. Introduction

This chapter presents the results of impacts of women land rights in Rwanda by focusing on food crop production, in view that land titling program increased power of decision making on the land by women. The data was collected during fieldwork conducted in sector of Muyumbu, in 2 cells Akinyambo and Nyarukombe cells, in Rwamagana district, Eastern province. Data was obtain through interviews with i) rural women women farmers owning land rights and ii) key informants on programs and interventions to increase food production existing in the area. The meanings of land and importance of land for the women, the awareness by women on land rights they might enjoy, and the perceptions of women on their tenure security are presented in this chapter. Moreover, involvement of women farmers, owning land, in decision- making on food crop production are presented. Lastly but not least, the programs and interventions aim at enhancing food security were identified. The benefits and supports from those interventions and programs have been also analyzed and presented in this research.

4.2. Perceptions of women on their land rights

4.2.1. Perceived meaning of land

The meaning of land for women in the study area was sought from qualitative approach. The responses to the question "what does land mean for rural women farmers", interviews were transcribed. Thereafter, an open coding process has been followed to get the sentences that sum up what have been said in the text. Table below indicates the results of perceived meaning of land by interviewed rural women farmers;

Layer of coding (repeated idea)	Description
Land as the primary source of food	All women shared same view, where in their word food was coming explicitly and frequently. They acknowledged the land as a primary resource for their households' food production. One woman said that <i>"I eat because I cultivated the land"</i> . Additionally, they explained that they can sell their harvest to buy other types of food they need. As an example, one said that <i>"land is where we get our daily food, we get food from the</i> <i>crops we grow on it, we can sell our harvest to get money, and because of my small</i> <i>land, my children are fine"</i> .
Land as the source of livelihood	Land was recognized as the source of life. This was also a distinguished meaning of land. The reasons were that they get their livelihoods from land, because agriculture is their primary occupation, they are paid by their own harvest after selling it. In one interview, a woman said "land <i>is a source of all life, [] from my harvest I can get money, my children are able to study, and my children are not thieves because we have land</i> ".
Land as crucial for social status, wealth and power	In the study area women stated that; land is the basic means for respect in their community, a source of wealth and power. They confessed that to own land is valuable because it helps them to be trusted and they can borrow money from the neighbors because they know that the land is there and one can find what to pay back. In one interview. A farmer

Table 4-1 the meaning of land for interviewed rural women

	said "Land is the source of everything,[] if you don't have land you are nothing, they respect you if you have the land". Another one said "land is source of wealth, I use land to develop myself, my children are studying because I have land and I have feelings that we are trusted in our neighborhood because we have our own land"?
Land as crucial for development, shelter and children's education	Women explained again land as their crucial mean for development, the place to stay on, and they can use it for children's education.
Land as heritage and transferable thing	Another meaning mentioned by women was that land was a heritage from ancestors because land was always there it is not them who created it, moreover land will be inherited by their children.

The table 4-1 above shows different meanings of land for women. Land was explained in its importance and the value to them. The main importance was that land is the primary source of food, the source of livelihoods. Women added that, they use their land for development of their families, where they can use the land to pay school fees of their children; they are assured to the shelter because of the land they own. Women were explaining that their children will be able to inherit their land.

The value of land was explained to be, apart from the mandatory aspect of the program, motivation to be representing during registration process. The results indicate that, half of women (16 out 20) interviewed were present and participated in land registration program. Another evidence of land's value for the rural women was supported by their response admitting that they consider themselves better off compared to others who do not own land in their community.

Further than being productive asset, land is viewed as a prestige asset for women. The results have revealed that it increases women status in society because people respect and trust them. Thus, women perceive the land as important asset to own.

4.2.2. Awareness by women of their land rights

On the question whether women are aware of the land rights that they have, all women said yes. This may shows that women have the knowledge on their land rights. The rights that women in the area responded to have when asked to tell the rights they have on their land include:

- Rights to use the land and manage it properly. This usage included;
- to use their land as collateral,
- to pass down the land to their children,
- to divide the land in separation case for those who are married;
- to own the land alone because she is single owner;
- to use the land in agriculture production;
- to own the land jointly with the husbands;
- to use the land for development of themselves and
- To have equal rights with their husbands.

Once more, for the perceived meaning of having their names on land titles for them, the main responses were that: The husband cannot cast them out or sell the land without their consent; they got rights to give a heritage to their children; they feel that they have value in society and they perceive that their government cares about women.

To figure out the level of their knowledge on their rights, the statements were used to capture the knowledge on the stated land rights in land laws and responsibilities. The following statements have been used: (1) A wife and husband under community of property regime should register their land with both names on the titles, (2) wife's consent required to transfer land, (3) surviving spouse will get land in the case of death, (4) equal division between sons and daughters, (5) government can take the land if fallow is more than 3 years, (6)It is not allowed to subdivide agricultural parcels if each child parcel will not have 1 ha respectively. Thus, it is revealed that they still lack information on established regulations on land as indicated that some source of information are friends. Thus, the following are results:



Figure 4-1 Results about knowledge of women on land rights and duties in land laws

The figure 4-1, indicate that, all women interviewed know about equal division of land between sons and daughters and they support the statements, they also know the required consent of wife in the case of transfer and they are happy for it, the same women are aware of registering the land in both names, husband and wife legally married under community of property. On the other hand, only 7 out of 20 women answered correctly the statement that "It is not allowed subdividing agricultural parcels if each child parcel will not have 1 ha" and other 2 out 20 did know that statement. In addition, 11 out of 20 were not having enough information; the response was "may be", which explains uncertain to them, they might have heard it before, but not enough information.

All women interviewed are aware of mainly use rights and are aware of inheritance law and jointly ownership of land once they are legally married and alone when there widowed or single. However, the among them are unaware of provisions/ limitations such as how many years allowed fallowing their land, the size of the parcel allowed to be subdivided.

4.2.2.1 The source of information about land rights.

This study presents also the source of information on land rights and provisions/limitations, which would help women in control on their land, thus make decisions which can improve their household food crop production. The results are presented in the following figure 4-2.



Figure 4-2 Source of information about their land rights

The figure 4-2 above indicates that the majority of women said to have got information through awareness raising meetings conducted before and during LTR. Friends were mentioned also as source of information by women. Trainings, and Radio/ television were pointed by few women.

4.3. Perceptions of women about their tenure security

Rural women in the study area have the way they perceive their security of tenure. The researcher investigated the way through which they acquired the land, to seek whether they faced any problem of insecurity, conflict and how they managed to handle the problem encountered. The results are shown in figure 4-3.



Figure 4-3 Mode of land acquisition for interviewed women

According to the findings presented in figure 4-3, majority of women owned land though own purchase (35%). Also, women owned land through their spouse (30%), explained that their spouses had had the land before they got married. Another mode of acquisition which existed in the study area was through government due the land redistribution because they were retuned refugees. All women explained that no problem or conflict between previous owners and them experienced since they started using the land. They clarify that they did not run into difficulties in registering the land jointly or alone.
The other insights of their tenure security, other than simply having registered land titles were sought. Thus, these were (1) whether they do not feel fear that their co-owners and relatives can transfer the land without their consent, (2) whether they think that there is possibility that government can evict them in the 5 -10 years (3) Whether they feel fear to invest your capital in land because they are not sure to have the land in the next 10 years. The results are following:



Figure 4-4 Perceived threat of transfer their land without their consent



Figure 4-5 Perceived threat of eviction the government in the next 5 or 10 years

The figure 4-4 and figure 4-5, show the perceptions on the possibility of being evicted; 13 out of 20 interviewed women see that there is no possibility of unwished transfer of the land they own by their

husbands or relatives and 15 out of 20 interviewed women responded that there is no possibility to be evicted by the government in the next 5 or 10 years, respectively. However, others responded that there are possibilities of unwished transfers by their husbands and relatives which were 7 out 20 of interviewed women, and others 5 responded that there is a possibility to be evicted by government in next 5 or 10 years.

For example one responded gave a testimony of how she was going to sign transfer documents without knowing what was written in these words: "My husband wanted to sell the land without my agreement, he brought a form and wanted me to sign I asked him what was about but he told me other things, I knew that what was telling me was not the truth, then I insisted to know the real purpose of documents where I he managed to not sign". Despite the uncertainty of the future, all women interviewed affirm that they do not feel fear of investing their capital in the land due to uncertainty to have the land in next 10 years.

4.3.1. Awareness by women of their land rights

The majority of women responded that there were changes in their tenure security. They admit that their tenure security has increased after allowing to them inherits rights, and ownership of the land. There was augmented mode of accessing the land through inheritance and long term use of the land and their husband will not sell the land without their permission. However, one of them said that she do not perceive changes because she has been always secure, she meant that no problems in usage of land encountered before. Secondary, all women shared the same views and admitted to have increased number of land rights and assurance of rights (security today). However, they were asked about duration of rights (security in the future), 6 out of 20 responded that they do not know about the future, even though no case of threats of evictions noticed in the areas.

Thus, women feel secure due to land rights and jointly or alone ownership given to land and the requirement of consent for transfer make them feeling that their husband or relatives will not sell or give the land without notifying them. However, they feel insecure about limitations in land law, and few of them doubt on whether their husbands or relatives will not fraud the transfer in the future due the reasons that who are not able to read may sign the documents without knowing what is written on them.

4.4. Women's decision making in food crops production

4.4.1. Women's preferences between food crop and cash crops

The results on the preference crops to grow on their land, between food crops and cash crops revealed that in the area women chose food crops compared to cash crops. Those food crops were mainly beans, maize, potatoes, bananas, soya, and vegetables.



Figure 4-6 Bananas in woman's farm (author)

The photo in figure 4-6 was taken in one woman owned farm and it shows bananas they planted in their farm. However, 1 out of 20 said that she feels, if she had money and the strength as men, could have grown cash crops because they results into money and she would become rich. Women with small land prefer to grow mixed crops which they believe that is the source of various nutrients, to increase the family food security.

4.4.2. Women's decision making in food crop production

To know women who make decisions and others who are not making decisions on main food crop production operations, the following variables have been used; whether decide what crop to grow on her land, where a certain crop should be grown, seeds variety (improved or local seeds/unimproved), fertiliser and manure application, fallowing, and irrigation, harvesting and usage of harvest and what to cell, have been measured. The results are shown in the figure 4-6 below.



Figure 4-7 Women's decision making on seven food crop production's decisions

The figure 4-7 shows that, 7 out 20 make always decisions regarding the choice of crop to grow, while 4 out of 20 said to never make decisions on the choice of crop to grow and 9 out 20 responded to make decisions on the crop to grow on their land, sometimes. Second, it shows that only 11 out of 20 women

make decisions always on where to grow the crops and 8 out of 20 make decisions sometimes on it. 1 responded to never make decisions on where to grow a certain crop. In addition, these results show that, 10 women out of 20 make decisions on selection of seeds; other 10 women make the same decisions sometimes.

Thus, interviewed women make decisions in food crop production, however, more than half of interviewed women make decisions sometimes and others do not take farming decisions listed. Moreover, there was no irrigation practiced by the women farmers in the area. The reason to not irrigate was that, the activity is for men only; they can't do it because it requires physical energy, thus, they wait rain season for farming.

4.4.3. Identified reasons of not making decisions on food crop production

Women who do not make decisions and others who responded that they do it sometimes, they revealed the reasons. The main reasons were the required consultation with neighbors due to the program of crop intensification, secondary, consulting other people like their children for those who are widowed, and husbands are mentioned, for those who are married, as the reasons for not making decisions on major operations in food crop production. However, this last one, as they explained, depends on the existing relationship in their households and economic status of the woman. A widowed woman said that: "when I wanted to plant new type of banana which called fia brought to us by our leaders, I had to wait my children to come in holidays, and I explained them the benefits of growing that type of bananas, and they understood, and helped me to prepare the field to plant that type of bananas, thus, the last say came from children".

Some of those who declared to make decisions sometimes, revealed that, when there were no instructions from leaders to cultivate the same crops in neighborhood they can choose themselves the crops to grow because they have good relationship with their husbands, and their husbands do not mind if they make a certain decision.

There is lack of means to buy seeds, fertilisers, and hires labours for women in the area. Women said that that they get inputs from buying mainly or the kept seeds from previous harvest and they the majority said to work alone in most of faming activities while their husband are concentrated in off farm activities and can provide a labour to work with their wives. Women who need to buy seeds explained, that they ask money to buy agriculture inputs from their husbands. Others said that they can borrow seeds from their neighbours. This means that rural women depend on other people not necessary their husbands, to provide means to use in farming such us agriculture inputs mainly seeds, thus, they sow, the available seeds, not exactly what they wanted to grow.

4.4.4. Impact of their decisions on increased harvest

In the study area, who answered to have made decisions always and sometimes has explained whether she notices any increased the harvest on their land due to their decisions made, whether respondent changed crops she used to grow, after getting land rights, and whether could be accompanied by changes in diet since got land rights. Women do not perceive increased harvest, when they grew unimproved seeds, due, however, when they grow improved seeds they achieve on a better return. Also, 7 out of 20 women responded to had changed the crops used to grow by introducing new types of bananas and maize and said to have increased the harvest. This was due to the new type brought by government in its program of crop intensification.

The interviewed women were asked whether the increased harvest was with the ownership and land titles on the land given to them. The majority of women could explain that they don't perceive any relation as they did not use the titles to invest in land by buying seeds, or to change methods of faming as they still practice the traditional farming techniques. In one's words said that "The harvest can be good because we sowed the good type of seeds and found fertilizers, together with the person's knowledge in good practices of farming and weather conditions. We changed the crop because we are told by leaders that it likely to give a better harvest and it does depend on the ownership on land by women. Sometimes we decide to grow the crops because it only the seeds we are able to provide ourselves, in that way you can't expect that the harvest will be increased". Another woman said that "what I used to do before getting land rights is the same as I do now, so I do not see that increased harvest".

The same, the results revealed that 14 out of 20 did not change their diet. Women in the areas declared to not have an access to loans because they require much money and they do not have the modern agriculture materials, and they face the problems of prolonged dry seasons or rain seasons which they do not have any strategies to cope with those challenges. Even though the majority not perceive increased harvest, 11 out of 20 responded that their harvest is just enough to contribute to the household food consumption. The following figure indicates the distribution of their answers on how the harvest from their land contributes to their household food consumption.



Figure 4-8 Contribution of their harvest to HH food consumption

The figure above (figure 4-8) shows how the harvest from their land contributes to HH food consumption on different levels. About half of women interviewed (11 out of 20), responded that it was just enough to contribute to household food consumption, 4 out of 20 of women responded it very much contribute to household food consumption however, however, 5 out of 20 women said that their harvest contribute little to household food consumption.

4.5. Programs and interventions aiming at inhencing food security

In order to identify the impact on food production and food security next to LTR, the programs and interventions in the area were identified to find out whether their supports helped rural women to increase food security. The main sources of the data for this section are different the leaders of the sector of Muyumbo and interviews with women.

4.5.1. Identified Programs and intervention in the area

Apart from providing women land rights, they are other programs and interventions by government which supposed to help to improve food security. The following programs and interventions were identified:

First of all comes, crop intensification programs (CIP): This is the program existing in the area, which is a government of Rwanda (GoR) program, focuses on the intensification of priority crops to strengthen the national agricultural productivity and improve food security. This aimed to increase agricultural inputs availability, irrigation use, and promotion of marshland use for higher land use, which should result into increase of production and food security. In the area the selected crops by GoR to grow were bananas, maize, beans, potatoes and vegetables as food crops and coffee as cash crop. In these programs, GoR procures selected seeds and fertilizers and imports, distributes them through Ministry of Agriculture (MINAGRI), which reach on sector office and then farmers get them by buying them on fixed price by the leaders. The agronomist's own words admitted that "This was a great opportunity for rural farmers to get seeds and fertilizers close to them, where they used to get them by walking the long distances to the agro-shops in centres". However, for rural women interviewed, to get money for buying these seeds and fertilizers remains a challenge.

Umurenge Savings and Credit Cooperative (Umurenge SACCO): This program is a member- based cooperative. It is intended, a part from encouraging local people to use formal financial institutions to save money and to take out loans, to help Rwanda's rural poor to become more financially secure, be better able to manage economic shocks, and to invest in business opportunities. All women said that they have account in this cooperative, however; only few of them requested credit, as it is shown in next section of this research.

Girinka Munyarwanda, means "one cow per family. According to interviews, one cow per family is a government program to enhance food security that based on distributing one cow to the chosen poor families thereby providing dairy products which play an important role in food security and produce manure for crop production by increasing the soil fertility. According to the local leaders government gives the basic support such as veterinary on the sector level to follow up and threat the cows when necessary, the other services such as vaccination and artificial insemination are provided by those veterinaries. The beneficiaries are also trained to care those cows on basic needs and receive seeds for animal feeds. According to the leaders all the programs mentioned above are not gender focused. Thus women and men are equally considered to benefit these programs, however, 1 out of 20 interviewed women, were given a cow by this program.

4.5.2. Women membership, benefits and supports from mentioned programs

The results indicate that all women interviewed were members of Umurenge sacco (Muyumbo). The main reason was the benefits of the possibility of asking credit which responded by women. The others could answer that, the benefit was that the money can't be stolen since are in the cooperative depository. However, women in the area do not receive any free support from Umurenge sacco and it doesn't take a particular attention on the rural women farmers, to facilitate them get loans to invest in their agriculture activities. They revealed that, it is difficult to procure the money required to get loan as it is required 10% of the amount to get loans. The results of limited usage of the credits are clearly indicated by the numbers of who asked loan, who got it and used in other projects than investing in agriculture. More than a half of women did not ask the loan since got land rights, as the figure 4-9 below indicate:



Figure 4-9 Response of women who asked credit and who did not

The figure 4-9 indicates that 7 out of 20 interviewed women asked the loan from Muyumbo SACCO and the majority of women (13 out of 20) could answer that they did not ask credits.

For those who asked credits, it is found that for majority of women, the purpose was not for agriculture but mainly to run an off-farm business for their husbands. In those 7 women who asked credits, only 3 received the credits and others did not get the credit. Who got the credits; they revealed that even though was not easy, they managed to use the credit according to what planned to use that credit. For example, 2 of them managed to buy motorcycles for their husbands, whilst another one wanted to pay the school fees for her children. The women whom their requests were not approved for the credits, the reasons were various but mainly to not having the required money in their account (10%) of the amount they requested.

On the other hand, women in the area have shown the fear of asking loans for agriculture investments. The reasons were the fear of losing and failing to reimburse due to the unpredictable changes in climate which can put them into suffer loss. In one's interview, she said "I can't ask loan for agriculture because dry period may be prolonged as it happened last year, or rain may be intense and destroy the crops, what can I pay back? They would take my land. I don't want that to happen to me".

Additionally, the required amount to have on the account hinders women to approach Muyumbo SACCO to ask for credit. Example one revealed that " I wanted to ask loan to buy another parcel where I could found it on low price, I manage to find somebody to lend me a parcel as collateral as my land was not enough, but I had the problem to find 10% of the amount I wanted, and the parcel was sold to another person".

Like the same as Sacco cooperative, women responded that they have the benefits from CIP program. These are opportunities for women farmers to buy seeds and fertilizers close to them. They said that before the CIP, there were no shops selling agriculture inputs; they used to get them by walking the long distances to the agro-shops in centres. However, they revealed that when the program was in beginning in 2007 the leaders used to give free seeds and fertilisers to the poor farmers, later they changed into receiving the seeds and fertilisers through loans where they were paying back gradually. This system was

helping the women farmers, as they could procure themselves the seeds and pay gradually depending on availability of money, and the harvest was good.

The system had been changed tree years before the interviews and the agriculture inputs were no longer free or on loan, only cash payment was required to receive those brought seeds and fertilisers on sectors level. Thus, to find money for buying these seeds and fertilisers remains a challenge as explained by women. The majority of women said that they mainly use local seeds they get from previous harvest. On the other hand, LTR helped them to have evidences of ownership on the land, thus, they are aware that they can ask loans using the titles given and then buy better inputs.

For the one cow per poor family program, only 1 woman in 20 was benefited from one cow per family program and was grad to be able to have milk without buying and get manure for his small farm. However, revealed that was not easy to keep the cows without enough land for pasture, and the forage to feed it.

4.5.3. The importance of women land rights compared to the programs and intervention in FCP

As it is shown in section 4.3.2 of this chapter, the support was no enough support benefitted by interviewed women. Thus, the researcher asked them how they can compare the support received and the rights to own land, thus, the majority of women farmers could admit that they strongly agree that documented land rights given to them are more important than the programs and interventions in the area for crops production. The reasons were that; to ask loans requires showing the evidence of land rights, second the membership, when they want to form the associations for credit request to buy seeds in neighbourhoods, important requirement is having land titles.

4.6. Constraints and limitations in Data collection

Although a number of interviews targeted have been completed, some women were refusing to take part of interviews because they were asking if they will receive any payment from participating in interview, as a consequence two of them refused completely and the option of replacing them was used. Upon personal observations and experiences, some respondents, were still worried and doubtful that the information they provide might be used against them in the future in spite of confidentiality had been assured before starting.

4.7. Summary

This chapter presents the results from data collected in the study area from different interviewees. The main objective was to investigate the impact of land rights obtained by women on food security, focusing on whether and how women make decisions for food crop production. The findings are summarized as follow: Initially, women admit that land is an important and valuable asset for them. Recognition as land rights holders was the motivation to be presented during registration process. All women interviewed are aware of mainly use rights and are aware of inheritance rights and jointly or individual ownership of land. However, among them are unaware of provisions/ limitations such as how many years allowed fallowing their land, the size of the parcel allowed to be subdivided. Women feel more secure about of their land rights due to the given titles through land tenure regularisation program. The particular important for women in this respect is that their consent is required to transfer land. With respect to women's decision-making on crop to grow on their land, where to farm, seeds type, fertilizers and manure application, choice on fallowing the land, harvesting and usage of harvest and what to sell, allowed to summarize the results as follow: Most of women make decisions sometimes, few of them make decisions always on some decisions while others do not take any decisions on their own. Other programs, than the LTR, that could

have an impact on women's decision making in food crop production were; CIP, Umurenge SACCO. All women were members of umurenge SACCO, have opened the accounts in that savings and credits cooperative. However, women indicate to not receive much supports from these programs, thus, they do don't benefit a lot. But, they admit that they strongly agree that land rights and titles given to them are more important than those programs.

5. DISCUSSION

5.1. Introduction

This chapter discusses research results, in relation to other studies. It allows understanding and explains the implications of various aspects of the findings

5.2. Perceptions of women on their land rights and tenure security

The findings revealed that women acknowledge land as important and valuable asset for them. They further explain how land is important in food production and land is the basis for their livelihoods. The further stated that land ownership increases their status in their society. All women in the study area are aware and support inheritance rights and ownership rights given to them. This implies that they are contented to own land themselves. A part from that, majority of women know that they have equal land rights with their male co- owners. In the same way, they hold information on the need of their consents required to transfer the land by their husband, or other co-owners due to the registered and titled land including their names which make them perceiving that their land rights are secure. The legal provisions have therefore supported achieving tenure security for women. This tenure security maybe affected by restrictions charged to land use. According to the land law, leaseholds are granted for 99 years, while freeholds are awarded depending on the completion of the developments in accordance with the land use planning/zoning regulations. This study found that women are unaware of some provisions that relate to restrictions/limitations of the usage of land. Specifically, they were not aware of how many years the land can be left on fallow. According to the law governing land, land left idle for more than three years may be confiscated by the government. Women were also unaware of the minimum size of land (hectares) under which land should not be subdivided further, which is 1 hectare. Unawareness of such information may lead to reverting of the land to the government if the rules and regulations are not adhered to. This may lead to tenure insecurity for the women.

Agarwal (2003) found similar findings in India, where women state that it seems like a dream they might have land on their own, which implies that women acknowledge the importance of owning land. Similarly, findings were found by Rajgor (2008). Rajgor (2008) has conducted a study on perceptions of women about land and ownership to it, to obtain government land, in India. Women felt that legal ownership was an overwhelmingly important issue. However, in one district of their study area, women said that it is not important to own land on their own, and declared that it suffices to farm on their husbands' land. This kind attitude was not found in this study. Similar to the findings by Ali et al (2014), women in the study area showed enthusiasm to own land for the first time in Rwanda due to registered land rights by LTR, including women's names on land titles. The results on awareness by women on their land rights fit also within the finding of Santos et al. (2014) who evaluated the inclusiveness of Rwanda's land tenure regularization program and found the high awareness for women of their inheritance rights and low awareness on the legal status of land rights.

5.3. Women's decision making for food crop production.

On women's decision-making in food production, the following was found in the study area: On selection of the crop to grow on their land, it is found that this was mainly guided by the government crop intensification program (CIP). Women consult their neighbours to be sure about what crops are required to grow. This means that although women have land titles, their powers to make decisions on choice of crops are restrained by the obligation to conform to the requirements of the CIP program. Meanwhile,

where women did not participate in the CIP program, their ability to acquire good seeds and fertilisers are limited by financial situations. Women thus resorted to use in local seeds secured from previous harvests and organic manure. In regards to the harvesting and usage of harvest and selling the harvest, women also make decisions sometimes, but they mostly ask permission for those who are married from their husbands while children of those who are widows sometimes made decisions for their mothers. Women do not perceive increased harvest by their decisions. Following that more than half of interviewed women, make decisions sometimes and others do not take farming decisions listed, their decision making on their land for food crop production is halfway and on the other side is minimal. This could be similar to what found by ActionAid (2013), that women's empowerment by land rights is represented in the ways they are able to produce what they needs for families food requirements.

The similar results have been found by Wiig(2013) who assessed the impact of joint titling in rural Peru on women participation on households decision making. In their findings on agriculture decisions, it was found that women's decision making is still low. The low participation of women landowners in agriculture decision- making in India, Ecuador and Ghana was also found by Deere et al (2013). This study could not find the experiences of increased harvest due to the land rights given to them. This is slightly different of what found in Nepal by Allendorf(2007) that the majority of women who own land have also a final say in households' decisions and it resulted in increased production.

5.4. Programs and interventions in crop production and supports

CIP is a major programs run by the Rwandan government to support citizens to improve national food security and improve their economic status. Its purpose was to specialise in on crop by region to have enough for market. It also supposed to help farmers obtain basic needs in crop production, such as selling seeds and fertilisers to farmers. Umurenge Sacco is a financial institution; close to the rural population in Muyumbo sector and one cow per poor family program in the area were found. However, there were no supports which helped women to increase their food production and women do lack the prerequisites to be supported by those programs. However, there were no free supports which helped women to increase their food production and women do lack the prerequisites to be supported by those programs. Pritchard (2013) has found that inefficient implementation of these programs has not permitted succeeding to help the intended beneficiaries.

Women support women's land rights. Women farmers could admit that they strongly agree that documented land rights given to them are more important than the programs and interventions in the area for food crop production. Women work on their land and declare that there is no loss for working hard on their own land; however, they desire financial and educational supports. Like other many findings on the need of financial support for the rural women, the programs should be regulated to work closely with rural women to support and empower them in their dairy work of cultivating their land, to make sure that the majority of rural population are benefiting on the maximum level and translated into increased produce on their land. Minimal women's decision making in food crop production, may hinder achievement on food production on the household level. Thus, the issue of food insecurity may remain unaddressed, especially where it exists.

5.5. Limitations of the study

The results discussed were from data collected during fieldwork in October 2014, using methods of semi structured interviews and observations apply to a sample size of 20 rural women farmers and 5 local leaders on sector level. Thus, results come from a limited number of views, perceptions and experiences and the results might not be generalised to all women in Rwanda. Some limitations of cross section data may be considerable to this research and may affect the validity of the findings in one way or another. Thus, it is necessary to continue researching on women's decision making on the land they own jointly or alone in food crop production to insure that the empirical impact of women's land rights on food crop production is researched and documented in all perspectives.

5.6. Summary

Women, like in others research findings, perceive land as important and valuable asset to own by them and support their inheritance rights and ownership of land. The lack of knowledge on certain provisions in the land law has been discussed together with perceptions on tenure security. An insight in women's decision making in food crop production, despite the individual or joint titling, such as choice of crop to grow, where to grow those crops, seeds varieties and fertilisers, harvest usage, and decisions on selling harvest were discussed versus other findings available. Some literatures confirm the identified perceptions of women about land and land rights, and that women may still have less decisions making power on their land they own in formal land tenure. In this situation it might be difficult to increase food production since they grow what told them to grow.

6. CONCLUSIONS AND RECOMMENDATIONS

6.1. Introduction

This chapter evaluates the achievement of research objectives by providing a reflection on the answers to the questions posed in this study. It gives first summary of the results and discusses them in relation to the findings by other researches where similarities and conflicts with those findings are discussed. Limitations of this study are outlined while recommendations for further research are given.

6.2. Conclusions

This research provides description of rural women's perceptions on the land rights given to them; it identifies women's decision making, whether and how land rights provided to women in Rwanda result into increased women's decision making in food crop production to improve food security of their households; it determines the other programs and interventions which might have an impact on women's decision making in food crop productive was to seek the impact of women's land rights on food security, next to the land rights and land titles given to women in Rwanda. Using semi-structured interviews with mainly rural women and observation methods, their views, perceptions and experiences were analyzed, presented and discussed in this study. All the way through, 3 specific objectives were addressed and research questions were answered throughout this thesis.

6.2.1. Specific objective 1: Describe women's perceptions on the land rights

Rural women in the study area perceived that land is importance and valuable asset they own, stating that land is the primary source of food; they eat because they cultivated the land, and it provides source of livelihoods. It is found that owning land on their own, increases their status in society because the people respect them and they trust them, thus land has also It is also a prestige meaning for the women. Moreover, they say that their children will have heritage from their land. These results confirm that rural women in the study area perceive land as important and valuable asset to own and they have much confidence in cultivating on their own land.

Women in the area are aware of some rights and unaware of others. The rights they mainly distinguish are inheritance rights, ownership rights, use the land as collateral, to use it in agriculture production. They state that their husband can't chase them out and sell the land without their consent because their names exist on titles. However, the control of how the land will be used is not mentioned. Furthermore they are not aware of provisions/limitations on the usage of land, whereby, the hectares allowed by the law to be subdivided, the limit of years of fallowing the land, which may help them to exercise their land rights without wasting many resources. Despite this unawareness, they are happy to own land and they feel that they have value in their society and they affirm that the government cares about them.

Women perceive tenure security because of consent required for transfer, thus titles given contribute to the perceived tenure security; however, they perceive insecure about limitations in land law. There exist perceptions on the possibility of being evicted, majority perceive that there is no possibility of unwished transfer of the land they own by their husbands or relatives and in the same way for majority there is no possibility to be evicted by the government in the next 5 or 10 years. However, minority perceive possibilities of unwished transfers by their husbands and relatives in the case of illiteracy of a woman, and a possibility to be evicted by government in next 5 or 10 years due to the allowed confiscation by

government of the land left idle for 3 years, which might be associated to low awareness of the women on those last.

6.2.2. Specific objective 2: Women's decisions in terms of selection of crops, where to farm, agriculture inputs in food production and control of harvest from land

Particularly, addressing this specific objective, gives insight on whether women make decisions on their land for food crop production to increase household hold food security, following land titles given to them. Before land tenure reform, women used to work on their husbands or relatives' land without control over it. After documenting women' rights and giving to them individual or joint titles, we expected that all women should be making their own decisions independently from any other side in choosing the crops to grow on their land, where to grow, inputs usage and decisions on harvest from their land. According to literatures women are likely to make decisions increasing household food security. This study distinguishes 3 categories women in decisions making in food crop production. First, majority of women make decisions sometimes, other ones make decisions always and others who don't make any decisions. It finds again that those women who do not make decisions and those who make them sometimes in food production follow instructions given by different people, one example being the CIP to crops to grow on their land, their husbands and adult children also play role in the women's decision making.

Preference crops to grow on their land between food crops and cash crops revealed that in the area,. Observing that their farming system is traditional, where all women interviewed use traditional materials like hoe, and rare improved seeds and fertilizers usage, it explains their perceived difficult to raise production.

Even though, women in the study area prefer more food crops than cash crops, the impact of these decisions in terms of enhancing household food production is still unsuccessful. Women do not perceive increasing food produce and their diet did not change and some cases reduced due to the prolonged dry season experienced. The use of traditional materials like hoe, and rare improved seeds and fertilizers usage, might also explain their perceived difficult to raise production. Moreover, this research suggest that are other factors influencing increase of food produce, not only the type of the crops grown and fertilisers applied, where example the drought season may extend and destroy the crops as happened last year which make them to feel fear the climate changes in climatic conditions more that being unable to make decisions in farming on their own.

6.2.3. Specific objective 3: Programs and interventions that might have an impact women's decision making in food crop production

The 3 programs which the aim is to help citizens to increase their economic status and food crop production were crop intensification programs (CIP), Girinka Munyarwanda, means "one cow per family, Umurenge Savings and Credit Cooperative (Umurenge SACCO). All these programs relate to food security through the opportunities presented for rural farmers to buy improved seeds and fertilizers close to them, possibility of asking credit in Sacco cooperative and invest it in crop production, Nutrients from milk once a poor rural households is given a cow, plus manure to enrich soil. However no perceived supports they receive. Nevertheless, no free supports and women do lack the prerequisites to be supported by those programs, such as the 10% required for obtaining credit and enough land for the forage. The brought seeds and fertilisers at sector office by CIP program are to be sold not distributed according the capabilities to buy them. The results allow concluding that the majority strongly agree that LTR was more important than those programs and interventions in the area for crop production.

6.3. General conclusion

This research was encouraged by the knowledge gap in relation to women land rights through individual or joint land titling by LTR to the explicit women's decision making status in food crop production. It was expected by addressing this research gap, to gain an insight on effect of secure women land rights on food security. The discussed results allow concluding that titling women land rights strengthened their land rights and increased perceived tenure security of women and resulted in increased acting as the owners. However, the state that CIP impose the crops to grow without their consultation and the other people making the decisions in their place, do not allow majority of women to apply their original ideas on their land. Thus, Land registration and land titling did not guarantee women's decision making in the specified decisions and women are disempowered in this dimension which can affect negatively household food security.

6.4. Recommendations

Recommendations are mainly for further research, from limitations of this study above it is clear that much further research is needed to extend the results presented in this research. This might be:

- First longitudinal studies are needed to capture well the changes in women's decision making process on their land.
- Secondary, research on how women acquire the land and how it is connected to the process of decision making in the households is crucial because these relationships may differ depending on how women gained land.
- Different variables should be used to measure women's decision making status in food crop production and the impact on food security in households.

Since women are major players in agriculture, there is a need to increase their involvement in decision making process because the success and progress of production depends upon plans made and decisions taken. This research gives reasons to suggest the following: There is a need of trainings in decision-making skills to know whether they are supposed to claim their rights to make decisions on their land ;Increase women's knowledge on existing land laws; Facilitation to obtain credits, encourage its use in farming, such as buying better inputs of their choice and better technologies since they use traditional technologies such as hoe.

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ANNEX

Interview questions

Research for obtaining MSc Degree, University of Twente, Faculty of Geo-Information science and Earth observation, Land administration course,

by Appolonie MUKAHIGIRO; mappolonie2001@gmail.com

Title: Secure women's land rights in Rwanda: investigating its impact on food security.

October 2014

Research Semi- structured interview questions.

Introduction

This interview is part of data collection exercise for my MSc Land Administration course at the Faculty of Geo-Information Science and Earth Observation of the University of Twente, the Netherlands. The MSc thesis for which this interview is conducted is titled: "Secure women's land rights in Rwanda: Investigating its impact on food security". I will give your responses the anonymity they deserve and count on your cooperation towards responding to this interview. Hence, your cooperation and assistance are highly appreciated. Thank you for giving your time for this interview.

The interview will focus on your (women farmers) opinions about:

- Your perceptions on the land rights given to you.
- Decisions that you make for food production in terms of selection of crops, where to farm, agriculture inputs and farming practices and control of harvest from land.
- Other Programs and interventions which have an impact on your decisions in food crop production.

The interview will not take above 45 minutes.

Part 1: Interviewee Information

Province: Eastern. District: Rwamagana. Sector: MUYUMBU	
CellVillage	
Interviewee Number:	
	Date:
Parcel noLand use/land cover	
Start time	End time

Part 2: Questions: Basic Personal Information respondents General Questions

1) Age:

18-30 years

31-45 years	
46-59 years	
earsandabove	

2) Marital status:

Single	
Divorced	
Married	
Widowed	

3) What is your occupation? (Pick all occupations, in which you are involved)

, I (
Unemployed	Others: PleaseSpecify:
Farmer	
CasualLaborer	
Governmentemployee	
NGO employee	
Self-employed/Business	
Politician	
Student	
Others	

4) Do you have any of the following education?

	Illiterate	Literate	Primary	Secondary
			education	education
Yes				
May be				
No				
5) Land holdin	g			

 Small
 Medium
 Large

 Yes

 May be

 No

Section A: Perceptions on women's land rights and tenure security. The meaning of land and awareness land rights to the women

6) Is this your land? If yes since when?

Yes	Year:
No	

7) How did you acquire the land?

Through inheritance	If other Specify
From the government	
Renting the land	
Own purchase	
Through spouse	
Gift	
Other	

8) Have you registered your land? If yes when? And why? Did you experience difficulties? With who?

Yes	Year:	Reasons:	Difficulties:	If yes,
May be				With family
				members?
				With the
				government
				authorities?
				Any other?
No				

9) Do you have land titles with you?

Yes	
May be	
No	

10) If no explain me why?

	Because I had no money to	I had no time to go to correct	Because of some
	correct my land titles	my land titles and I will go if	litigation not solved
		time is available	yet
Yes			
May			
be			
No			

11) What does it mean for you to have your name on land titles?

12) How do you use your land?(to give a lot of space and do probing to go in depth, mapping)

13) What is the most important usage of your land?

.....

.....

Perceptions about tenure security

14) Are you a single owner of the land? If not, with whom do you have co-ownership?

Yes	Co-owners:
No	

15) Do you use your land together with those co-owners?

Yes	Co-owners:
No	

16) What does each of you do on the land?

17) Are you aware of your rights on the land? What are the rights u have on your land?

Yes	Rights:	1
No		

18) Can you indicate which of the following rights apply to you? (Tenure rights listed below from(UNDP,UNEP et al. 2005).)

The right to use the land.	
The right to control how it will be used.	
The right to profit from use of the land.	
The right to exclude others from unauthorized use.	
The right to sell one's tenure rights to others,	
permanently or for a limited time.	
The right to pass down these rights to one's	
successors.	
The right to protection from illegal expropriation of	
the resource.	

(An increase of breath rights, means increased tenure security)

19) Anything missing? That was not mentioned by me?

.....

20) Now I am going to read you the statements that people have made about their perceptions of rights to land by women and men. For these statements, please tell me whether the statement was, often true, sometimes true, or never true for you.

1: I see my self as having equal rights to land as man

1	Often true, I always have equal rights to land as the man
2	Sometimes true, I sometimes have equal rights to land as the man
3	Never true, I do not have equal rights to land as the man
4	No answer

21) Do you see any differences between now and before you got land titles regarding tenure security?

Yes	
No	
Don't	
know	

22) If yes, what changed for you?

Wideness of tenure rights (increased	
--------------------------------------	--

number of rights)	
Assurance of rights(security today)	
Duration of rights(security in the	
future)	
Guarantee of rights(today and the	
future)	

Section B: Women's decisions in terms of selection of crops, where to farm, agriculture inputs in food production and control of harvest from land.

Whether women make decisions in terms of selection of crops

.....

23) What crops do you grow on your land?

24) Do you decide the crops to grow on your land?

Yes	
No	

25) If no who decides?

26) If yes why do you grow those crops?

27) Between food crops and cash crops, which one do you like to grow?

.....

food crops	
cash crops	

28) Before having ownership and land titles to this land, which crops did you used to grow?

29) Has this changed with ownership and land titles to land?

30) How?

31) Are you satisfied to grow those crops?(answer only in one category in the table below)

	Reason for your answer
Very satisfied	
Satisfied	
Partially satisfied	
Not at all	

Whether women make decisions to where to farm

32) Do you make decisions where to grow a certain crop on your land?

Always	
sometimes	
Never	

33) If never, who decides?

.....

34) If always and sometimes, do you think your food production have increased because of your contribution in making decisions on your land?

Yes	
No	

Women's decisions in terms of agriculture inputs and farming practices

35) How do you get your seeds?

36) Do you decide on selection of the following inputs and farming practices?

1 2 o fou accure on cereation of the following them and functions					
	Seeds variety	Manure/Fertilizer	Manure/Fertilizer	Sowing method	
		type	application		

37) What type of seeds do you plant?

1	improved seeds
2	Local or unimproved seeds
3	other

38) Do you use any of the following farming practices?

	Always	Sometimes	Never
fallow			
mixed crop or monocroping			
terraces			
irrigation			

39) Do you decide to do it?

Yes	Explain your answer:
No	

40) Have you ever requested a credit using your land as collateral? /

Yes	
No	

41) If yes, did you get the credit?

Yes	Was it easy? If not, why?
No	

42) Why did you request for credit?

.....

Women's decisions on harvest

43) Does harvest from your land contribute to your household food consumption? How?

Very much to contribute household food consumption
Just enough to contribute the HH food consumption
Contributes little to HH food consumption
Not at all

44) Which of these statements best describes the food eaten in your HH: enough of the kinds of food we want to eat; enough but not always the kinds of the food we want to eat; sometimes not enough to eat; often not enough to eat

Enough of the kinds of food we want to eat
Enough but not always the kinds of the food we want to eat
Often not enough to eat
Not at all

45) Do you sell your harvest?

1	always	If never who make decisions?
2	Sometimes	
3	Never	

46) Do you make decision on what to sell?

1	always	If never who make decisions?
2	Sometimes	
3	Never	

47) Do you make decisions on conservation of harvested products?

1 Always Give an example of decisions:		Give an example of decisions:
--	--	-------------------------------

The impact of these decisions in terms of enhancing food production

48) Has food production increased since you got land rights?

.....

49) Has your diet changed since you gained land rights? How?

Yes	Explain your answers:
No	
Other	

Section C: Determine the other programs and interventions which might have an impact on women's food crop production

The programs and interventions that support you in food production

50) Are you a member of any organization, program aiming to support farming?

Yes	
No	
Other	

51) What are those organizations, programs, intervention?

Government	Tell me the name of each please:
NGO's	
Church	
Neibourhood	
groups	
Individuals	

52) What are the purpose/ benefit of being a member in terms in food production?

Supports they receive and how important compared to women land rights in food production

53) Do you receive support from those programs and interventions in farming and food production?



54) Explain the support you received

55) How important are these programs and their support as compared to the land titles?

	3 11	1
Land title registration is	Strongly agree	Explanation:
more important than the	Agree	
support from other	Partly agree	

|--|