UNIVERSITY FOR DEVELOPMENT STUDIES

PROSPECTS AND CHALLENGES OF CHILLI PEPPER VALUE CHAIN DEVELOPMENT IN THE TOLON-KUMBUNGU DISTRICT OF THE NORTHERN REGION OF GHANA

By

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DECLARATION

I, Sualihu Sulemana declare that this thesis: *"Prospects and Challenges of Chili Pepper Value Chain Development in the Tolon-Kumbungu District of the Northern Region of Ghana"* is my own work and that all sources of materials used have been duly acknowledged. This dissertation has been submitted by me in partial fulfillment of the requirement for a Master of Science Degree in Development Management at the University for Development Studies. To the best of y knowledge this thesis is not submitted to any other institution anywhere for the award of any :ademic degree. I accept responsibilities for any inaccuracies and errors in this work.

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ABSTRACT

Value chains (VC) have been identified as one of the methods of improving agriculture and sharing gains. It is one of the major policies of the MoFA. The IFDC and MOAP have been promoting the development of the chilli pepper VC in the Tolon-Kumbung District of the Northern Region of Ghana, hence the need to study the prospects and challenges of the development of this VC in the District.

Semi-structured questionnaire were administered to 188 respondents who were purposively sampled from the groups working with IFDC and MOAP to collect data on issues such as market accessibility, upgrading strategies, constraints and prospects of the VC. The respondents cut across all the actors in the chain. FGD were also held in some of the communities. Key informants from implementing partners provided useful information. Data gathered were analysed using descriptive statistics and rankings.

The study found that producer groups had limited access to market due to the lack of group cohesion. There was no bulking and collective marketing and limited market information. The study also found the lack of financial credit to actors; lack of requisite processing equipment and storage facilities; inability of actors to adopt improved production methods; and high cost of agricultural inputs ranked in that order as challenges. The prospects associated with the chilli pepper VC development include; high quality chilli pepper and products and the existence of functional VC Committee. It is recommended that a chilli pepper business platform be established in the district, link actors onto the IFDC Mobile-farm platform; and involve the District Assembly in the chilli pepper VC.

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CAADP	-	Comprehensive Africa Agriculture Development Programme
CRF	-	Chemical Residue Free
FAO	-	Food and Agriculture Organisation
FASDEP	-	Food and Agriculture Sector Policy Development Policy
GAP	-	Good Agriculture Practice
GDP	-	Gross Domestic Product
GIS	-	Geographic Information Systems
GIZ	-	German International Cooperation
GSB	-	Ghana Standard Board
HACCP	-	Hazard Analysis and Critical Control Point
IFAD	-	International Fund for Agricultural Development
IFDC	-	International Fertilizer Development Centre
ITFC	-	Integrated Tamale Fruit Company
MDG	-	Millennium Development Goals
MOAP	-	Market Oriented Agriculture Programme
MOFA	-	Ministry of Food and Agriculture
NBSSI	-	National Board for Small Scale Industries
NRGP	-	Northern Rural Growth Programme
SARI	-	Savannah Agriculture Research Institute
SPSS	-	Statistical Packages for Social Scientist
TQM	-	Total Quality Management

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CHAPTER ONE

1. 1 INTRODUCTION

With the emergence of globalisation and trade relations, development cooperation has been skewed towards a sustainable, growth-oriented integration of developing countries into the world economy. Value chain (VC) development has received emphasis as a way out of integrating the economies. Improvement in the productivity of smallholder farmers and sustainable economic growth are pre-requisites to achieving the full contributions of agriculture to overall growth and development. Recent global policies propose that smallholder farmers can get out of poverty by being better linked to markets. Markets in recent times are changing fast and competition is becoming increasingly fierce. If businesses aspire to stay in the market, they need to make sure that their products and services meet continuously changing market requirements (Matthias and Muzira 2009).

Millions of smallholder farmers in Africa are working to improve their livelihoods in an environment characterised by dwindling government support and increased competition between producers, processing companies and supermarkets within agricultural markets (René, 2006). While access to markets remains an important medium for achieving the Millennium Development Goals (MDGs), there remain low levels of investment in agriculture, poor infrastructure, as well as limited access to technological innovation; Business Development Services (BDS), market information and weak commodity VCs still inhibit smallholder farmers' full access to markets (Grant 2009).

Ghana is currently running an agrarian economy, with agriculture sector contributing about 37 percent to its Gross Domestic Product (GDP) (Lambert and McBride 2010). The rate of the country's economic growth seems to fall on the performance of the agricultural sector. The agriculture sector employs at least 50.6 percent of the working population, and most of them are small-scale farmers. This rises to above 75 percent in the rural areas (Asuming-Brempong, 2003). Market orientation among producers and processors still remains a stumbling block.

For VCs and marketing systems in agriculture, there exist mutual benefits where farmers are hooked-up to the needs of consumers, working closely with suppliers and processors to produce the specific goods consumers demand (Roduner, 2007). Similarly, through flows of information and products, consumers are linked to the needs of farmers. Development and promotion of VC in agriculture is often about an improvement in access to markets and ensuring a more efficient product flow while ensuring that all actors in that chain benefit. Government and Non-governmental Organisations (NGO) promoting VC development have made it a core responsibility supporting farmers to sell their products in a planned, participatory and coordinated manner. But the question which needs deeper investigation is: *do emphases on VC development bring about an improvement in market access to farmers.* "VC development can only overcome the cycle of poverty if they are deliberately designed to improve farmers' livelihoods" (Gertan, 2009:2).

Market in the context of this study refers to the total supply and demand for a particular product by consumers both locally and internationally. The marketing process must be customer oriented and provide profit for all actors along the chain. Marketing therefore involves buyer and consumer identification, understanding what they want in terms of products and how they want it to be supplied, operating in a production – marketing chain that delivers the right products at the right place, the right time and at the right price and making enough profit to continue to operate (FAO, 2005). A VC in the context of this study refers to all the steps that a product takes, from its point of origin to the consumer. A VC represents a specific type of supply chain – one where the actors actively seek to support each other so that they can increase their efficiency and competitiveness. The actors invest in time, effort and money, and build relationships with other actors to reach a common goal of satisfying consumer needs – so they can increase their profits.

The VC in agribusiness treats production as a chain of activities, each of which adds value to the final output. The value of the product increases as it goes through the stages in the chain. Actors are the players involved in producing, processing, trading or consuming a particular agricultural product. They include direct actors – producers, traders, retailers, agro-input dealers and consumers who are commercially involved in the chain and indirect actors – banks, credit agencies, business service providers, government, researchers, extensionists etc, who provide financial or non-financial support services.

Ghana has adopted the VC approach to commodity development and has incorporated it in its agricultural policy (MOFA, 2010). The Market Oriented Agriculture Programme of the German International Cooperation and the Ministry of Food and Agriculture (GIZ/MOAP-MOFA), International Fertilizer Development Center (IFDC), Savanna Agriculture Research Institute (SARI) and the University for Development Studies (UDS) are currently focusing on employment-oriented private sector development with a VC in agribusiness development lens. The VC development concept has been adopted by these organisations as part of their core development strategies in the chilli pepper industry in the Tolon-Kumbungu District of the Northern Region of Ghana since 2006. The main objective of their intervention is to improve the ability of agricultural producers and other actors in the agricultural sector to compete in national, regional and international markets. This inevitably would stimulate growth of the local economy and foster sustainable relationships among actors, thereby bringing about their competitiveness in domestic, regional and export markets (GIZ/MOAP, 2004). While these seem laudable, the problem of market access still exists.

As a tropical crop, chilli pepper can survive in both tropical and temperate climates. In 2005 the global production amounted to 27.5 million tons. In developing countries, chilli pepper is considered the most popular vegetable crop, being grown on an area of 0.73 million hectares in Sub-Saharan Africa in 2005 (AVRDC, 2005). Currently, Ghana is the fifth largest exporter of chilli pepper to the European Union, and the demand for chilli pepper has been growing annually by 17 percent on average since 2000 (Armah, 2008).

Chilli pepper is a common agricultural product produced and consumed in Ghana. The crop is used in nearly all Ghanaian dishes. Quite a number of households and individuals are involved in its production in the region. It is estimated that about 41.3% of households in the Northern Region are engaged in chilli pepper production, making the region second only to Brong-Ahafo as the region producing significant quantities of chilli pepper in the Northern sector of the country (Nsiah-Gyabaah, 2002). Therefore, any poverty alleviation programme that includes the promotion of the crop as part of its strategies could have high potential for achieving greater impact, as chilli pepper has become an important cash crop for many people cultivating and trading in it. However, due to the effects of globalisation, liberalisation and increasing competition in agriculture markets, it is apparent that strategies aiming at reducing rural poverty need to move beyond a focus on increasing productivity.

1.2 PROBLEM STATEMENT

Smallholder farmers especially in developing countries and for that matter Ghana are working to improve their livelihoods in an environment characterized by dwindling government support and increased competition between producers, processing companies and supermarkets within agricultural markets (René, 2006). While access to markets remains an important medium for achieving the MDGs, there remain several factors including weak commodity VC still hindering smallholder farmers' access to guaranteed markets (Grant 2009).

The main concern in development cooperation is how to reduce poverty. Many development organisations believe that agriculture VC development is a strategic means of bringing about market access and income to actors. Functional VC is said to be more efficient in bringing products to consumers and therefore all actors, including small-scale producers and poor consumers, hence all should benefit from VC development.

Competitiveness in agribusiness in both local and international markets is noted to be one of the most commonly quoted objectives of VC development. But this seems not to hit its full potential with the chilli pepper VC in the Tolon-Kumbungu District. Farmers are still faced with enormous marketing constraints of having to find credible buyers after harvest. They remain 'price takers' and face the risk and uncertainties of fluctuating markets. The farmers feel highly vulnerable and unable to withstand the risks to achieve sufficient production (Mitchell *et al,* 2009).

Against this background, chilli pepper farmers in the study area still grapple with uncertain markets and have no control over prices and have to accept whatever is offered. Lack of guaranteed buyers and economic equity among actors endangers the VC intervention in the study area. The VC development needs to identify and prioritise the constraints and match them against the prospects if they are to work for the chilli pepper actors, therefore an empirical *investigation into the poor market accessibility in the development process of the chilli pepper VC in the Tolon-Kumbungu District.*

1.3 MAIN RESEARCH QUESTION

The main research question was:

How are the prospects and challenges of chilli pepper VC development in the Tolon-Kumbungu District hampering or enhancing the process for a vibrant VC?

1.3.1 Specific Research Questions

The following specific research questions guided the research.

1. To what extent can the chilli pepper VC development bring about an improvement in market access?
2. What strategies can be adopted to upgrade the VC in terms of products, processes, and functions?
3. What are the constraints faced by actors in the chilli pepper VC development process?
4. What are the prospects of a well functioning chilli pepper VC?
5. What support do chilli pepper actors need to function as active players in the VC

1.4 MAIN RESEARCH OBJECTIVE

The general objective of this research was to assess the prospects and challenges of the chilli pepper VC development in the Tolon-Kumbungu District as a tool for increasing market access with the view to making policy recommendations.

1.4.1 Specific Objectives

To achieve the main objectives, specific research objectives were developed. These are;

1. To determine the extent to which chilli pepper VC development could lead to market access.
2. To study strategies for upgrading the chilli pepper VC development in terms of product, process and functions.
3. To analyse the constraints faced by the development process.
4. To study the prospects for a well functioning chain.
5. To identify the requisite support required by actors to function as active players.

1.5 SIGNIFICANCE OF THE STUDY

Improvements in the living conditions of project beneficiaries in recent times have become one of the key concerns of development organisations. The issue in this approach lies in the promotion of economic potentials of the smallholder farmers and the disadvantaged (Altenburg, 2007). About 50.6 percent of the Ghanaian working population in agriculture production is smallholder farmers with limited market access for their produce (Asuming-Brempong, 2003). The introduction of the VC as a development intervention tool is not only timely, but it is also appropriate to help farmers improve their standard of living.

The VC concept has gained more recognition in development projects and programmes with a primary objective of reduction in economic inequality by improvement in market access and income of all actors along the chain. Well functioning VC should create a platform for efficient and mutual benefits of all actors including small-scale producers and poor consumers. However, as a new concept among development practioners, it is likely to be engulfed with many critical operationalisation problems. Hence, efforts should be stepped up to facilitate the operations of the chain for the benefits of all actors. This would aid in the attainment of the UN MDG1 – eradication of extreme poverty and hunger. One surest way of doing this is to unearth the challenges and prospects of VC development and how it can be improved for the benefit of actors and as an appropriate intervention tool in agribusiness development hence the study. The findings will also be useful to VC faciliators. The result of the research could also serve as basis for further research on the chilli pepper sector in the Northern Region of Ghana.

According to Ashley and Hussein (2000) assessing impacts of projects can be sometimes problematic because respondents may not give a true picture of the impact of the interventions. Johnson and Rogally (1997) contended that, one possible solution to assessing impact is to include a 'control' group and to use recall to make comparisons with how things were before the intervention. On this basis, a control group was strategically employed to measure the objective one (1) (market access) of this study.

It is the opinion of the researcher that conducting a process study on the chilli pepper VC project intervention could create a platform for coordinators and facilitators of the project to discontinue ineffective activities, change strategies to future interventions and also have better choice of alternative interventions while looking at the same goals.

1.6 ORGANISATION OF THE STUDY

The thesis is organised into five chapters. Chapter one introduces the research background, problem statement, the research questions, the objectives of the research and ends with the significance of the study. Chapter two explores the pertinent conceptual and empirical literature on the concepts of VC, value addition processes, market accessibility, marketing channels, market linkages, market orientation among others. Chapter three consists of the methodology used for the research, sampling procedure, data sources, study instruments and analytical tools and techniques. Chapter four presents the study results and discussions of the research findings while Chapter five offers the summary, the conclusion and the recommendations based on the findings of the research.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

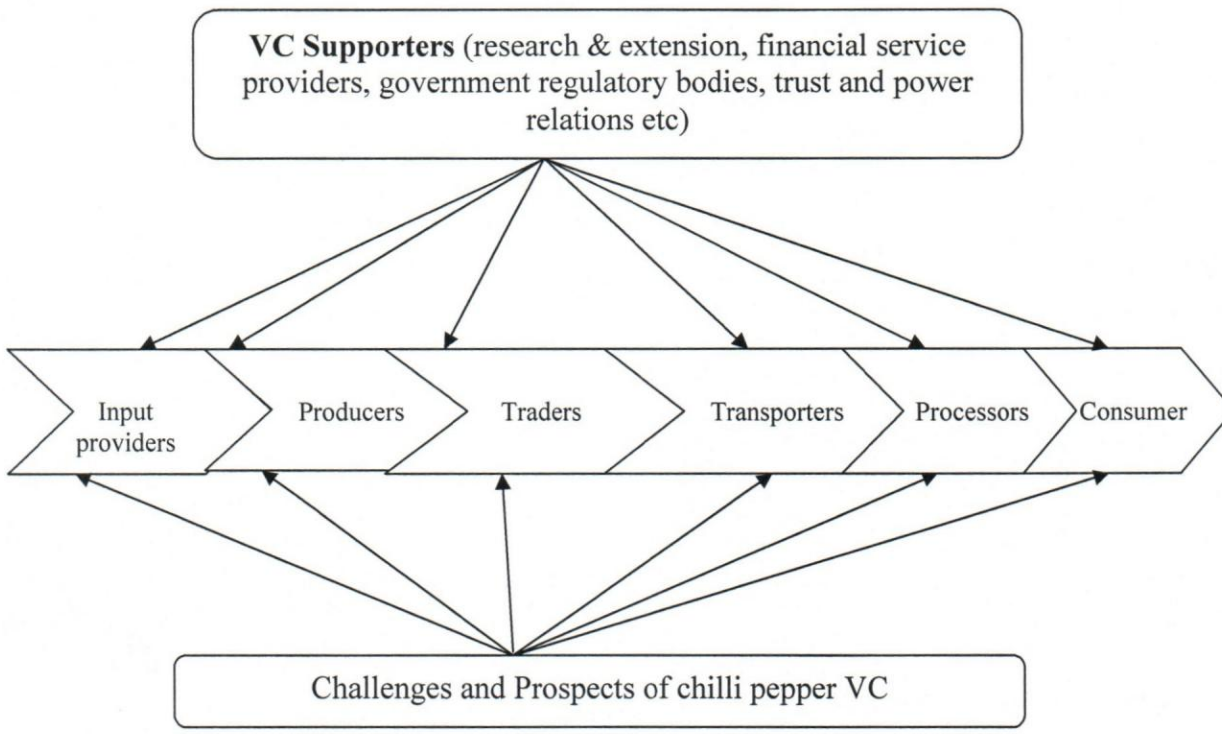
This chapter is essentially a review of past works done in the field of VC with special emphasis on commodity VC. To this end, both published and unpublished literature was reviewed. Gaps in some theories and concepts were identified, amendments suggested and acknowledgements made.

2.2 CONCEPTUAL FRAMEWORK

Different approaches exist in VC research with different definitions of the term VC. For this study definitions by (Kaplinsky and Morris 2001) were considered and modified to provide a working definition as; all stages of a technical production process as well as the interactions between these stages. The production process starts at the stage of input supply, then covers production, trading, processing and ends with consumption. This definition of a VC covers the inner core of a VC but additionally the institutional framework and other aspects, e.g. legal framework, need to be considered in VC analysis (Kaplinsky and Morris 2001).

The conceptual framework portrays linkages of the main actors of the chilli pepper VC in the Tolon-Kumbungu District that may influence the efficiency of the chain. The framework demonstrates that for chilli pepper VC to maintain a functional level that will make it efficient and sustainable, input providers, producers, transporters, processors, wholesalers, retailers and consumers must work in tandem and coordinate effectively. VC supporters – service providers (research and extension, rural banks, etc), National, district, community administrations, regulatory bodies, legislations, infrastructure and socio-cultural factors influencing business attitudes, trust and power relations are the factors influencing the efficiency and sustainability of the chain.

Figure 2.1 Conceptual Framework of Chilli Pepper Value Chain in Tolon-Kumbungu District



'C means the sequence of productive processes (functions) from the provision of specific inputs ɔr a particular product to primary production, transformation, and marketing and up to final ɔnsumption. It is also an institutional arrangement linking and coordinating producers, processors, traders and distributors of a particular product. Also, it is an economic model which combines the selection of a product and the appropriate technology with a particular way of organising the actors in other to access the market" (GIZ/MOAP 2005:1).

Kaplinsky and Morris (2001) defined VC as the full range of activities required in bringing a product or service from conception, through the different phases of production and this involves physical transformation of inputs of various producer services, delivery to final consumers and final disposal after use. VC Development according to Matthias and Muzira (2009:3) "means an improvement of cooperation between stakeholders of a particular sector and the coordination of their activities along different levels of the chain. The ultimate goal is to increase the mpetitiveness of this sector on the (international) market". Will (2008: 12), on her study in ɔmoting VC of neglected and under-utilised species for pro-poor growth and biodiversity nservation stated,

> *VCs are organised to meet specific marketing objectives, i.e. to satisfy consumers' needs. VCs are only in existence where a common vision and goals are shared among operators, allowing for mutual decision-making on how to link production with markets while sharing risks and benefits.*

om the foregoing definitions, it is evident that the VC concept assumes various perspectives, th the key factors including; planned productive process, participation, coordination of actors d a technology adoption to access markets.

ːtors of commodity VC stand in competition with one another. If a certain actor or chain ıesn't pursue continuous enhancement and adaptation to changing market situations, whereas hers do, the actor will loose its position in the chain or the chain will become less competitive and may loose its position at the market. Hence, actors must be aware of the competition to prevent erosion of their benefits. Value capturing and value creation needs to be seriously considered to enable actors seize existing markets and better their living standards. The VC concept of development intervention has been adopted as a strategy in the chili sector in the Tolon-

Kumbungu District. The intervention model was initiated in 2005 to help address the marketing problems associated with the chilli pepper VC in the district.

2.2.1 Value Addition Processes

Value addition consists of activities that tend to improve products with the intension to increase returns for operators in the chain. Will (2006) identified two possibilities for value addition: (1) Value Capturing and (2) Value Creation. Value capturing is described as the process of ıproving current production, processing and trading structures/processes. Value creation is ›wever seen as the process of innovation in a new product through enhanced processing and ıckaging to meet standards and market demands. To create value, it is necessary to identify the 'omising market opportunities and assess production and marketing risk.

'hat these fail to capture is whether resource poor farmers can better position themselves to eet consumer demands and have access and sustainable markets. Value addition as prescribed y development organisations such as the Agriculture Development and Value chain nhancement programme (ADVANCE) and the Comprehensive Africa Agriculture evelopment Programme (CAADP) stresses the need for its adoption in commodity evelopment. Little efforts are made to identify the possibility of participation by low income ıd disadvantaged actors. Also, development organisations operationalising the VC intervention ıodels need to be questioned on the successes and the way-forward regarding their methods of intervention and adoption rates especially among smallholder farmers.

Four value addition processes, sorting, drying, milling and cooking, in chilli pepper VC have been identified. Chilli pepper traders, through marketing activities create time, space and form utilities, by buying, and/or sorting before selling fresh to capture value or create value by drying before sales (Schipmann, 2006). Conventionally, these transformation processes that take place in the chilli pepper processing include grinding of the fresh chilli pepper into a hot pepper paste, or drying to obtain a dried chilli pepper which is also the intermediary product for powdered chilli pepper. The powdered chilli pepper is also used for producing “Shito”, a local pepper source, when cooked with other ingredients. All these transformational techniques of the chilli ›pper were rudimentarily conducted before the VC intervention in the Tolon-Kumbungu istrict. These conventional transformations could not have met the quality requirements of ıroGAP and GlobalGAP hence lacked the competitiveness for both local and international arkets. Mainstreaming actors into VCs implies the preparedness for the VC facilitating ;encies to play a facilitating and linkage roles through capacity building, the provision and aintenances of equipments especially for the low income actors. Indeed, the development and alisation of the VC development strategy is expected to contribute to achieving a better ›mpetitiveness in the local, regional and international markets. By so doing smallholders will : empowered to take advantage of the higher valued global markets and improve their standards : living. This, it is hoped, will also translate into increased income for all operators along the ıain, the creation of employment and consequently the improvement of the livelihood in rural ıd urban areas (Will, 2006).

3 ACCESS TO MARKETS

The importance of markets for agricultural growth and sustainable development can not be overemphasised. A lack of market or poor access to markets that exist will not only affect farmers' productivity but will also go a long way to affect their standards of living. Actors in commodity VCs especially in northern Ghana are faced with increasing imperative to integrate themselves into the modern market to generate cash incomes to improve their livelihoods. The development of the chili VC in the Tolon-Kumbungu District of the Northern Region of Ghana can therefore be seen as a panacea to improve the crop's potential with the resultant effect on the wellbeing of the population who depend on it for their livelihoods. Improving agricultural potential through the promotion of market oriented agricultural development programmes can be :en as a catalyst for growth and development in the rural areas of northern Ghana.

Iarkets offer the opportunity for the smallholder actors to participate in economic activity. Iarkets are part of poor people's daily reality. According to Ferrand *et al* (2004:2) "markets are : the heart of successful economic growth". Every producer or entrepreneur who wants to earn ıoney will at one point become involved in marketing. The goal of marketing activities should e an improvement in the profit levels of traded products. Market–oriented interventions by evelopment organisations in a way should offer a "win –win" outcome for VC actors.

ʼanielson (2002), in his study of Vietnam and Tanzania agribusiness sector indicated that mited access to markets, credit facilities and inadequate infrastructure are the major challenges f smallholder farmers in developing countries. Minot and Ngigi (2003) noted that the key ıctors behind the Kenyan horticultural success included an enabling investment climate, links /ith European markets, and deliberate efforts to facilitate cooperation between farmers and exporters. According to Karaan (2009) development agencies can help link actors to markets via advisory, facilitation, advocacy campaigns, and the linkage models could be farmer to farmer, farmer to processor, farmer to customer, contract design and monitoring, removing information asymmetries, quality enhancement, value addition, support services (technology, finance, trainings etc). From the above it is clear that market access is very essential to VC development and also applies to the chilli pepper VC. This, the VC committee and other interventionist such as IFDC, GIZ/MOAP and their partners seek to attain. To develop market access, Shepherd (2007) suggests that collective marketing, market channel development among others should be applied.

3.1 Collective Marketing of Produce

ccording to Shepherd (2007), collective marketing is where individuals or groups gather their oduce together and market in bulk. Collective marketing is one of the ways of attaining onomies-of-scale through bulking of products. By working collectively, farmers for example, n improve the quality of their products by growing the same variety, synchronizing their rming operations and collectively sorting and grading their products.

roup or collective marketing means that producers are working jointly with the main purpose of lling their produce together. Many horticultural producers in Ghana are smallholders, who oduce in small quantities. The groups can establish local collection centres/aggregation points enable buyers' access their produce. It is however evident that, some smallholder farmers turally do not want to market jointly. This presents a great challenge even if awareness about e benefits of marketing together is conducted. Overcoming the challenges and barriers to collective marketing would have significant impact on the income of the smallholder. As indicated by Karaan (2009) that actors of specific VC can efficiently work together when they are supported by development agencies on the need to bulk produce and market as a group.

Smallholder farmers in Northern Ghana, sell their products to several types of markets - local, regional, and international. The local markets are the easiest to reach due to quality standards constraints, and how production scale issues which are less of a concern at the local level, but these markets offer relatively low gains hence the farmers sell individually and not collectively.

Shepherd (2007) said collective marketing requires strong group cohesion, trust, excellent ıanagement of the activities and mutual agreements on the conditions. He indicated that ɔllective marketing can ease the smallholder market challenges through the improvement of ɔonomies of scale. It offers large quantities which is more attractive for the market, less ansport costs, lower transaction costs, improve access to market, support from ɔnors/government, joint input purchases, joint investment in agricultural machinery as well as ıformation and Communication Technology (ICT) and social advantages.

ɜmallholder farmers especially in Northern Ghana form groups for various reasons; to satisfy ɔonomic goals, develop personal and business relationship and to access development projects. hese groups when strengthened could derive benefits such as; collective sales, field trials, aining courses, information exchange, access to market information services, service provision ɜxtension, access to finance, machinery) by buyers or contractors (Shepherd 2007). This implies ıat facilitating the establishment of aggregation points for bulk sales of chilli pepper produce, ɔr example, in the growing communities can result in many benefits to the smallholder farmers.

Helen and Ruth (2006) on the other hand said collective marketing is not a "silver bullet" to solve the marketing problems of smallholder farmers. They identified a number of constraints associated with collective marketing which includes; the difficulty for a group to agree on all crucial issues especially if there is mutual distrust among members, dishonesty and non-transparency especially on the part of the marketing team which may lead to conflicts, poor record keeping which may lead to losses, thefts and losses can occur in poorly secured central facilities, good road infrastructure is required to attract large scale buyers to remote rural areas, may require heavy capital investments if the group has to put up its own central storage facilities, acquisition of other assets like moisture testers, sorting/grading facilities and vehicles for transport.

nplementing group linkage activities can thus be easier when farmers have strong group hesions and are used to collaborating. Shepherd (2007), reported that in Indonesia, NGOs who sist farmers to market mandarins have been able to build on informal social or church groups r mutual assistance during harvest and group sales. Development organisations can lead the forts to assist smallholder farmers to form effective producer groups and collectively market eir produce. The key success factors lie in the extent of market orientation by group members, ow cohesive the group is, mutual trust among members, clear rules and regulations. nallholder farmers should consider working and bulking their produce to increase their output vels to enable them secure contracts for their produce.

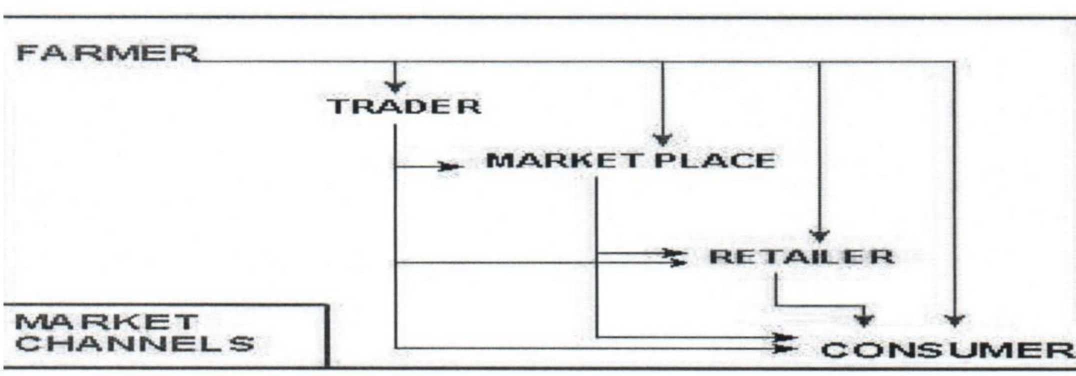
3.2 Marketing Channels of Farmers' Produce

Iarketing channels can be defined as the pathways by which produce get to the final consumer. channel of distribution comprises of a set of institutions, which perform all the activities utilised to move a product and its title from production to consumption (Lancaster and Massingham, 1993). Adegeye and Dittoh (1985) defines marketing channel as the sequence of intermediaries of middlemen, and markets through which general goods are passed en-route from producers to consumers. Plaat (2006) identified a number of existing marketing channels in the food crop industry in developing countries ranging from traditional to more modern channels. These marketing channels are;

1. Direct selling from the producer to the consumer;
2. Direct selling to retailers;
3. Selling at market places;
4. Selling the product through traders/ middlemen;
5. Selling through a co-operative; and
6. Selling through collection organisations;

Ie further clarified that, the first three market channels are mostly for small volumes and when he farmer wants to sell larger volumes the last three channels can also be contractors. Figure 2.2 resents a general flow diagram of a typical marketing channel. A farmer sells his/her produce ither directly to traders, the retailers, at the market place or to the final consumer.

igure 2.2 Flow Diagram of Market Channels



Source: Adopted from Marketing and Sales Agrobrief (2006)

The main marketing agents commonly found in the horticultural sector in the Northern part of Ghana are the retailers, wholesales and processors. Retailers deal directly with farmers by buying the produce at farm gate prices and sellig mainly to wholesalers or household consumers.

Wholesalers buy in large quantities either directly from farmers or from the retailers. The processors also deal either directly with the farmers, retailers or the wholesalers. They add value to the product or process it to another product before selling it to the final consumer.

2.3.3 Market Linkages

Linkages could mean a physical business connection between the producer and ultimate ɔnsumer. Business-to-business linkages could be between a producer to final consumer, ·oducer to trader, producer to retailer, producer to agro-processor, producer to exporter, contract ırming etc. According to Shepherd (2007) linkages also involve financial transactions – the :lling and buying of goods.

he linkage between the rural and urban areas is provided through a network of traders or ıtermediaries, the cost of their activities being paid for through the marketing margins. The mplest link between production and consumption is where the farmers sell their own produce irectly to the consumer. This is common among smallholder farmers in rural areas of Northern hana but may also occur in urban areas.

ollaborative business linkages among actors in commodity chains could be operationalised in ther horizontal or vertically forms. GIZ/MOAP (2005) spelt out that horizontal business nkages can be advantageous for smallholder producers because, by cooperation, they can overcome the limits set by the size, and with vertical business linkages, producer groups can integrate themselves into markets driven by domestic or international VCs.

Forward and backward linkages along the VC have been identified by the FAO (2004) as a form of collaborative business linkages and operate from the farm gate (Forward linkages) and include the consumer whilst backward linkage is between the producer or enterprise and the input suppliers. In a well functioning chain, forward linkages with buyers could result in several benefits especially for the producer and include the provision of working capital, bulking and transportating of produce, market access, provision of information concerning demand and ɔnsumption patterns and assists in quality standardisation etc. Backward linkages with input ıppliers could also benefit the producer especially in the provision of inputs needed for roduction, provision of embedded services etc.

'raditionally, traders have interacted with farmers on a one to- one basis, either buying from ıem at local markets or at the farm gate. These interactions were based on mutual trust and not /ritten contracts. Product specifications as a result of the changing market requirements, and elivery times and mutual benefits has created the need for an existence of relationships which /ould allow farmers to link up directly with retailers such as supermarkets or fast food chains or an supply through intermediaries. Therefore, trust between smallholders farmers' and buyers re essential, and can be promoted by exchanging information and involvement of smallholders ı contract negotiations (Shepherd, 2007). Purchases at the village level can often be extremely ıefficient and this can contribute to the high marketing costs that often lead to allegations of xploitation of farmers by traders. Stauder (2003) finds that of the 300 farmers in the horticulture sector in Hungary, all farmers sell their produce to traders who pay lower prices for the produce.

KIT and IIRR (2008) indicated that traders operate in a climate of great uncertainty and encounter all sorts of risk. They search for commodities to buy, visit sellers, and negotiate deals individually and this is time-consuming. And because they are searching for products to sell, far away from markets, they too do not know how much they should pay for a certain product, let alone how much it will fetch when sold in the market later. Traders can minimize such costs if farmers can be coordinated to work together to assemble all their products at one location. In ct, one of the keys to VC development should be to reinforce linkages and partnerships along e chains. However, this linkage should involve analysing the relationships between the various tors involved. Shepherd (2003) indicated that traders play an important role for smallholder rmers through the provision of both financial and input credit and technical assistance. He oved this in a case study in which traders offered advance payments to four (4) out of every ve rice mills surveyed by the Food and Agriculture Organisation (FAO) in India to cover input ost. Fruit and vegetable traders in India surveyed showed that more than half gave credit (in ish or in kind) to farmers.

case study by Shepherd (2007) in Chiang Mai province in Thailand, revealed that traders aintained close relation with farmers, paying frequent visits to monitor quality and to ensure at the farmers supplied only products from their own plots. An example of a linkage between aders and mandarin farmers in Indonesia further illustrates the capacity of some traders to work osely with farmers. However, in this case the training to farmers was provided through the intervention of an NGO to organise the farmers. The above case studies showed farmers and traders working genuinely together to improve business relations. All these reflect better business relations and contribution to more transparent prices. Improved chain relations can translate into benefits for farmers, traders and consumers. Shepherd (2007) reported of a case study from Mindanao in the Philippines describing a VC that involved close liaison with input suppliers, transporters and buyers developed with donor assistance. Government departments such as MOFA can play a role in linking farmers to buyers by identifying traders and arranging to meet with the farmers. At a more complex level, other development agencies such as NGOs or bilateral organisations can identify markets for particular products and organise farmers into roups to supply those markets, or the activities of agro-processors to secure their raw materials ıpply from smallholder farmers.

'hilli pepper traders and processors constitute important actors in the chilli pepper VC in the tudy area. The traders and processors serve as buying agents to farmers thereby saving them :om the hassle of transporting their produce to the markets. The traders and processors also add alue to the produce through processing and packaging.

ıccording to KIT & IIRR (2008) there are two basic strategies for an improvement in trading elations:

- **Stronger Trade Relations:** the creation of well-organised business relations between the various actors to improve the conditions for trading within the VCs. This can be done by organising the chain actors, creation of mutual understanding, specialising on certain roles and services, coordinating the chain and developing chain relations.
- **Stronger Market Institutions:** the establishment of standards, regulations, policies and services to coordinate and support trading activities to improve the conditions in the business environment around the VC. This can be conducted by standardising quality,

weights and measures, developing contract enforcement mechanisms, developing market information systems, provision of financial services, provision of business support services and using policy leverage.

Marketing is the exchange process that occurs between individuals and organisations or between organisations. However, not all suppliers or customers are equally attractive. In marketing, a ıpplier needs to determine which partner or customer he/she prefers to deal with and this has to ɔ with trust and relationships. In the business arena, relationship building could start from ːlection of business partners. Business relationships development starts from regular meetings ıd interactions among business partners. This however hinges significantly on the level of trust nong business partners. Business relationships among actors could also be as a result of the ːchange of products, services or information between business partners. An example is the ːlationship between farmer groups and input suppliers (backward linkages) and buying agencies hrough forward linkages). Business – to – business meetings can either be buyer controlled or ːller controlled (KIT & IIRR, 2008).

roducer – trader – processor meetings can be a helpful tool to supporting cooperation between ıe different actors in the chain and to create trust and commitment within the groups and with ıeir customers. It is obvious that the demand of wholesalers far exceeds the capacities of every ingle smallholder vegetable farmer in Northern Ghana. It is important for farmers and the traders to interact regularly. This could be coordinated by the farmer groups, NGOs or Business Development Service (BDS) providers. The meetings should have clear targets for example the establishment of contacts between the farmer groups and the traders or exchange information on supply and demand, or agreements, contracts and transactions.

Dawson (2002) stated a scenario in Ecuador in which cassava was grown in marginal areas of where other crops do not grow. Aid agencies abandoned the zones where cassava was produced and processed and the dynamics of the cassava industry developed spontaneously through artnership between farmers, traders and processors in order to meet market demand in eighbouring Colombia. An important factor in the success of these business linkages is the eneration of mutual trust through the fulfillment of verbal agreements.

.3.4 Market Orientation

Iarket orientation would require knowledge of the farmer about what the market needs in terms f products specification and volumes. A producer who is market oriented will first consider the ıarket demands and then decide what to grow and how. After acquiring this knowledge would e/she then decide to whom and how to sell his products. Shepherd (2006) indicates that market rientation acknowledges that farm-level development must be related to what people want to uy and the precondition for farmers growth is the existence of a market and their understanding f its trends. Many of the smallholder farmers in the horticultural sector in northern Ghana roduced vegetables for subsistence and as a tradition. Their main concern has always been the ost of production. However, smallholder farmers are now compelled to get informed of the market trends due to the forces of globalisation and internationalisation resulting in increased competition within the commodity chains.

For an entrepreneur to earn a commensurate profit on his or her business, he/she has to first choose a product that would sell. The choice of what product or crop to produce will largely depend on his or her orientation. According to Abbot (2000:18) "the choice of product is an important marketing tool and to make the right choice, the producer has to have as much insight as possible into the workings of supply and demand for a number of relevant products".

ıepherd (2007) presented a case study from Uganda potato suppliers to a fast-food restaurant, dicating how potato farmers understood the workings of the market. In this case the farmers ıd to grow a new variety, change production practices to influence potato size and moisture ›ntent, stagger planting dates and grow at different altitudes in order to ensure year-round /ailability. It is very much unlikely that these farmers could have taken these bold steps without ıe assistance of an external facilitation agency.

emand for high quality products in the Ghanaian market is rising and is expected to increase ıe to the influx of supermarkets which now sell for example, imported chilli pepper products. he local chilli pepper actors have the opportunity of replacing this with their own products via rientation of the market in terms of quality and volumes. Basic treatment in chilli pepper roduction such as cleaning and washing, sorting, blanching and packaging should form an ıtegral part of primary production. This means that for actors to be able to increase their profit ıargins, they need to apply these requirements. Even though, several field demonstrations have been carried out on these technologies, were these demonstrations rightly conducted? If so, are actors adopting them?

2.3.5 Market Information

The concept of farming as a business requires that farmers' have access to relevant information in order to make informed choices and appropriate decisions of their production so they can produce products that satisfy customer demands. In this perspective, market information is information needed for a profitable agribusiness. Categories of market information which can be available and relevant to actors include information on prices, trade volumes, demands and ɪpply situations, quality requirements for produce in the market, etc. Shepherd (2000) list ɔurces of market information as; Government-run market information services; Farmers; 'raders; Price boards in markets; Extension workers; Non-Governmental Organizations (NGOs); ˌgro-processors;

[e also lists benefits that farmers could derive from availability of market information as;

- An improvement in farmers understanding of the marketing environment;
- Empowerment of farmers' negotiation position for better prices;
- Reduction of farmers' risks of selling at low prices;
- Indicates which crops are fetching a better price and why;
- Indicates new market options; and
- Informs producers and traders about new options.

e veld (2004) stated that, market information would allow producers to choose a product that is xpected to do well on the market. Information's on supply and demand for a product can be _athered via market research (middleman or consumers), the media and extension workers. Cooperatives can disseminate market information to producers to enable them have access to current commodity prices (Koopmans, 2006). Martini (2006) indicated that marketing groups can also offer market information service to members.

For successful marketing of horticulture products, farmers must change their attitude considering farming as a business and not a way of life. It requires that all the necessary conditions needed to improve the quality of the produce must be taken seriously. Market information which can also include conditions available in the market like quality of the produce, volumes coming in and going out, varieties in the market, value addition and seasonal tendencies like harvest or planting time are inevitable if actors are to make commensurate profits from their businesses.

3.6 Role of Producer Organisations in Market Accessibility

:IT & IIRR (2008) report that the key to better trading conditions among farmers and traders is at smallholder farmers' build a well-functioning organisation. A well-functioning farmer ·ganisation promotes market-oriented farming systems to produce products that are demanded / the consumer, invests in GAPs, monitors market requirements and developments, provides ılue for its members by ensuring quality services and good governance.

hepherd (2007) reports that farmer group formation has had a mixed success to date, with the :sources required to achieve success reducing prospects for replication. It is generally felt by C facilitating agencies that development of groups is necessary to enable farmers to make the ansition from a production to a market orientation. A well functioning farmer group can access ĸtension and inputs more easily, improve produce quality, increase quantity and achieve :onomies of scale, and increase bargaining power with buyers. de veld (2004) also established that farmers organising themselves into groups give them better access to inexpensive credit. Farmer organisations have become a major mechanism in linking small-scale producers to markets. The basic reasons for this include the inability of small-scale producers to neither achieve the economies of scale nor provide the volume of product required to be competitive in modern markets.

Shepherd (2007) places strong emphasis on the promotion of farmers' organisations to help bring about what he calls a "smallholder revolution – facilitate farmer access to inputs, credit, output markets and technical training and to increase engagement with policy processes to improve ordination within the agriculture sector". Helen and Ruth (2006) argue that development encies can play a very important role in facilitating farmer organisations development, pecially in the early stages. But greater attention has to be directed at examining the purpose d the appropriate partners of such organisations.

is evident from the discussion above that actors need the support of both the government and ivate sector agencies to enable them take advantage of the emerging global market to improve eir economic wellbeing and better their living standards. This is possible through the creation an enabling investment climate to facilitate linkages among actors. When actors understand e merits of working collectively as well as vertical and horizontal business linkages they can iprove their accessibility to domestic and foreign markets. However, these would require arket orientation as well as relevant market information along the chain.

4 UPGRADING IN VALUE CHAINS

According to Seville *et al* (2011) small-scale producers often need investment to capture market opportunities. They stated that these investments are typically needed to;

- Upgrade producer skills, producer organisatioins and intermediaries to meet the requirements of the market (quality, consistency, production standards, processing capacity, infrastructure and the like), and;
- Utilize existing assets and invest as needed to ensure that the poor are able to participate in a beneficial way and enhance the rewards and/or reduce exposure to risks of chain participation (increasing productivity, increasing producer business and sustainable farming skills, increasing business capacity of the intermediary and more)

ılwig et al (2008) stated that upgrading is the capacity to;

1. Deliver larger volumes (even at lower quality)
2. Comply with standards and certifications
3. Deliver on logistics and lead times
4. Negotiate better prices for the same product (for example Fair-trade)

obalisation and internationalisation is changing ways that markets operate in recent time posing smallholder farmers to both risks and opportunities. Actors in commodity chains may unable to penetrate in the export markets if their produce and products are of inferior quality d of low standards. Building the capacities of the chilli pepper VC actors in the study area uld enable them meet quality and quantity needs of both local and export markets. The focus uld be the introduction of standards certification, minimal processing, reduction in production st, introduction of contemporary agronomic techniques, and improvement of product quality d creation of new markets. Efforts geared towards upgrading and making farmers competitive needs to be driven by market opportunities and demands (Vermeulen *et al,* 2008). Relationship building is one of the possible means by which actors can upgrade their activities.

Upgrading according to Jonathan and Christopher (2009) refers to the acquisition of technological, institutional and market capabilities that allow actors of specific commodity chains to improve their competitiveness and move into higher-value activities. A study conducted by the Overseas Development Institute (ODI) via the International Development Research Centre (IDRC), the Danish Institute of International Studies (DIIS), explored different ways that the smallholder farmer can engage successfully in viable VCs. A menu was proposed seven types of VC upgrading strategies and these are spelled out as follows:

orizontal Coordination: Here, business relationships are created among actors to take vantage of market demand for example, in terms of volume requirements of produce. This rm of upgrading is very important for smallholder farmers in rural areas because coordinating ith others allows producers to achieve economies of scale in supplies and to reduce transaction ısts. Horizontal coordination is considered to be the first step in a sequence of interventions that timately result in access to market and is a prerequisite for other forms of upgrading.

ertical Coordination: This refers to an extended linkages in which there is a move up away om one-off spot transaction and towards longer-term inter-nodal relations, for instance contract rming, whereby a processor or exporter will contract horticultural out-grower farmers. It is also elieved that this form of upgrading is important because it can result in greater certainty about ture revenue flows for poor participants. Vertical coordination involves the building of trust relations between the buyer and the seller.

Functional Upgrading: With functional upgrading, a mix of functions are performed by actors in the VC –increasing (upgrading) or reducing (downgrading) the number of activities performed by individuals and firms. Considering this scenario, a producer starting to process some of their output to add value to it represents functional upgrading. The shortening of the VC can be achieved by means of the exclusion of intermediaries and the redistribution of their functions among the partners of a newly formed vertical relationship. The question to deliberate upon is; ɔw can a producer be assisted to undertake minimal processing in order to increase his/her rofit margin?

rocess Upgrading: Process upgrading refers to an improvement in VC efficiency by increasing utput volumes or reducing costs for a unit of output. Examples of this include improving gronomy to enhance yields that result in higher sales and/or own consumption. This may be the esult of improved planting techniques, planting materials or investments, such as irrigation ıfrastructure. Process upgrading allows smallholder producers to meet international standard uch as EuropGAP and GlobalGAP certification requirements.

'roduct Upgrading: Due to globalisation, the quality of the product of the VC has become ıcreasingly important as the export markets have become more quality conscious. The challenge f standards lies in achieving them (to allow market access) without excluding the poor from the 'C interventions. Process upgrading has knock-on-effects on product upgrading because improvement in product quality would involve an improvement or uplifting of production process.

Inter-chain Upgrading: This is the use of skills and experience developed in one VC to productively engage with another – usually more profitable – VC.

Upgrading of the Enabling Environment: This refers to the commitment of both government and other development partners in providing the requisite business assistance to actors of commodity chains. This is because the competitiveness of the enabling environment for VCs is a major contributing factor in the success of the operations of VCs.

rom the above it can be said that upgrading is necessary for good business. The use of improved eeds as a strategy in upgrading is paramount especially in the horticultural sector. This is upported by Linden (2010) indicating that Fair Trade Certified producers achieved better results ian their conventional competitors. However, the use of improved seeds hinges on the vailability of the certified seeds for use by farmers. Some smallholder farmers mostly would refer the use of their own stock. A case study of maize farmers in Central Valleys of Oaxaca by adstue (2006) established that selecting and saving seeds from farmers own maize harvest is by ır the most common way of obtaining seed for the next planting season. Among the reasons ighlighted include 'confidence' or 'trust' in their own maize seed.

ome opportunities for upgrading by farmers may include the availability of improved seeds and echnology for production. Access to Business Development Services (BDS) from Business ervice Organisations can provide a great opportunity for upgrading farmers' production practices. In addition, the formation of Farmer Based Organisations (FBO) and farmers' own initiatives to form associations can enhance their access to both local and export markets.

Despite the relevance of the different kinds of upgrading, ***commitment upgrading*** by both government and bilateral agencies including NGOs to the constraints of actors engaged in agribusiness VCs is non-existent especially in developing countries like Ghana. Instances where government shows commitment to encouraging smallholder participation in agriculture markets, the associated bureaucracy is much less to be desired, as government policy is undermined at the implementation stage.

is necessary for actors of commodity chains to upgrade their products in other to penetrate the obal markets. For the chili actors in the Tolon-Kumbungu District to take advantage of these nerging global markets it will require building their capacities on the different levels of ıgrading their activities and provision of relevant equipments to improve upon their operations meet standards for the export markets.

5 BARRIERS TO ENTRY INTO COMMODITY CHAINS

:ville et al (2011) indicated that small-scale producers and poor farmers are often characterized / a large degree of marginalization, lacking access to natural resources (both land and inputs), chnologies, capital markets and credit. They added that geographic marginalization restricts the ıility of these producers to buy inputs and sell produce, an isolation deepened by lack of access motorized transport and low levels of skills. Michell and Shepherd (2006) indicated that lack capacity building and financial credit has been shown in Kenya to prevent smallholders from participating in global VCs because they lack the means by which to certify their produce, as required by European retailers. Similarly, actors of commodity chains in northern Ghana generally are unable to take advantage of the high value markets due to lack of requisite needs to elevate their activities to meet standards. Many of them often have problems accessing credit, obtaining information on market opportunities or new technologies, purchasing certain inputs and accessing product markets. Instances where markets are accessible, farmers may be subject to price fluctuations or inequitable prices. Such difficulties are barriers to their development and represent a 'bottleneck' in their business development process. However, chilli pepper VC committee members in the Tolon-Kumbungu District focus on new technologies to meet standards.

6 PROSPECTS OF A WELL FUNCTIONING CHAIN

aising competitiveness and seizing opportunities in domestic, regional and international ıarkets, access to financial services and capacity development of VC actors could represent ›me of the key prospects of a well functioning VC. Actors in a specific VCs in their ıteractions have the possibility of acquiring new skills and knowledge. Interactions and ›mpliance with standards has prospects for meeting certain specific demands especially in ıantities and export requirements. The chilli pepper VC development needs to present certain ›ecific prospects to the project beneficiaries. These could include; market accessibility, vailability of niche markets for chilli pepper products, proper linkage with actors in the chain ıd accessibility to financial credit etc. Yago et al (2007) indicated that VC actors have the rospects of accessing export market demands of quality and quantity. According to KIT and ŁR (2008) agriculture VC offers good economic prospects for actors which include access to nancial and input credit for the development of their businesses.

Shepherd (2007) indicates that agriculture VC offers opportunities of developing groups and associations which have prospects of making farmers share knowledge and make transition from production to market orientation. Accordingly, farmers have the opportunity of accessing extension and inputs more easily to improve produce quality, increase quantity, achieve economies of scale, and increase bargaining power with buyers if they are organised into cohesive groups via VC activities. Working through farmer groups can also reduce the costs associated with supplying inputs, collecting outputs, providing extension advice and negotiating contracts.

Iarket-oriented collective action has potential of overcoming the high transaction costs that /ould be faced by farmers acting individually (Shepherd 2007). For this reason actions need to e taken to develop the economic performance of a producer group, through both production ıtensification and marketing improvement. Creation of a competitive advantage in production nd processing is a key prospect for actors of VCs. Innovative production and processing can reate cost efficiencies and improved service that translate into higher margins.

'he chilli pepper VC facilitating agencies need to see group development as an essential omponent of the development of a market-oriented approach among actors since this will onstitute potential prospects for efficient VC activities. It is obvious that the prospects for an fficient VCs encompasses market orientation, market accessibility/guaranteed buyer, access to inancial and input credit and creation of relationships among actors.

2.7 CHALLENGES OF THE VALUE CHAIN DEVELOPMENT

VC development is seen by many development practitioners as an effective approach to increase competiveness and incomes of smallholders. However, there exist several challenges posing a treat to the smooth functioning of the chain. IFAD (2010) indicates that functioning of agricultural VCs especially in Africa is challenged by the fragmentation of most of its agricultural sector and a whole range of production, trading, processing, storage, market issues and access to appropriate financial services.

A number of challenges and emerging trends have been identified by CAADP (2010) with espect to the VC development in the agricultural sector. These they outlined as;

- Fragmentation of the agricultural VC at the production segment level. This is as a result of high cost of production and marketing cost, high cost of access to modern inputs, slow diffusion of technical innovations and relative vulnerability to weather.
- Limited availability of adapted financial services products. There is a lack of financial services products that are adapted to the needs of VC actors.
- High cost of establishing and operating businesses. The relative difficulty to establish and operate a business due to stringent laws and regulations and affecting business registration.

These challenges are still impeding the development of VC in Northern Ghana. In addition post harvest losses, lack of standards, business linkages are visible.

2.8 SUPPORT TO VALUE CHAIN ACTORS

Access to services is an essential component of a successful VC participation. Smallholders need access to technical expertise, business training, inputs such as fertilizers and high-germination seeds and appropriate financing. The strategies adopted by the organisations implementing the VC concept in the study area include capacity building, linkage to markets and financial services. The objective of these interventions is to bring about competitiveness of actors in both local and export markets. Have these interventions yielded the much anticipated benefits? The chilli pepper actors need assistance to develop best practices for managing their production processes. Access to formal markets and financial support are among their biggest challenges. Selling to formalized markets can offer more stable prices but requires that farmers have access to affordable credit and are willing to invest in capital requirements (Neven et al. 2009).

ccording to Donovan (2010) improvement in access to credit and income from VC ırticipation can lead to increased natural capital. His findings among Nicaraguan organic coffee :oducers shown an increase in average total area under coffee production by 6.3 percent as a :sult of access to credit provided by the exporter. Minten et al (2005) also found in Madagascar :oved that increasing access to credit, inputs and technology led to an improvement in :oductivity as well as technology spill-over to other crops. There resulted in increased income om the sale of coffee and increased credit from the exporter in the form of long-term loans with three-year grace period. Michell and Shepherd (2006) also indicated that high levels of social ıpital, through associations or through group-savings schemes can support links to formalized ıarkets through aggregation and facilitate scaling-up. Barham and Chitemi, (2009) shown that ıore mature groups with strong internal institutions, functioning group activities and a good sset base of natural capital are more likely to improve the market situation and take advantage f market opportunities.

The development of VC has made agriculture markets more efficient by overcoming highly fragmented marketing relations, improving access to services, balancing asymmetric distribution of information and power, and building trust among VC stakeholders (Vorley and Proctor, 2008).

These will generally result in reduction in transaction costs (market research, transport and logistics for distributing goods from farm to consumers), reduction in wastage rates and enhancement of product quality from post-harvest up to the consumers table (GIZ/MOAP, 2005).

Making the chilli pepper VC achieve its objectives in the study area appeared to suffer many bottlenecks. According to René (2006), it is imperative that beneficiaries of VC development pproach are identified. If the goal of the intervention is general economic development then the pproach will need to target groups based on their ability to adapt or ability to deal with exposure o risk. It is imperative that, the chili actors are involved in VC analysis, identifying their specific ›otentials and constraints for market integration, their current and/or potential position within the hain, framework conditions relevant to them, necessary support measures through the adoption ›f a participatory market chain approach in the development of commodity chains.

t is again necessary that, the chilli pepper actors are empowered to take informed decisions, upporting them with market access under the strategy of contract farming. There should also be in initiative that aims at identifying out-of-the-box innovative technology options that will add ignificant value for the chilli pepper actors. Policies to strengthen both public and private sector igencies need to be formulated and supported by governments to provide requisite capacities that ire germane for the sustainable development of the VCs. Owing to this, support services to the Tolon-Kumbungu District is vital for an efficient functioning of the chilli pepper VC.

2.9 MOAP, IFDC CHILLI PEPPER INTERVENTION IN THE TOLON-KUMBUNGU DISTRICT

Chilli pepper is considered a major crop in the Northern region of Ghana with an estimate of 41.3% of the people engaged in its production. MOAP and IFDC considered the promotion of the chilli pepper crop as a way of increasing its competitiveness in domestic, regional and export market. MOAP and IFDC adopted the VC concept as a strategy of promoting the chilli pepper ɔmmodity in the Tolon-Kumbungu District of the Northern Region of Ghana since 2006. The ıain objective of their intervention was to bring about the economic wellbeing of the actors ırough improved production techniques and access to guaranteed market (GIZ/MOAP, 2004).

he key components adopted by MOAP and IFDC in facilitating the chilli pepper VC in the listrict include; capacity building in Good Agriculture Practices (GAPs) and other value ldition techniques, Organisational Development (OD), creating linkages among actors, linkage) guaranteed market, linkage to financial credit and other services. Despite these strategies as a 'ay of raising the competitiveness of chilli pepper in the District via the VC approach, actors ill have problems of procuring guaranteed markets for their products and also lack access to nancial credit and other relevant support services to making them competitive.

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CHAPTER THREE

STUDY AREA AND RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter is devoted to the profile of the study area as in section 3.2 and the research methodology of the study as in section 3.3.

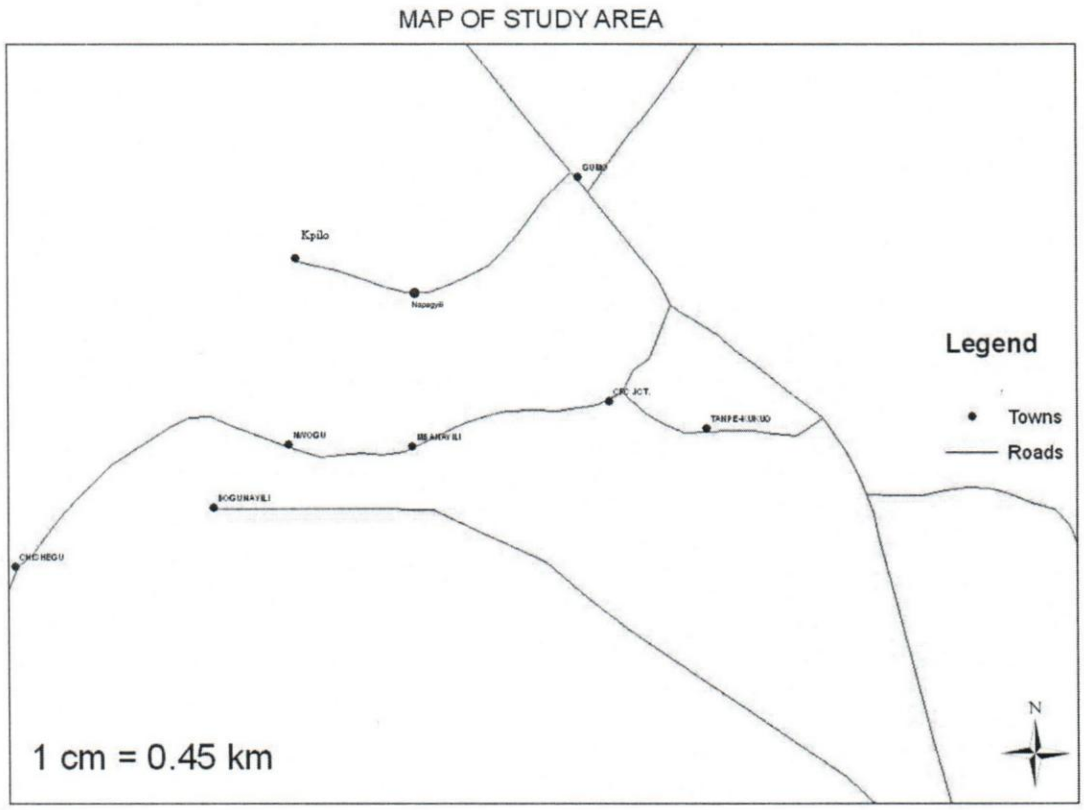
2 PROFILE OF THE STUDY AREA

ıe study area is the Tolon-Kumbungu District of the Northern Region. It was chosen because ere were interventions aimed at developing the chilli pepper VC there.

2.1 Location and Size

ıe Tolon-Kumbungu District was one of the 45 districts created by the erstwhile Provisional ational Defense Council (PNDC) Law 2007 in 1988 with Tolon as the capital. It lies between titude 9° 16' and 9° 34' North and longitudes 0° 36" and 0° 57' West. It shares common ›undaries with Savelugu/Nanton District to the North, Tamale Metropolis to the East and entral and West Gonja District to the South (Tolon-Kumbungu District Assembly, 2001). ajor towns in the district are Tolon, Kumbungu, Nyankpala, Dalun, Wantugu, Tali, Kasulyili, oggu, Gbulahagu, Kpendua, Tibung, Lungbunga, Gbullung, Grimani, Chirifoyilli, Zangbalung, oggu, Yepeligu, Tingoli and Gundaa. The district covers an area of about 2, 741 square lometers with a population of 132,338 (female, 66,269, male, 66,069) as a the 2000 population and housing census Population density is approximately 50 inhabitants per square kilometer 2000 (GSS, 2000). .

Figure 3.1 Map Showing Study Communities in the Tolon-Kumbungu District



Source: ITFC GIS Data Base

3.2.2 Topography and Drainage

The District is located 180 meters above sea level and the topography is generally undulating with shallow valleys that serve as stream courses and isolated hills. The district is among the few in the Northern Region through which the White Volta passes. Other major natural water sources in the district include Bontanga, Golinga, Jaagbo and Tolon dams. Many other smaller dams are also dotted around (Tolon-Kumbungu District Assembly, 2001).

3.2.3 Climate and Vegetation

There is a unimodal rainfall with a mean annual rainfall of 1100mm in the district. Crop farming is highly restricted by the short rainfall duration. The mean day temperature ranges from 33°C to

39°C with mean night temperature ranging from 16°C to 22°C. The mean annual day sunshine is approximately 7.5 hours. The district exhibits both short and tall grasses interspersed with drought resistant trees such as shea trees, 'Neem', Dawadawa and Mahogany. During the rainy seasons the district becomes green making the vegetation more luxuriant. In the dry seasons, however water becomes scarce as a result of poor vegetation cover. The grasses dry up and the accompanying bushfires destroy the soil nutrients and expose the soils to serious erosion (Tolon-Kumbungu District Assembly, 2001).

.2.4 Agriculture

'he economy of the Tolon-District Assembly is dominated by agriculture, commerce and trade nd services. Until 1995 over 90% of all indigenous people in the District were mainly farmers GSS, 2005). The main crops cultivated by households are cereals (rice, millet, maize, sorghum) ultivated by 99.8% of households, legumes (soyabeans, groundnut, cowpea, pegion pea) ultivated by 88.3% of households, tubers (cassava, yam) 80.6%, of households vegetables 5.7% and 15.3% cultivate fruits. Cash crops include cotton, tobacco groundnuts, cashew, heanuts, and soya-beans (Tolon-Kumbungu District Assembly 2001). The main problems of rop production are with unfavorable weather conditions (drought), erratic rainfall, perennial ush fires and declining soil fertility. Some of these problems are due to poor environmental nanagement relating to inefficient farming practices and hunting for fuel wood.

Despite the challenges facing agriculture production, the district is endowed with numerous potentials which when exploited would help transform agriculture in the district, for example land, irrigation facilities, comprising of Bontanga and Golinga Dams for all year round cropping, research institutions (SARI, ARI and UDS), farm labour, research and extension for farmer, linkage for effective technology transfer and adoption. Others include commercial production of legumes (soya-bean) and vegetables (chilli pepper), commercial production of roots and tubers (yam and cassava), small and large ruminant production and industrial cash crop production (cashew). Land tenure systems in the district include free hold/inheritance and negotiations/temporary use. The types of soil found in the district include sandstone, mudstone and shale. These soil types are inadequately protected resulting in serious erosion during the ainy season.

.2.5 Ethnicity

Apart from the Nyankpala community which has diversified ethnic groups, Dagombas, Gurishie, 'rafra, Ashanti, Ewe, almost all the inhabitants in the major towns and villages are predominantly Dagombas.

. 3 RESEARCH APPROACH

Research methodology is an important component of any study and provides the framework upon which the whole process is dependent (Brown, 1996). It is recommended that the methodology is conducted thoroughly to efficiently produce accurate and precise data in order to achieve the research goals and objectives. The choice in using a particular research approach would depend on a number of factors: the purpose of the research, its sub-research objectives, practicability and validity, available financial resources, time, the skill of the researcher in data analysis and interpretation and social organisation among others.

3.3.1 Sampling Procedure and Size

Two main sampling techniques are prominently used in various researches. These are probability and non-probability sampling (Twumasi, 2001). Probability sampling gives every item in the universe an equal chance of inclusion in the sample. Non-probability sampling technique such as purposive sampling (Bernard, 1998) procedures are also used. According to Preston (2002) applying purposive sampling can yield insights and in-depth understanding rather than empirical generalisations. In this sampling procedure, the researcher purposively choose the particular units of the universe to constitute the sample on the basis that the small mass that they so select out of a huge one will be typical of the whole (Yin, 1993). The judgment of the researcher plays an important part in this sampling technique.

According to Punch (2004), selecting a sample that adequately reflects the variation in a given population is quite challenging and calls for an appropriate approach. Miller (1991) indicated that, a researcher needs to select only few items from the universe for the study purpose and that an ideal sample is often preferable to larger sample or interviewing a larger number of people saying the same thing. The size of a sample should neither be excessively large, nor too small. It should be optimal (Karma, 1999). This however should be to the discretion of the researcher. Saunders et al (1997) argued that while deciding on the size of a sample, the desired precision should be determined by the researcher and also an acceptable confidence level in carrying-out estimates in quantitative research.

For this study, a purposive sampling technique was employed to select the Tolon-Kumbungu District because chilli pepper VC interventions are going on there. Eight (8) communities where the chilli pepper VC interventions are were purposively chosen. The importance of adopting this design is the relative advantage of existing interventions inherent in the sampling. In each of the 8 communities, there are existing producer groups formed and working with the project. Each group is made up of between 25 and 30 members. All these 8 groups were purposively chosen for the study. There are no other chilli pepper producer groups in the district. From each of the group simple random sampling was done to have 10 samples per group. It should be noted that farmers constitute the largest beneficiaries of the chilli pepper VC intervention in the district ıence the reason for their larger sample size.

The snowball method sampling technique was used to trace non- beneficiary's chilli pepper ›roducers in the study communities who are not benefiting from the chilli pepper VC ntervention. This was to respond clearly to the research objective one (Market accessibility) of he study. As indicated by Johnson and Rogally (1997) one possible way to conduct an impact ıssessment study is to include a 'control' group and to use recall to make comparisons with how hings are for non-beneficiaries.

With the snowball method, the non-beneficiary actors served as linkages by recommending ›ersons who belong to their categories to be interviewed. Ten (10) non-beneficiaries were ›elected from each benefiting community hence, a total of 80 non-beneficiaries chosen and ›tudied. Four (4) organisations (GIZ, IFDC, SARI and UDS) who are implementers of the chilli ›epper VC were also selected to provide some data.

Again, purposive sampling techniques were used to select ten VC beneficiary traders, two VC beneficiary processors and two VC beneficiary input dealers for the study. There were the only active beneficiaries of the VC hence the selection. Also, ten non-beneficiary traders, two non-beneficiary processors, and two non-beneficiary agro-input dealers were also purposively sampled. A total of one hundred and eighty eight (188) actors were sampled for the study.

Four focus group discussions (FGD) were conducted with ten participants each. The first and second FGD was conducted at "Mbanayili" community with ten VC beneficiary farmers and ten n-beneficiary farmers respectively. The third and fourth FGD was also conducted at ›ogunayili" with ten VC beneficiary and traders and ten non-beneficiary actors respectively. l the FGD were conducted with the help of a checklist. The final sample is shown on table 3.1.

ıble 3.1 Sample Size of Beneficiary and Non-beneficiary Actors

ımmunities	Chilli pepper VC beneficiary actors				Non-beneficiary actors				Total
	Farmers	Traders	Processors	Agro-input dealers	Farmers	Traders	Processors	Agro-input dealers	
banayili	10	2	2		10	2			**26**
›gunayili	10	2			10	2			**24**
ıeshegu	10	1			10	1	2	2	**26**
vogu	10	1			10	1			**22**
›ilo	10	1			10	1			**22**
ımo	10	1		2	10	1			**24**
ınkulung	10	1			10	1			**22**
..apagyili	10	1			10	1			**22**
Total	**80**	**10**	**2**	**2**	**80**	**10**	**2**	**2**	**188**

Source: Field survey, February 2011

3.3.2 Method of Data Collection

It is useful for the researcher to use more than one method in data collection. The methods were selected to complement each other and to allow for triangulation. Triangulation "reflects an attempt to secure an in-depth understanding of the phenomenon in question. It is a strategy that adds rigor, breadth, complexity, richness and depth to any inquiry" (Denzin and Lincoln, 2000:8). In the light of this, data was elicited from primary sources through the combination of interviews, focus groups, and questionnaires.

According to Grady (1998) in making a decision for data collection, the researcher needs to have in mind the social situation and the type of people he is dealing with so as to help minimise negative tendencies. This was taken into consideration in choosing the data collection methods. Data collection was done in 3 steps; (1) Focus Group Discussion and (2) Questionnaire administration and (3) key informant interviews.

Focus Groups Discussion: "A focus group discussion (FGD) is a planned, facilitated discussion among a small group of stakeholders designed to obtain perceptions in a defined area of interest in a permissive, non-threatening environment" (Campbell, 2008: 3). "FGD demands a focus on subject area, interest groups, the use of the experiences and/or opinions of group members, and the generation of intense debates on the area of focus" (Millar and Apusigah, 2004:31). Focus groups typically consist of 6-10 people drawn from a population that the researcher is interested in. To allow for perfect interaction, homogenous groups are recommended in FGD. Open-ended questions, checklists, are used to guide the discussion, taking notes and recording the session so that the information could be analysed later (Campbell, 2008).

A homogenous group of ten beneficiary farmers and ten non-beneficiary farmers as well as ten beneficiary traders and ten non-beneficiary traders respectively were constituted separately in two communities (Mbanayili and Bogunayili) to elicit in-depth information on the impact of the chilli pepper VC intervention. This was conducted using a checklist. FGD was employed in this study to have a general idea about the effects of the chilli pepper VC intervention. Themes, hunches, interpretations and ideas generated from the focus groups were analysed. Issues from ıe four focus groups were compared and contrasted. The content of the discussion were ıalysed by looking at the trends and patterns within and among the various groups.

uestionnaire: The choice of using a questionnaire is influenced by a variety of factors ıcluding size of the sample required for analysis, type of questions needed to collect data and umber of questions needed to collect data (Saunders *et al*, 1997). As a tool for data collection, ıe questionnaire represents an efficient tool to collect statistically quantifiable information. It is n efficient tool in the sense that many respondents can be reached within a short space of time Twumasi, 2001).

or this study the questionnaire comprised of closed and open –ended questions. Five separate uestionnaires were used; one each for farmers, traders, processors, agro-input dealers and chilli epper VC implementing agencies, all based on the objectives of the study. The questionnaires /ere pre–tested in a purposively selected community, to determine their appropriateness in collecting the desired data. It was also to test for clarity, suitability, logical flow of questions, ambiguity and vague meanings. Issues that came up during the pre-testing were used to refine the questionnaires. The data was collected with the help of field assistants who administered the questionnaires to individual interviewees.

Key Informant Interviews: The term "key informant" refers to anyone who can provide detailed information and opinion based on his or her knowledge of a particular issue and seeks qualitative information that can be narrated and cross checked with quantitative data, a method alled "triangulation" (Law et al.1998). Key informants were selected from the chilli pepper nplementation organisations (GIZ/MOAP, IFDC, SARI and UDS) and contacted to elicit in-epth qualitative information to complement the findings from the qualitative data.

.3.3 Data Analysis

According to Yin (1993), in analysing data, a number of closely related operations are performed vith the purpose of summarising the data collected and organising them in such a manner that hey answer the research questions. In so doing appropriate analytical tools are used.

Data from the questionnaire were analysed using descriptive statistical analysis such as requencies, percentages and means. Ranking was also used to analyse the challenges. Simple quantitative data from questionnaires were tabulated and processed with the help of Statistical Package for Social Sciences (SPSS) version 17. The outputs were presented in the form of graphs/figure and tables. The qualitative data analysis was done at the same time during the data collection process and after the overall data was collected. Qualitative data was cleaned with the aim of checking accuracy and consistency of information on each questionnaire in relation to the set objectives.

A coding manual was designed after knowing the nature of responses. Both open and closed-ended questions were coded and sorted for interpretation. Thus, the key issues that are identifiable with the study topic were grouped accordingly. Data from farmers were analysed separately from traders, processors and agro-input dealers. Market accessibility was determined by comparing with the non- beneficiary chilli pepper actors which served as the "control group". Ranking method was applied for responses in the needed support services. This was done by coring from highest to lowest.

CHAPTER FOUR

FINDINGS AND DISCUSSIONS

4.1 INTRODUCTION

This chapter is devoted to the findings and discussions of the research work. Section 4.2 presents the socio-demographic characteristics of the chilli pepper farmers, traders, processors and agro-chemical input dealers. Section 4.3 discusses the VC intervention on market accessibility by chain actors. Section 4.4 presents findings on upgrading of chilli pepper VC. The findings of the ajor constraints in the chilli pepper VC are discussed in section 4.5 while the prospects of the illi pepper VC development on beneficiaries are in section 4.6. Finally, support services eded for a functional VC are presented in section 4.7.

2 SOCIO-DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

2.1 Sex of Respondents

ie sex distribution of the respondents is presented in Table 4.1. It shows that, 93.7% of the oducers are male while 6.3% are females. The male dominance in the chilli pepper production ctor confirms that farming in the Northern Region of Ghana is traditionally and culturally ominated by men. As such, availability and accessibility of farm land is mainly limited to male rmers. Among the traders, 20% are males while the majority 80% is female. Both the ocessors and agro- input dealers were four female and four male respectively representing)0% each. It could be suggested that responsibilities in the chilli pepper VC is gender specific – an for agro-input dealing and production while women are for processing and marketing.

Table 4.1 Sex Distribution of Respondents

Actors	Sex	Frequency	Percentage (%)
Producers	Male	150	93.7
	Female	10	6.3
Traders	Male	4	20.0
	Female	16	80.0
Processors	Male	0	0.0
	Female	4	100.0
Agro –input dealers	Male	4	100.0
	Female	0	0.0

ource: Field survey, February, 2011

ìender mainstreaming as a crosscutting activity could be applied as a strategy in the nplementation of the chilli pepper VC to ensure stronger linkages in all facets of the chain, ince chain actors are an embodiment of both men and women. This could help ensure that the conomic and social needs of both men and women in the project districts are improved.

.2.2 Age and Marital Status of Respondents

/larriage is socially defined to include formal unions based on traditional, legal or religious anctions (GSS, 2005). For the purpose of this study, the respondents were put into age groups as hown in table 4.2 to deepen analysis. It came out that only four out of the 32 respondent (mainly men) in age from 20-29 were married. This shows that in the study area most men do not marry before 30 years. All the respondents in the other groups were married except two in age group 30-39. One respondent about 60 years was widowed and this was a (male or female). There was however no divorced case showing that respondents generally enjoyed stable family life. This is an indication that fairly strong family ties exist in the study communities which the chilli pepper VC intervention could capitalise on to build trust and good relationships among actors.

Table 4.2 Age and Marital Status Distribution of Respondents

Age Group	Single	Married	Divorced	Widowed	Total
20-29	28	4	0	0	32
30-39	2	98	0	0	100
40-49	0	52	0	0	52
50-59	0	3	0	0	3
60 and Above	0	0	0	1	1
Total	30	157	0	1	188

Source: Field survey, February, 2011

ıe study revealed that a significant number of the respondents were within the active age group ' 20 – 50. These were men and women in their reproductive age, full of life, very energetic, novative and economically active and were vigorously engaged in agricultural activities. It also eans that these age groups are more likely to actively participate in the chilli pepper VC tervention programme, more prepared and receptive to new ideas and techniques which require uch labour. The FGD revealed that their motivation was to earn enough to cater for themselves ıd their children, and accumulate some assets towards their retirement and old age.

4.2.3 Household Size

Table 4.3 presents the distribution of household sizes of respondents and this is backed by mean, median and range of the household seize. The composition and structure of the household system in the study area is largely traditional. A household is a person or group of persons who live together in the same house or compound, share the same house-keeping arrangements and are catered for as one unit (GSS, 2005). The household size data was collected taken cognisance of the above definition.

Table 4.3 Household Size Distribution of Respondents

Household size	Frequency	Percent (%)
1-3	49	26.1
4-6	97	51.6
7-10	32	17
Greater than 10	10	5.3
Total	188	100

Mean	2.02
Median	2
Range	3

Source: Field survey, February 2011

The survey results in Table 4.3 shows that 26.1% of the respondents belong to household size of 1-3 inmates while 51.6%, 17% and 5.3% represent respondents belonging to households whose sizes of ranges from 4 - 6, 7-10 and greater than 10 respectively. During the FGD it came to light that, the size of the household largely depends on the ability of the household head to fend for his/her people. This means the household size largely hinges on the economic status of the household head. The higher number of inmates in farmers' compound could be a source of labour which farmers can utilise in times of need. For example, the number of days spent by farmers to harvest produce could drastically be reduced. The net effect is that chilli pepper would be harvested within the required time period thereby leading to an enhancement in the quality of the produce.

4.2.4 Occupation and Education of Respondents

The GSS (2005) noted that at the household level, income is related to parental occupation, which in turn depends to some degree on level of education. Table 4.4 revealed that 78.5%, 75%, and 100% of the farmers, traders and processors respectively had no formal education. The study again revealed that 11.8%, 25% and 100% of the farmers, traders and agro-chemical input dealers had Primary/JHS/Middle school education respectively. Only 8.7% of the farmer respondents had SSS/SHS education and had vocational education.

The lack of formal education among the farmers in the study area would make it difficult for em to enter the formal sector of the economy. The absence of formal education can also result lack of market orientation among the chilli pepper actors. Human capital in the form of skills d education is a key characteristic in comparative studies on participants versus no-participants formalised VCs.

ıble 4.4 Educational Level by Occupation of Respondents

vel of Education	Farming		Trading		Food processing		Agro-input dealer		Total	
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
ı formal Education	126	78.5	15	75.0	4	100.0	0	0	145	77.0
imary/JHS/Middle	19	11.8	5	25.0	0	0	4	100.0	28	15.0
S/SHS	14	8.7	0	0	0	0	0	0	14	7.0
ıcational	1	1.0	0	0	0	0	0	0	1	1.0
rtiary	0	0	0	0	0	0	0	0	0	0
ıtal	160		20		4		4		188	100.0

Source: Field survey, February 2011
*Freq = Frequency

4.3 VALUE CHAIN INTERVENTION ON MARKET ACCESSIBILITY

This section presents the effects of the chilli pepper VC intervention on market accessibility. It is inevitable that markets offer the primary means through which the smallholder farmer can participate in any economic activity. Owing to this, GIZ, IFDC, UDS and SARI collaborated to implement the chilli pepper VC as a strategy to help improve the methods of production and processing to meet both domestic and export markets. Chilli pepper as a major commercial and velihood crop in the study area has a great potential and the support helped improved the local conomy and hence better living conditions of actors. Farmers' response on VC intervention on ıarket accessibility was analysed.

.3.1 Collective Marketing

'he interventions introduced by the chilli pepper VC facilitating agencies include bulk sales at ollection centres. This strategy has the potential of easing the chilli pepper farmers marketing hallenges through the improvement of economies of scale, offering a large quantity which is ıore attractive for the market, which brings about less transport cost and lower transaction cost. 'he study revealed that none of the eighty VC beneficiary farmers and the eighty non-ıeneficiary farmers was involved in bulk sales at a collection centre. This is at variance with ,inden (2010) which indicated that smallholder farmers in Latin America always had access to ɔcal and international markets because they established local organisations who produce and ıarket together and Shepherd (2007) that NGOs assisted farmers in Indonesia market mandarins by building informal groups for mutual assistance and sales during harvest.

The FGD revealed lack of trust among members as the main cause of not selling in bulk. It was also reported that output level of some farmers were too small to be marketed together. The lack of trust expressed by the respondents was a symptom of weak group cohesions making it difficult to collectively market their produce. The intervening institutions indicated the steps taken to improve trust by increasing training and sharing the expected benefits. Soon producers will begin to experiment as they have promised the facilitators.

4.3.2 Chilli Pepper Varieties Grown and Traded/Marketed

ables 4.5 and 4.6 show the varieties of chilli pepper grown by farmers and traded by chilli epper traders and processors. Two main varieties are cultivated by both the VC beneficiary and on-VC beneficiary farmers. It was revealed that 18.7% and 17.5% of the VC beneficiary rmers grow 'Adope' and 'Konfirm' chilli pepper varieties respectively. While 63.8% grow oth 'Adope' and 'Konfirm' chilli pepeper varieties. Majority of the non-beneficiary farmers ow both 'Konfirm' and 'Adope' chilli pepper varieties representing 65%. Also, 17.5% of the on-beneficiary farmers grow only 'Konfirm' and only 'Adope' chilli pepper varieties each. owever, none of the VC beneficiary and non-beneficiary farmers grows the 'Legon 18' chilli epper variety. The concentration of farmers on the cultivation of 'Adope' and 'Konfirm' chilli epper varieties could be attributed to their higher market demands and ability to withstand estruction by pest and disease. Farmers could therefore capitalise on these potentials and grow iore of these varieties to take advantage of the increasing market demand.

Iot many of the farmers are producing 'Adope' because it is newly introduced and also most of them prefer to sell 'Konfirm' fresh to get immediate cash during the lean season as against 'Adope' which they have to store and sell later if they should get good prices.

It came to light during the FGD that both the VC beneficiary and non- beneficiary farmers saw 'Adope' and 'Konfirm' varieties as being easy to manage in terms of cultivation. They also reported that 'Adope' variety is mostly demanded by consumers due to the high quantity of powder obtained when milled. The VC beneficiary farmers also reported that "Legon 18" variety is attractive and capable of fetching higher returns than any of the other chili varieties, however, they contended that it is susceptible to pest and diseases, making it difficult to manage.

able: 4.5 Chilli Pepper Varieties Grown by Farmers

arieties	VC Beneficiary Farmers		Non –Beneficiary Farmers	
	Frequency	%	Frequency	%
dope	15	18.7	14	17.5
onfirm	14	17.5	14	17.5
dope and Konfirm	51	63.8	52	65.0
.egon 18	0	0.00	0	0.0
otal	80	100.0	80	100.0

Source: Field survey, February 2011

was observed in the study that both traders and processors patronise 'Adope' and 'Konfirm' of ıe chilli pepper varieties. As presented in Table 4.6, 20% and 30% of the VC beneficiary traders ·e engaged in only 'Adope' and only 'Konfirm' chilli pepper varieties respectively. On the ther hand, 50% of the VC beneficiary traders deal in both 'Adope' and 'konfirm' whilst 10% and 10% of the non-beneficiary traders deal in only 'Adope' and only 'Konfirm' chilli pepper varieties respectively. However, 80% of them deal in both 'Adope' and 'Konfirm'.

Traders in the FGD confirmed the farmers report that 'Adope' and 'Konfirm' are chilli pepper varieties mostly demanded by the market. It was found that all the VC beneficiary processors and non-beneficiaries are dealing in both 'Adope' and 'Konfirm'.

Table: 4.6 Chilli Pepper Varieties Traders and Processors Deal in

Actors	Chili varieties	Number	%
VC beneficiary ıders	Adope	2	20.0
	Konfirm	3	30.0
	Adope and Konfirm	5	50.0
on-beneficiary ıders	Adope	1	10.0
	Konfirm	1	10.0
	Adope and Konfirm	8	80.0
C beneficiary ocessors	Adope and Konfirm	2	100.0
on-beneficiary ocessors	Adope and Konfirm	2	100.0

Source: Field survey, February 2011

.3.3 Buyers of Actors Produce

espondents who buy farmers chilli pepper during harvest were skewed towards retailers as ıown in Table 4.7. Of the 80 beneficiary farmers, 40% indicated selling their chilli pepper to holesalers whilst 60% sell to retailers. Of the 80 non- beneficiary farmers, 16% sell to holesalers and the remaining 84% sell to retailers. None of the beneficiaries or non-beneficiaries sell to processors directly.

The farmers' complained that selling their produce to wholesalers and retailers was a great challenge to them. The reasons assigned were that they could not be assured of regular market for their produce and they received lower prices for the produce especially during high supply. Conversely, the VC beneficiary farmers pointed out during the FGD that working with processing companies or institutional buyers would pay better and this could serve as an incentive for them but unfortunately, the only one they know at the moment cannot buy much.

Building strong customer relationship is a prerequisite to ensuring regular supply and demand for goods and services. The study found that the beneficiary traders and processors sell their wears mainly to wholesalers and household consumers as main buyers while majority of the non-beneficiary traders sell their produce to wholesalers and an insignificant number to household consumers. None of them sell to retailers and processors.

Table 4.7 Buyers of Farmers Produce

	VC Beneficiary Farmers		Non –Beneficiary Farmers	
Actors	Frequency	percentage (%)	Frequency	percentage (%)
Wholesalers	32	40.0	13	16.0
Retailers	48	60.0	6 7	84.0
Processors	0	0.0	0	0.0
Total	80	100.0	80	100.0

Source: Field survey, February 2011

The intervention institutions are assisting the producers and marketers to link to big processors and traders in other regions and beyond such as Burkina Faso.

4.3.4 Means by which Farmers Sell their Produce

It is acknowledged that most African markets are operated in the informal way, that is, selling and buying are done in uncoordinated manner. Farmers' views were solicited to find out how their produce reached the buyers. They identified two main ways of selling chilli pepper to buyers. The majority, 87.5% of the VC beneficiaries and 93.7% of non-beneficiary farmers said traders come to buy their produce (farm gate) while 12.5% and 6.3% respectively send their ·oduce to assembly points or markets. Selling to traders in the community or on their farms they ıid was convenient since they do not have to transport the produce and go through the hazards get almost the same price.

able 4.8 How Farmers Sell their Produce

lling methods	VC Beneficiary Farmers		Non –Beneficiary Farmers	
	Number	%	Number	%
aders come to buy	70	87.5	75	93.7
sembly point/market	10	12.5	5	6.3
tal	80	100.0	80	100.0

Source: Field survey, February 2011

came out strongly during the FGD that farmers think that traders often exploit them by offering ›wer prices in order to make high profits. This very much agrees with Stauder (2003) that ırmers in the horticulture sector in Hungary sell to traders who pay lower prices for the produce. owever, both the VC beneficiary and the non-beneficiary farmers reported that it is better to produce in a contract arrangement then to cart them to the market centres. It is unambiguous that traders also play a vital role in the chilli pepper industry by serving as buying agents to the farmers. These services offered by the traders liberate farmers of transport cost and the hassle of marketing their produce. Views of respondents selected from GIZ, IFDC, UDS and SARI shows efforts being made to link the producers to contract buyers. They indicated that group cohesion and collective marketing by the producers could help them solve the problem of unfair prices offered by the traders. It could be assumed that the VC has not made a good success in this area since there is still believe that farmers are being cheated.

4.3.5 Business Meetings between Farmers, Traders and Processors

n view of the significance of business meetings between actors, the regularity was assessed. ince the farmers did not sell directly to processors emphasis was on meetings between farmers nd traders. About 21.3% of the VC beneficiary farmers indicated that they meet with buyers nce a week and once a month. In addition 17.5% indicated meeting buyers at least once every hree months. The remaining 40% of the VC beneficiary farmers said they do not have meetings vith buyers. The majority, 40% and 53.6% of VC beneficiaries and non-beneficiaries espectively do not have business meetings outside the periods of transaction on the day of uying and selling. This means that many of the VC beneficiaries sell to non-beneficiary traders. This is contrary to the findings by Shepherd (2007) in Chiang Mai province in Thailand, in which trader's maintained close relations with farmers, paying frequent visits to monitor quality and to ensure that the farmers supplied only production from their own plots. Surprisingly, more of the non-beneficiaries have frequent meetings once a week. Though in general more of VC beneficiaries have business meetings with other actors, there is the need for strengthening the inkages in the chain.

Table 4.9 Regularity of Meetings between Farmers and Buyers

Intervals of meetings	VC Beneficiary Farmers		Non –Beneficiary Farmers	
	Number	%	Number	%
Daily	0	0.0	1	1.3
Once per week	17	21.3	28	35.0
At least once per month	17	21.3	7	8.8
At least once every three months	14	17.4	1	1.3
Never	32	40.0	43	53.6
Total	**80**	**100.0**	**80**	**100.0**

Source: Field survey, February 2011

'he FGD revealed some level of interactions between farmers and buyers. However, both the 'C beneficiary and non-beneficiary farmers admitted that they do individual interactions with uyers and not as a group. The interactions between a few farmers and buyers are partly as a esult of capacity building by the VC facilitating agencies. Invariably, direct individual separate armer and trader discussions is a contributory factor to low prices offered by traders since they re unable to collectively bargain for higher prices.

.3.6 Market Requirements of Chilli Pepper Products

\ market oriented farmer would have to take cognisance of the various market requirements and roduce commodities that are demanded in other to be competitive. They need to identify possible markets and their requirements before they start to crop. Carefully obeying this paradigm would surely pay off in any economic activity. Market information especially on variety, quality and volumes are inevitable if farmers want to maximise their incomes. Farmers were probed to find out what they think or know about market requirements of chilli pepper products and their information presented in table 4.10. Cleanliness and the variety of chilli pepper were the two main requirements that both the VC beneficiary and non-beneficiary farmers know of. Among the VC beneficiary farmers, it was revealed that 52.5% saw cleanliness as a major market requirement while 47.5% of them identified the variety as important.

Among the non-beneficiary farmers 35% and 65% identified cleanliness and varieties espectively as being major market requirements for their produce. However, it is rather urprising that none of the farmers identified pungency and freshness as being market equirements for their produce through these are very important quality and value measures used y consumers.

Table 4.10 Farmers Knowledge of Market Quality Requirements

Quality requirements	Beneficiary Farmers		Non –Beneficiary Farmers	
	Number	%	Number	%
Cleanliness	42	52.5	28	35.0
Variety	38	47.5	52	65.0
Packaging style	0	0.0	0	0.0
Freshness	0	0.0	0	0.0
Pungency	0	0.0	0	0.0
Total	80	100.0	80	100.0

Source: Field survey, February 2011

The FGD confirmed that cleanliness and variety were the main market requirement for the farmers, traders and processors. During the FDG session, farmers were made to indicate their compliance level to the identified market requirements. Responses were mixed as farmers gave varied answers indicating that though they were aware of the market requirements, they did not adhere to them, while others complied in order to attract many customers for their produce, leading to higher profits. It could not be established whether those who comply with the market requirement actually made commensurate profits. It can therefore be deduced that compliance with the market requirements is more likely to ensure mutual satisfaction between farmers and buyers thereby leading to higher gains.

'aders and processors made similar observation on knowledge of market requirements, as .own in Table 4.11. Of the VC beneficiary traders and processors, 50% opted for variety and)% for cleanliness. Similarly, 70% and 30% of the non –beneficiary traders opted for variety ıd cleanliness respectively. This agrees with Shepherd's (2007) finding from Uganda potatoes ıppliers to a fast-food restaurant, indicating how potato farmers understood the workings of the arket. In this case the farmers had to grow a new variety, change production practices to fluence potato size and moisture content, stagger planting dates and grow at different altitudes order to ensure year-round availability.

able 4.11 Market Requirements of Traders and Processors Products

Actors	Market Requirements	Number	%
VC beneficiary trader	Variety	5	50.0
	Cleanliness	5	50.0
Non-beneficiary traders	Variety	7	70.0
	Cleanliness	3	30.0
VC beneficiary processor	Variety	1	50.0
	Cleanliness	1	50.0
Non beneficiary processor	Variety	2	100.0

Source: Field survey, February 2011

The responses of the VC beneficiary processors made similar revelations as those made by the traders. Surprisingly packaging style, freshness and pungency were not characteristics that were required by the market. This is because of the informal nature of the market in which they sell their products. Where no requirement of product standards may be demanded on them by government agencies such as Food and Drugs Board (FDB) and Ghana Standard Board (GSB) as well as the general consuming public. Another reason could be low market orientation as a result f ineffective facilitation of the concept of value addition to the VC beneficiary actors.

dentifying market requirements is one thing and complying with it is another. The study evealed that majority of the traders and processors comply with variety and cleanliness as narket requirements for their products.

.3.7 Types and Sources of Market Information to Farmers

Most of the smallholder farmers in Northern Ghana are not aware of available markets due to nformation gap. Farmers' ideas on type of market information were elicited from the espondents to help inform the study. Table 4.12 shows that 37.5%, 25.3%, and 6.3% of the VC beneficiary farmers identified availability of chilli pepper, market price and quality of produce espectively as the kind of market information that was available to them. Market information on ransport charges and road conditions were also identified by the VC beneficiary Of the non-beneficiary farmers, 12.5%, 56.3%, 8.8% identified availability of chilli pepper, market price and quality of produce respectively as the category of market information available to them. Also, 10% and 12.5% of the non-beneficiary farmers also identified transport charges and road conditions respectively as the available market information to them. Market information is significant to the success of farmers' production. This information seeking was as a result of intervention by the Business Support Services.

Table 4.12 Types of Market Information Available to Farmers

Market Information	VC Beneficiary Farmers		Non –Beneficiary Farmers	
	Number	%	Number	%
Availability of chili	25	31.3	10	12.5
Market price	30	37.5	45	56.3
Quality of produce	5	6.2	7	8.8
Transport charges	10	12.5	8	10.0
Road conditions	10	12.5	10	12.4
Total	80	100.0	80	100.0

Source: Field survey, February 2011

During the FGD farmers emphasized that availability of chilli pepper, market price and transport charges were some of the main market information types available to them. The sources of market information identified were other farmers, traders, local radio and Non-Governmental Organisations (NGOs). However, government policy and supply condition could also be vital information source to them, though the study failed to identify these. The limited knowledge of farmers on information type is likely to negatively affect their ability to satisfy consumer demands. The study identified the main sources of market information as market places, traders, fellow farmers and radio broadcasting. They concluded that the information types identified were relevant for the growth of their businesses.

4.3.8 Improvements in Business of Agro- Input Dealers

Inputs provision is crucial to farmers' productivity and production. Availability and affordability of agro-inputs such as fertilizers and means of pest management to farmers stand the chance of rendering production in the agriculture sector more profitable. The study probed into whether agro-input dealers' sales levels have improved as a result of their connection to farmers through the VC process. On a whole, it was shown that both the VC and non –beneficiary input suppliers had experienced increase in sales of their products especially fertilizers and insecticides. According to the agro -input dealer respondents, high cost of certified seeds have been the main complaint of farmers and this always contributed to low patronage of such inputs. Low patronage r certified seeds by farmers was likely to thwart their efforts at attaining high quality chilli ;pper. Majority of the VC beneficiary farmers indicated that they do not apply the quality ıhancements techniques.

4 UPGRADING IN CHILLI PEPPER VALUE CHAINS

:oduction processes and action plans of the actors need to be elevated so as to be competitive in ›th the local and export market. Adoption of new techniques geared at improving the ›mpetitiveness and efficiency in chili production have significant benefits for farmers.

4.1 Acquisition and Use of Certified Seeds by Farmers (Technological Upgrading)

vailability and accessibility of certified seeds would not only contribute in increasing :oductivity and incomes of farmers but would also move them towards quality enhancement ıd certification. It was discovered that majority of the interviewed VC beneficiary farmers did ɔt use certified seeds for cultivation despite its availability. The reasons given for not using certified seeds were susceptibility of the seeds to diseases and high cost. The small number of the farmers who use certified seeds indicated that the seeds have high germination percentage than their own stock. This very much agrees with Badstue (2006) in his study of maize farmers in

Central Valleys of Oaxaca in which farmers using their own seeds said they have trust and confidence in their own seeds. The FGD revealed that farmers had trust for their personal preserved seeds and had also adopted the farmer – to – farmer seed distribution system.

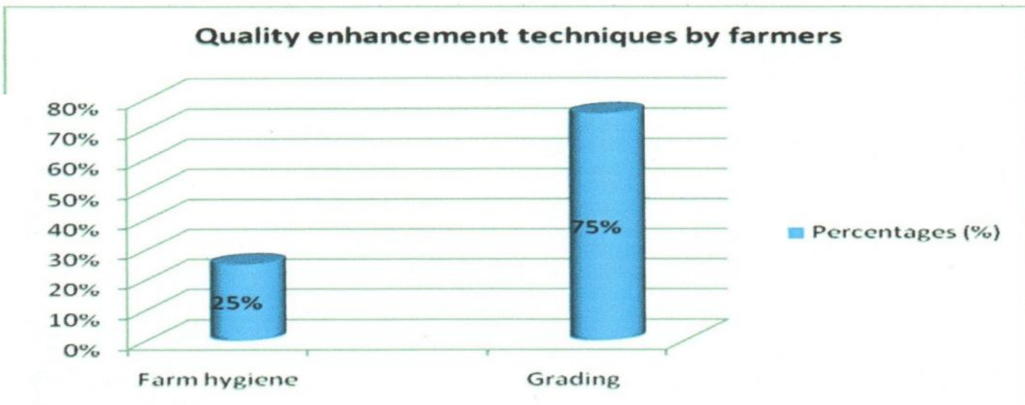
4.4.2 Quality Improvement Methods by Farmers, Traders and Processors (Process Upgrading)

gure 4.1 and Table 4.13 present the methods aimed at improving the quality of chili produce ıd products. Majority of the beneficiary farmers, representing 75%, indicated that they had lopted grading techniques via selection by ripeness whilst the remaining 25% practice farm /giene as an agronomic method of quality enhancement.

milar responses given made in the FGD by the VC beneficiary farmers. It was revealed that a gnificant number of the VC beneficiary farmers also adopted grading as a quality enhancement chnique. They however complained that practicing farm hygiene was cumbersome and time asting. The survey concluded that fewer farmers were willing to practice farm hygiene as ımpared to the number of farmers willing to adopt grading via sorting by ripeness and level of ısect infestation. The study revealed contradiction between farmers' knowledge of quality ıhancement and willingness to practice it. Thus farmers were aware of the quality enhancement chniques for the production of their chilli pepper but a significant number of them were ıwilling to practice them. The awareness of farmers may be attributed to the training offered them by the chilli pepper VC facilitating agencies.

Responses of the VC beneficiary traders and processors in table 4.15 indicated that 40% of the VC beneficiary traders adopted blenching as a method of quality improvement technique and the remaining 60% revealed that they practice grading instead. Of the VC beneficiaries, 50% each of the traders and processors reported practicing blenching and grading.

Figure 4.1 Methods aimed at improving Chilli Pepper Quality by Farmers



ource: Field survey, February 2011

he FGD added storage and packaging of the commodity to blenching and grading. It came to ght that both traders and processors do not package their products. It was again revealed that ey do not have appropriate storage facilities for their products. This is so because the market oes not demand them hence may not be willing to pay for.

'able 4.13 Methods of Upgrading by Traders and Processors

	Response by Traders		**Response by processors**	
Methods of Upgrading	Number	%	Number	%
Blenching	4	40.0	1	50.0
Grading	6	60.0	1	50.0
Total	10	100.0	2	100.0

Source: Field survey, February 2011

4.4.3 Certification of Farmers' Produce (Product Upgrading)

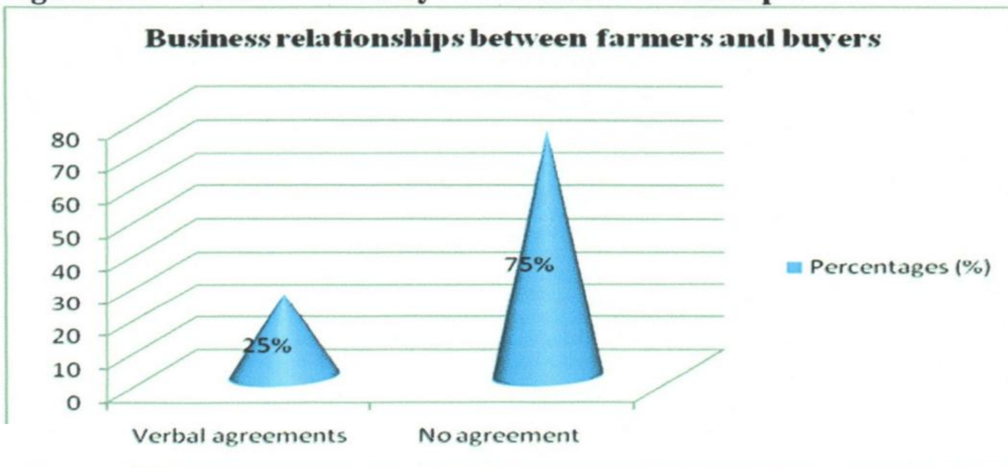
In finding out farmer's response on certification of their chilli pepper, all the VC beneficiary farmers said they were not aware of certification standards. Linden (2010) found that Fair Trade Certified producers achieved better results than their conventional competitors. This means farmers in the study area were more likely to improve their livelihoods considerably if they resort to certification of their produce.

he lack of awareness on certification standards by the VC beneficiary farmers was attributed to e fact that the VC facilitating agencies concentrated on yield improvement and relationship ıilding among others but paid less attention to certification. This concentration on yield may ɔt offer farmers the opportunity to be abreast with both national and international market quirements.

4.4 Business Relationship between Farmers and Buyers – Contracts (Functional pgrading)

is acknowledged that with trust chilli pepper farmers can achieve quality, quantity as well as mely deliveries of products without any monitoring of performance. As shown in figure 4.2, 5% of the VC beneficiary farmers have verbal agreements with buyers of their chilli pepper hilst the remaining 75% do not have any form of agreement with buyers. This agreed perfectly ith Dawson (2002) reporting a scenario in Ecuador in which cassava farmers formed partnership with traders and processors to meet market demand in neighbouring Colombia based on mutual trust through the fulfillment of verbal agreements.

Figure 4.2 Farmers and Buyers Business Relationship's



ource: Field survey, February 2011

ı the FGD, it was also revealed that farmers hardly entered into any form of contractual greement with traders and wholesalers the reason being lack of trust between farmers and aders.

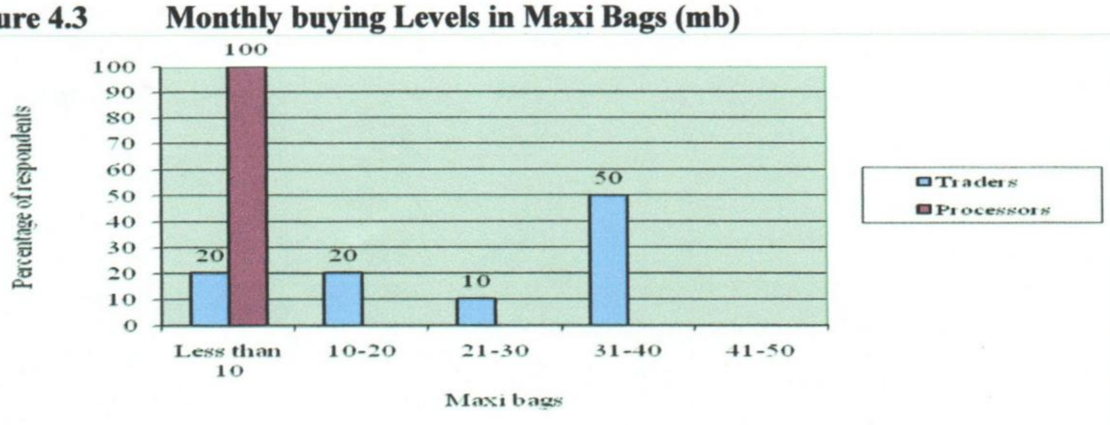
.4.5 Services Provided by Traders and Processors to Farmers

he concept of VC requires effective collaboration among actors. For instance, chilli pepper aders and processors could ensure regular supply from farmers through the provision of ssential services such as technical assistance, loans and equipments to enhance productivity. he study found that traders and processors did not support chilli pepper farmers with essential ervices. The traders indicated that they neither provide technical assistance, equipment nor loans › farmers. The only service they offered to farmers was market information especially in elation to current market prices of chilli pepper. This is contrary to Shepherd (2007) which revealed that traders offered advance payments to four (4) out of every five rice mills surveyed by the Food and Agriculture Organisation (FAO) in India to cover input cost of the fruit and vegetable traders in India surveyed, more than half give credit (in cash or in kind) to farmers. In the same way, the response of processors also revealed that they do not offer any direct services to farmers. This situation is not strange because the existing relationship between the actors is not strong enough to cause service provision naturally.

4.4.6 Quantity of Produce Bought in Maxi bags by Traders and Processors

Traders and processors were made to quantify the amount of chilli pepper sold in maxi bags per ar. The research found that a significant number of the VC beneficiary traders dealt in small antities as shown in Figure 4.3.

gure 4.3 Monthly buying Levels in Maxi Bags (mb)



ɪurce: Field survey, February 2011

l the VC beneficiary processors revealed that the quantities of raw chilli pepper varieties Adope', 'Konfirm' and 'Legon18') they buy in a month for processing are less than 10 maxi ɪgs each. On the other hand, 50% of the VC beneficiary traders answered that the quantities of w chilli pepper varieties ('Adope', 'Konfirm' and 'Legon18') they buy per month (in a chilli pepper season) is between 31 – 40 maxi bags. Of the VC beneficiary traders, 20% of them indicated that they buy quantities between 10 – 20 maxi bags and less than 10 maxi bags each per month in a chilli pepper season. Only 10% of the traders reported that they buy quantities between 21 – 30 maxi bags per month in a chilli pepper season. The lower quantities of raw chilli pepper bought monthly (in a chilli pepper season) by the traders and processors is an indication of limited purchasing power and guaranteed market for the actors.

4.5 CONSTRAINTS FACING THE VALUE CHAIN DEVELOPMENT

The survey identified some constraints facing chili VC development in the study area. Unless the eeded attention was given, these constraints could jeopardise the chilli pepper business potential s a major source of livelihoods for the VC beneficiary actors. These constraints are classified nder production, trading, processing and agro-input dealers.

.5.1 Production Constraints

'armers reported of three major constraints that affect production and productivity levels esulting in inaccessibility to high value markets and better incomes. These constraints were lack f access to financial and input credit, low level of information flow among producer group nembers and inadequate access to guaranteed buyers as presented in Table 4.14.

'able 4.14 Constraints in the Production Sector

Constraints	Number	%
Lack of Financial credit	160	100.0
Low information flow	90	56.3
Lack of guaranteed buyers	160	100.0

Source: Field survey, February 2011

Lack of access to financial and input credit: There is no production without money. Every farmer who wants to expand or maintain his/her business needs cash. The farmer does not have the money hence the need for credit. As shown in Table 4.14, all the VC beneficiary farmers (100%) reported lack of access to financial credit to expand or maintain their production levels as a constraint. According to the actors, their inability to access loans from financial institution was due to the banks unwillingness to grant loans to farmers and the difficulty in bank loan processes. This supports the findings of Shepherd (2006) that lack of capacity building and financial credit prevented smallholder farmers in Kenya from participating in global VCs ecause they lack the means by which to certify their produce as required by the European narkets. Hence, making financial credit available to farmers at critical stages of the production pectrum -land preparation, planting, post planting and post harvest activities is essential.

Low level of information flow among producer group members: Farmers acquire marketing nowledge via linkages or information flow. Free flow of information among members in producer groups would pave the way for the identification of growth opportunities and priorities. Sharing of information would enable farmers' share ideas and practices to produce the right products that will sell. Over 56.3% of the VC beneficiary farmers reported of irregular nformation flow among members as indicated in Table 4.14. This can undermine trust which is prerequisite for successful Farmer Based Organisation (FBO). The irregular flow is due to underdeveloped system for sharing information. Free flow of information among producer group members could enable them function as organic units, build trust, take collective decision and actions that would be binding and beneficial to them.

Inadequate access to guaranteed buyers: As indicated in Table 4.14, all the VC beneficiary farmers (100%) indicated of lack of guaranteed market for their produce as a major constraint facing the growth of their business. Access to markets could serve as an incentive for chilli pepper farmers in the study area to liberate themselves from their perpetual production and marketing constraints. Helping smallholder farmers in developing countries to grow more crops and get them to market could be one of the world's most powerful levers for reducing poverty. In order to unleash the potential of the chilli pepper business in the study area, efforts have been made by the Business Support Service institutions to help the farmers identify and link to major buyers. This will in a short time yield good dividend.

.5.2 Trading and Processing Constraints

ıoth the VC beneficiary traders and processors experience bottlenecks in their businesses. All ıe VC beneficiary traders and processors identified financial credit, low sales and lack of torage facilities as constraints affecting the progress of their businesses. The processors dentified in addition lack of milling machines as major constraints affecting their business rowth and development. For the chilli pepper VC development in the study area to achieve its ntended results, solutions need to be provided to eliminate or minimise the constraints militating gainst actors of the chain. This include linking actors to credit sources at low interest rates, ssisting in the provision of storage facilities and milling machines and access to guaranteed narkets for their produce

Table 4.15 Chilli Pepper Trading and Processing Constraints

Constraints	Trading		Processing	
	Number	%	Number	%
Financial credit	10	100.0	2	100.0
Low sales	10	100.0	2	100.0
Lack of storage facilities	10	100.0	2	100.0
Lack of milling machines	0	0.0	2	100.0

Source: Field survey, February 2011

4.5.3 Constraints to Agro-Input Dealers

Unlike the production, trading and processing sectors of the chilli pepper value chain, the agro input dealers appeared not to suffer many bottlenecks. The only mentioned constraint to the sector was inadequate access to financial credit to expand their businesses. It was observed during the interview that the agro input dealers were not properly connected with the other actors of the chilli pepper VC and also appeared to have little orientation in business management.

.5.4 Constraints of the Intervention Institutions:

n order to ascertain the constraints faced by the chili VC actors in the study area, the key chilli epper VC intervention organisations (GIZ, IFDC, UDS and SARI) were contacted. Responses f the respondents selected from the four organisations indicated the inability of the actors to dopt new technologies, difficulty in access to financial and input credit and unwillingness of hilli pepper farmers to shift to the cultivation of international market driven varieties as some of he main constraints affecting the sector.

)ther constraints which negatively impact on the activities of the chilli pepper VC actors ncluded lack of formal marketing arrangement especially between farmers and traders on one ıand and between traders and processors on the other hand. This has a net effect on over supply ır inadequate supply of the commodity into the market.

They further revealed that unfavorable climatic conditions coupled with the lack of irrigation facilities in the area were also some of the constraints affecting the activities of the chilli pepper VC actors. It was further reported that cost of agricultural input such as fertilizers and insecticides were very high and these presented a glooming picture to the chilli pepper VC actors especially the farmers. It is imperative to note that the constraints as identified by the VC intervention organisations were similar to that of those identified by the actors. Steps are being taken by the implementing agencies to help remove these constraints to improve upon the chilli pepper industry.

.6 PROSPECTS OF THE CHILLI PEPPER VALUE CHAIN DEVELOPMENT

'his section discusses the prospects of the chilli Pepper VC development to actors in the study rea.

.6.1 Prospects in the Chilli Pepper Production Sector

'he study elicited views of farmer-respondents on their expectations or prospects of the chilli epper VC in the study area. Some of the respondents identified guaranteed-buyers and access to inancial and input credits as some of the prospects presented by the chilli pepper VC evelopment in the district. In addition, 72% of the respondents see high quality produce and arger volumes as a good prospect if the improvement in agronomic practices such as nursery nanagement practices, land preparation and planting distance as well as good relation among ctors are put into effective practice. The current knowledge of the respondents on the agronomic ractices they said is as a result of the trainings received under the chilli pepper VC project. 'here could be good linkages to markets in the future for good prices and hence good profit for poverty reduction.

During the FGD, similar responses were obtained in relation to farmers ideas on prospects of chilli pepper VC in the study area. The group revealed that VC intervention could link them to financial institutions for credits, provide market opportunities and build good social relation among actors.

4.6.2 Prospects in the Trading and Processing Sectors

The study's attempt to ascertain the prospects associated with the chilli pepper VC development the study area. Responses of beneficiary chilli pepper traders and processors on VC were)tained. They indicated that market opportunities and access to financial credits as being 'ospects of the chilli pepper VC. In addition, they affirmed that chilli pepper VC was likely to 1prove good relation among the actors and also enhance group cohesion among them. There is ill a growing demand for the produce and even the market is unable to meet the current :mand, so high prospect for larger volumes.

6.3 Prospects of Chilli Pepper VC to Agro-Input Dealers

he agro-input dealers are responsible for selling of agro-inputs such as fertilizers, herbicides 1d other chemicals to farmers and chilli pepper farmers in particular. Owing to the important)le they play in the chilli pepper VC intervention, the study tried to ascertain their subjective .ews on prospects associated with the chili VC in the study area. Analyses of their responses :vealed that increases in sales of certified chili seeds and agro-inputs such as fertilizers and :rbicides were opportunities likely to be presented by chili VC if properly carried out and concluded that they stand the opportunity of gaining further training on agro input handling among others. It is worth noting that this expected improvement in the sales of agro-inputs could come from the training chilli pepper VC farmers were likely to have undergone in the study area. For example, VC intervention exposes farmers to good agronomic practices such as the need to use improved seedlings for planting, the need for rightful application of fertilizers and other chemicals on their farms for the purpose of pest and weeds controls.

4.6.4 Prospects of Chilli Pepper VC Identified by Intervention Institutions.

The study elicited the subjective views of respondents selected from GIZ, IFDC, UDS and SARI on the opportunities associated with the chilli pepper VC development. The respondents indicated high prospects for the chilli pepper VC development in the district. They reported of a growing need for chilli pepper products such as 'Shito' in both local and export markets and several capacity development programmes for the beneficiary actors to improve their production processes. Another important prospect that the chilli pepper VC presented as indicated by the study was the growing need to undertake further study in quality improvement of the chilli pepper seeds to ensure that farmers had the opportunity of producing high quality products that could meet the needs of both local and international markets. The existence of the VC Committee would help to ensure effective communication of activities to all actors via the committee.

Thought the chilli pepper VC intervention has brought about some benefits to the intended beneficiaries, the beneficiary actors still holds that with commitment of the VC implementing agencies in linking them to guaranteed buyers and financial credit could be a major achievement for their participation in the VC. Since the primary aim of the VC intervention was to improve the economic wellbeing of the beneficiaries via improved production techniques, access to guaranteed market, etc, it could be assumed that the prospects of the intervention has not been adequately felt yet.

4.7 SUPPORT SERVICES NEEDED FOR A FUNCTIONAL VALUE CHAIN

Chilli pepper as an important cash crop for smallholder farmers in Northern Ghana needs to be supported by services that will ensure growth, efficiency and enhancement of competitiveness. The aim should be to bring about an improvement in the depth and breadth of services currently being provided to actors of the chain to make it more commercially oriented for the improvement of the actors' livelihoods.

4.7.1 Support Services in the Production Sector

The VC beneficiary farmers identified a range of services which they believe when addressed could make actors more competitive and efficient. The range of support services enumerated by the VC beneficiary farmers were ranked as shown in Table 4.16.

A significant number of the beneficiary farmers; 35%, 18%, and 16% reported that access to financial credit, guaranteed buyers, and access to agro- inputs dealers were the most support services which were critical for the success of the chilli pepper VC in the district. Also, 14%, 11% and 6% of the beneficiary farmers said that refresher GAP training, training in quality assurance, business and credit management training were the needed support services for the VC intervention strategy to achieve results. These findings are similar to that of Donovan's (2010) among Nicaraguan coffee producers where an increase in average total area under coffee production through access to credit was demonstrated. The high demand for access to credit also pertained in Madagascar as indicated by Minten *et al* (2005) that smallholder access to credit (inputs and technology) led to an improvement in productivity as well as technology adoption.

The entire 80 beneficiary farmers reported that they had not received any support services from the Tolon-District Assembly as a stakeholder in the chilli pepper VC intervention. Expected functions of the District Assembly according to the VC beneficiary farmers is the provision of commercial tractors during farming seasons and institution of credit schemes from which farmers could access credit at minimal interest rates.

The VC beneficiary farmers also reported that, GIZ/MOAP-MOFA, IFDC, SARI, UDS and other development partners in the chilli pepper VC could collaborate to institute both financial and input credit schemes at minimal interest rates, link actors to guaranteed buyers and conduct refresher training in agronomic practices and quality assurance. It is rather supprising that not many farmers mentioned issues of group strengthening, strengthening of linkages and connection of markets as strong issues.

Table 4.16 Ranking of Chilli Pepper Beneficiary Farmers Views on the Needed Support Services

Rankings	**Needed support services**	**%**
1st	Access to financial credit	35.0
2nd	Guaranteed buyer	18.0
3rd	Access to agro-inputs	16.0
4th	GAP trainings	14.0
5th	Quality Assurance trainings	11.0
6th	Business and credit management trainings	6.0

Source: Field survey, February 2011

4.7.2 Support Services in the Trading and Processing Sectors

The needed support services enumerated by both the VC beneficiary traders and processors were ranked as shown in Table 4.17. All the VC beneficiary traders indicated that financial credit assistance was paramount for the growth of their business and the VC. The VC beneficiary traders reported that access to dryers, storage facilities and training in record keeping were critical to the growth of their business and the VC. Again, 14% and 11% of the beneficiary traders also reported that training in GAPs, Quality Assurance and Hazard Analyses and Critical Control Points (HACCP) respectively were needed for the growth of their businesses.

All VC beneficiary processors also reported that with available financial services in the form of credit, milling machines, dryers, quality assurance and HACCP training, the sky would be the limit. All the VC beneficiary traders and processors reported that they had not benefited from any business support service from the Tolon-District Assembly. Consequently, they indicated that the assembly could institute a credit scheme with minimal interest rates which they could access for their businesses. Regarding the role of GIZ/MOAP-MOFA, IFDC, SARI and UDS, they indicated the provision of dryers and drying equipments (tarpaulin), training in value additions, business and credit management training as well as provision of storage facilities.

Table 4.17 **Needed Support Services in the Trading and Processing Sectors**

Rankings	Needed support services	%
1st	Access to financial credit	27.0
2nd	Dryers	20.0
3rd	Storage facilities	18.0
4th	Training in record keeping	16.0
5th	Training GAPs	12.0
6th	Training in HACCP	7.0

Source: Field survey, February 2011

4.7.3 Support Services Needed by Agro-Input Dealers

According to the VC beneficiary agro-input dealers, the significance of farmers using certified seeds was central to the quality and yield of their farms. They therefore stressed for awareness on the benefits of using certified seeds for cultivation. Again they indicated the need for refresher training on agro-input handling and preservation to elevate their knowledge on the business.

The agro-input dealers also said they had not benefited from any services delivered by the Tolon-Kumbungu District Assembly but indicated that the District Assembly could play a role by organising business development training for all the actors in the chain. They also reported that, GIZ/MOAP-MOFA, IFDC, UDS and SARI, could take charge of the refresher training in agro – chemical handling and preservation.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter presents the summary of findings of this study and the conclusions drawn. The chapter concludes with recommendations based on the findings where the researcher outlined the necessary interventions needed to improve VC development among chilli pepper actors in the study area.

5.1 SUMMARY OF FINDINGS

This section of the study presents discussions of the findings made in respect of the objectives outlined in the study. These thematic areas include findings on market accessibility by chilli pepper actors, upgrading of strategies, constraints, prospects and support services associated with chilli pepper production, marketing and processing in the study area.

5.1.1 Market Accessibility

- The study revealed that none of the chilli pepper producer groups practice collective marketing despite its associated benefits which results in limitations to their market accessibilities. The study also found that there was lack of group cohesion among chilli pepper actors thereby making it difficult for them to market together at collection points.
- As regards the varieties of chilli pepper cultivated and its potential of market penetration, it was revealed that 18.7% and 17.5% of the VC beneficiary and non-beneficiary farmers were producing 'Adope' and 'Konfirm' respectively, while 63.8% grow both 'Adope' and 'Konfirm' varieties which are readily demanded in the local market. Retailers and wholesalers remained the only buying agents of these produce and offered low prices for

them especially during periods of glut. The study could not establish evidence of existence of farmers' linkages with guaranteed buyers.

- It was found that both the VC beneficiary and non-beneficiary farmers were not meeting regularly to discuss issues concerning their businesses. About 21.3% and 17.5% of the VC beneficiary farmers indicated meeting with buyers once a week and once in every three months respectively. Similar reports were made by the beneficiary and non-beneficiary groups of traders, processors and agro-chemical input dealers. Interactions between chilli pepper farmers and traders on one hand and chilli pepper traders and processors on the other were not also effective and all these negatively affected their chances of market penetration.
- On the issue of the availability of market information to actors and their implication on market accessibility, the study identified market price, quality of produce, transport charges and road conditions as key areas of information that the actors required. It was revealed that 37.5%, 25.3% and 6.3% of the VC beneficiary farmers identified availability of chilli pepper, market price and quality of produce respectively as the kind of market information that was available to them. It was further revealed that chilli pepper traders and processors sought information on quality of the produce available in the market as key to the success of their business since they were dealing directly or indirectly with the final consumers whose main interest are on quality.
- Farmers still think they are being cheated by traders while traders think otherwise.

5.1.2 Upgrading Strategies

- On the upgrading strategies in terms of chilli pepper products, processes and functions, the study found that though certified seeds of chilli pepper were available, farmers were not willing to use them in their cultivations. The reasons given were high cost and susceptibility of the certified seeds to disease and insect infestation when cultivated. Own stock and farmer- to- farmer seed distribution systems were the farmers' sources of seeds for cropping.
- It was established that both the chilli pepper VC beneficiary traders and processors adopted blenching techniques as well as grading by ripeness as quality enhancement methods. It was revealed that 40% of the VC beneficiary traders adopted blenching as a method of quality improvement technique and the remaining 60% practice grading as quality enhancement technique.

5.1.3 Constraints

- It was discovered that all the VC beneficiary actors (100%) in the study area did not have access to financial credit to expand and maintain their production levels. Reasons for this were attributed to banks' unwillingness to grant loans due to lack of collaterals and difficulty in contacting banks for loans due to lack of formal linkages.
- Majority of the VC beneficiary farmers faced constraints of non- regular information flow among members.
- The study further discovered that all the VC beneficiary traders (100%) and processors did not have milling machines and storage facilities to store their goods as well as low sales.

- The chilli pepper VC intervention institutions identified the inability of the actors to adopt new technologies due to cost, difficulty in access to financial credit and unwillingness of chilli pepper farmers to shift to the cultivation of international market driven varieties as some of the main constraints affecting the sector.
- Unfavourable climatic conditions, high cost of agricultural inputs and lack of formal marketing structures are some the challenges facing the VC development in the district.

5.1.4 Prospects

- Prospects associated with the chilli pepper VC, include guaranteed-buyers and access to financial and input credit. The full implementation of the VC project in the study has the potential of improving the knowledge of beneficiary farmers in agronomic practices such as chilli pepper nursery preparation and management, land preparation and planting distance as well as good relation among actors.
- The study also identified that chilli pepper VC intervention could enhance group cohesion and improve good relation among actors. Apart from gaining further trainings on agro-chemical handling, the study also ascertained that the chilli pepper VC intervention project had the potential of increasing sales of agro- input dealers on certified inputs.
- There is a growing demand for chilli pepper. The market is not able to supply the current demand. High quality and quantities of chilli pepper can be produce to meet the market demand.

5.1.5 Support

- Under the decentralisation concept, the District Assemblies are expected to provide governance and other support services at the grassroots level. However, the study revealed that the Tolon-Kumbungu District Assembly was not supporting chilli pepper actors in the district. The District Assembly was also found not to be active in linking the chilli pepper VC actors to other financial service providers such as banks for loans and other financial services.
- Finally, both the chilli pepper VC traders and processors identified provision of storage facilities, capacity buildings in record keeping, refresher trainings in GAPs and HACCP as areas of intervention which needed a critical look.

5.2 CONCLUSIONS

The study revealed that market accessibility was still a major challenge to both the VC beneficiary and non-beneficiary actors indicating that the chilli pepper VC intervention has not booked its intended results. As part of upgrading strategies, it was revealed that though certified seeds of chilli pepper were available, farmers were reluctant to patronised them due to their high cost and susceptibility to pest and diseases. It was also found that the actors were not without constraints. Some of the constraints identified included lack of access to financial credit to expand their businesses, lack of information flow among members and lack of equipment and storage facilities for chilli pepper products.

The study also identified guaranteed buyers, access to financial credits, improvement in knowledge of agronomic practices through training and enhancement of good relations among actors as some of the possible prospects of the chilli pepper VC intervention in the study area. The study further indicated that it could also improve the knowledge of agro-input dealers on chemical handling and preservation as some of the prospects. It was however found that the Tolon-Kumbungu District Assembly which is supposed to play a pivotal role in the support of these actors on their businesses is rather reneging on its responsibilities as all the actors :oncluded that they could not get any support services from the District Assembly to enhance heir businesses. Farmers did not see strengthening of groups, linkages and exploring more narkets which are issues in VC development as issues in which they need support.

;.3 RECOMMENDATIONS

- It is recommended that chilli pepper business platform be established in the district to coordinate the activities of the chilli pepper VC actors. The platform will help to identify the opportunities associated with the chilli pepper business and also address some of the constraints affecting the business processes especially access to guaranteed buyers and building of cohesive chilli pepper groups.
- As part of measures to ensure actors' accessibility to financial credit, the study recommends that agribusiness coordinating unit and the Tolon-Kumbungu District Assembly should facilitate linkage of the chilli pepper VC actors to financial institutions for credit.
- The platform would also have the mandate to identify capacity gaps of the actors and liaised with the VC facilitating agencies to provide the requisite capacity needs.
- The intervention institutions must step up efforts at building trust among the actors especially between farmers and traders.

- It is also recommended that chilli pepper VC actors be mainstreamed onto the IFDC Mfarm (Mobile farm) market access platform to gain market accessibility and information flow.
- The chilli pepper VC facilitating agencies should team-up with the Tolon-Kumbungu District Assembly to establish local collection centres where farmers can bulk their produce and sell in volumes to meet buyer's requirements.
- Development partners such as NGOs in the study area should intensify their effort at organising the actors into identifiable groups and building their capacities on group dynamics to ensure that they develop strong group relations among themselves. This will ensure collective marketing and market accessibility among them.
- The chilli pepper VC facilitating agencies together with the Tolon-Kumbungu District Assembly assist actors to acquire milling machines to help them increase and improve production.
- In order to expand the frontiers of VC development, the study concludes in its recommendations that further studies be conducted by students and research organisations on the effects of VC on the small scale business development in the non-agriculture sector in the country. Further studies could also be conducted into chilli pepper VC and Total Quality Management (TQM) among agribusinesses.

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APPENDIX 1.

PROSPECTS AND CHALLENGES OF CHILI VALUE CHAIN DEVELOPMENT IN TOLONKUMBUNGU DISTRICT

Questionnaire for Producers

All questions are related to the subject and I will be grateful if you can give me some of your time. The survey is meant for an MSc Degree in Development Management. I assure you that everything you say will be kept confidential. Thank You.
(Fill in and tick where appropriate)

Section A: Section A: SOCIO-DEMOGRAPHIC DATA

1. District…………………………………………………………………………………
2. Name of community/village……………………………………………………………..
3. Sex a) Male b) Female
4. Age a) 20 – 30 b) 30 – 40 c) 40 – 50 d) 50 – 60 e) 60+
5. Marital status a) Single b) Married c) Divorce d) Widowed
6. Number of children a) 1 - 2 b) 2 - 3 c) 3 – 4 d) 5+ e) None
7. Number of people in your household a) 1 – 3 b) 3 – 4 c) 4 – 5 d) 5 +
8. Main occupation? a) Farming b) Trading c) Salary based job
   d) Food processing e) Other (specify) ……………………………………..
9. Educational level a) No formal education b) Primary/JHS/Middle
   c) SSS/SHS d) Teacher Training College e) Tertiary f) Others (specify)

Section B: Extend To Which Value Chain Development Can Lead to Market Access to Actors.

10. Do you belong to any value chain? a)Yes b) No
11. Which value chain do you belong to? …………………………………………………...
12. Do you do collective marketing of your produce as a group? a)Yes b) No

13. Which of these varieties of chili pepper are most demanded and grown by you?

a) Fingerlike (Adope) b) Roundball (Konfirm) c) Legon 18

d) Fingerlike (Adope) and Roundball (Roundball) e) Legon 18 and Bird eye

f) Other (specify) ....

14. Who buys your produce? a) Wholesaler b) Retailer c) Processor

d) Other (specify)..

15. Are there any benefits in selling to buyers in Q14? a) Yes b) No

16. If yes, please explain...

17. In which ways do you sell your chili?

a) ....

b) ....

c) ....

d) ....

18. How often do you meet your buyer(s) to discuss business related matters and exchange new information? a) Daily b) Once per week c) At least once per month d) At least once every three months e) Never f) Other (Specify)...

19. What is the most important requirement that buyers look for in your produce?

a) Cleanliness b) Variety c) Packaging style

d) Freshness e) Pungency f) Other (specify).....................

20. Do you comply with the market requirements in Q 19? a) Yes b) No

21. If no why?...

22. If yes, explain?...

23. Which of these types of market information are available to you?

a) Road condition

b) Transport charges

c) Quality of produce

d) Market price

e) Availability of chili

24. Kindly indicate the sources of these market information's in question 23?

25. Are these information's relevant to your farming activities? a) Yes b) No

Section C: Strategies for Upgrading in Terms of Products, Process and Functions

26. Do you use certified seeds? a) Yes b) No

27. Do you intend to use certified seeds in the next farming season? a) Yes b) No

28. What will you do to improve upon the quality of your produce?............................

....

29. Are your produce certified by any of the certification schemes? a) Yes b) No

30. If no, are there means by which you can attain certification for your produce?

a) Yes b) No

31. If no, why?...

32. What is your current production level in maxi bags (mb)?

a) Less than 10 (mb) b) 10 – 20 (mb) c) 21 – 30 (mb) d) 31 – 40 (mb) e) 41 - 50 (mb)

33. What type of business relationship do you have with your buyers?..........................

....

Section D: Constraints face by actors in the value chain development process

34. Does your group have ready and easy access to credit (bank loan, equipment, input credit)? a) Yes b)No

35. IF no, why?..

....

36. Are members of your group committed to the wellbeing and success of the group?

a) Yes b) No

37. If no, why?..

38. Are you constrained with information asymmetry as an actor in the chili value chain development in the district? a) Yes b) No

Section E: Prospects of a Well Functioning Value Chain

39. Mention some of the opportunities that you have realised as a beneficiary of the chili value chain development in the district?..

....

40. Are these benefits relevant to your business? a) Yes b) No

41. If yes, explain...

42. If no, why?..

Section F: Requisite support required by actors to form a strong value chain

43. What do you need to have a functional value chain?..

....

44. What is the District Assembly doing now to support the Chili value chain development?...

45. What do you want the Assembly to do to support the value chain?..........................

46. What role should NGOs (e.g. IFDC), bilateral organisations (GIZ/MOAP) and government agencies/departments (SARI, UDS, NRGP etc) play to improve the functioning of the chili value chain?

APPENDIX 2.

Questionnaire for Traders

Section A: SOCIO-DEMOGRAPHIC DATA

1. District……………………………………………………………………………..

2. Name of community/village…………………………………………………………

3. Gender a) Male b) Female

4. Age a) 20 – 30 b) 30 – 40 c) 40 – 50 d) 50 – 60 e) 60+

5. Marital status a) Single b) Married c) Divorce d) Widowed

6. Number of children a) 1 - 2 b) 2 - 3 c) 3 – 4 d) 5+ e) None

7. Number of people in your household a) 1 – 3 b) 3 – 4 c) 4 – 5 d) 5 +

8. Main occupation? a) Farming b) Trading c) Salary based job

d) Food processing e) Other (specify)……………………………………………

9. Educational level a) No formal education b) Primary/JHS/Middle

c) SSS/SHS d) Teacher Training College e) Tertiary f) Others (specify)…

Section B: Extend To Which Value Chain Development Can Lead To Market Access to Actors.

10. Do you belong to any value chain? a)Yes b) No

11. Which value chain do you belong to? ………………………………………………

12. Which of these varieties of chili are most demanded and trade by you?

a) Fingerlike (Adope) b) Roundball (Konfirm) c) Legon 18

d) Fingerlike (Adope) and Roundball (Roundball) e) Legon 18 and Bird eye

f) Other (specify)

13. What do you think is the most important requirement that buyers look for in your product? a) Cleanliness b) Variety c) Packaging style d) Freshness e) Pungency f) Other (specify)……………………

14. Do you comply with the market requirements in Q 13? a) Yes b) No

15. If no why?……………………………………………………………………………………

6. If yes, explain?……………………………………………………………………………

7. Who buys your produce? More than one answer is allowed a) Wholesalers b) Retailers c) Processors d) Household consumers e) Other (specify)………

8. Are there any benefits in selling to buyers in Q17? a) Yes b) No

9 If yes, please explain……………………………………………………………………

:0. How often do you meet your suppliers (s) to discuss business related matters and exchange new information? ……………………………………………………………

47. Which of these types of market information are available to you?

f) Road condition

g) Transport charges

h) Quality of produce

i) Market price

j) Availability of chili

22. Kindly indicate the sources of this market information in question 21?

23. Are these information's relevant to your trading activities? a) Yes b) No

Section C: Strategies for upgrading in terms of products, process and functions

24. What will you do to improve upon the quality of your products?............................

25. Have you attempted improving on the packaging style of your products?

a) Yes b) No

26. Do you have appropriate storage facilities for your product(s)?

a) Yes b) No

27. Which of the following services do you provide to your suppliers? (more than 1 answer is possible)

a) Technical assistance (e.g. training)

b) Equipments (Input supply)

c) Loans

d) Information about market requirements and demand conditions

e) Other (specify) ....

28. What kind of business relationship do you have with your suppliers?...

29. What is your current sales level in maxi bags (mb) per month?

a) Less than 10 (mb) b) 10 – 20 (mb) c) 21 – 30 (mb) d) 31 – 40 (mb) e) 41 - 50 (mb)

Section D: Constraints Face by Actors in the Value Chain Development Process

30. What are your most constrains in carrying out your trading business? (more than 1 answer is allowed) a) Lack of storage facilities b) Lacks financial credit c) Low sales d) Unable to meet both local and export standards e) Lack of regular feedback e) Other (specify)...................

Section E: Prospects of a Well Functioning Value Chain

31. Mention some of the opportunities that you have realised as a beneficiary of the chili value chain development in the district?...

32. Are these benefits relevant to your business? a) Yes b) No

33. If yes, explain..

34. If no, why?...

Section E: Requisite Support Required By Actors to Form a Strong Value Chain

35. What do you need to have a functional value chain?...

36. What is the District Assembly doing now to support the Chili value chain development?...

37. What do you want the Assembly to do to support the value chain?...........................

38. What role should NGOs (e.g. IFDC), bilateral organisations (GIZ/MOAP) and government agencies/departments (SARI, UDS, NRGP etc) play to improve the functioning of the chili value chain?

APPENDIX 3.

Questionnaire for Processors

Section A: SOCIO-DEMOGRAPHIC DATA

1. District……………………………………………………………………………

2. Name of community/village……………………………………………………

3. Sex a) Male b) Female

4. Age a) 20 – 30 b) 30 – 40 c) 40 – 50 d) 50 – 60 e) 60+

5. Marital status a) Single b) Married c) Divorced d) Widowed

6. Number of children a) 1 - 2 b) 2 - 3 c) 3 – 4 d) 5+ e) none

7. Number of people in your household a) 1 – 3 b) 3 – 4 c) 4 – 5 d) 5+

8. Main occupation? a) Farming b) Trading c) Salary based job

   d) Food processing e) Other (specify) ………………………………………….

9. Educational level a) No formal education b) Primary/JHS/Middle

   c) SSS/SHS d) Teacher Training College e) Tertiary f) Others (specify) …

Section B: Extend to Which Value Chain Development Can Lead to Market Access.

10. Do you belong to any value chain? a) Yes b) No

11. Which value chain do you belong to? ………………………………………

12. Which of these varieties of chili are most demanded and processed by you?

    a) Fingerlike (Adope) b) Roundball (Konfirm) c) Legon 18

    d) Fingerlike (Adope) and Roundball (Roundball) e) Legon 18 and Bird eye

    f) Other (specify)………………………………………………………………

13. What do you think is the most important requirement that buyers look for in your product? a) Cleanliness b) Variety c) Packaging style

d) Freshness e) Other (specify)..

14. Do you comply with the market requirements in Q 13? a) Yes b) No

15. If no why?..

6. If yes, explain?..

7. How often do you meet your suppliers(s) to discuss business related matters and exchange iew information? ....

18. Who buys your produce? a) Wholesaler b) Retailer c) Processors

c) Household consumers d) Other (specify).......................................

19. Are there any benefits in selling to buyers in Q18? a) Yes b) No

20. If yes, please explain...

21. Which of these types of market information are available to you?

k) Road condition

l) Transport charges

m) Quality of produce

n) Market price

o) Availability of chili

22. Kindly indicate the sources of this market information in question 21?

23. Are these information's relevant to your trading activities? a) Yes b) No

Section: Strategies for Upgrading in Terms of Products, Process and Functions

24. What will you do to improve upon the quality of your products?............................

....

25. Which of the following services do you provide to your suppliers? (more than 1 answer is possible)

a) Technical assistance (e.g. training)

b) Equipments (Input supply)

c) Loans

d) Information about market requirements and demand conditions

e) Other (specify) ....

26. What kind of business relationship do you have with farmers? ....

27. What is your current sales level in maxi bags per month (mb)?

a) Less than 10 (mb) b) 10 – 20 (mb) c) 21 – 30 (mb) d) 31 – 40 (mb) e) 41 - 50 (mb)

Section C: Constraints Face by Actors in the Value Chain Development Process

28. What are your most constrains in carrying out your processing business? More than 1 answer is allowed. a) Inadequate raw materials b) Lacks financial credit c) Low sales d) Unable to meet both local and export standards

e) Lack of milling machines e) Lack of storage facilities

f) Lack of regular feedback (g) Other (specify)........................

Section D: Prospects of a well functioning value chain

29. Mention some of the opportunities that you have realised as a beneficiary of the chili value chain development in the district?...

....

30. Are these benefits relevant to your business? a) Yes b) No

31. If yes, explain……………………………………………………………………………

32. If no, why?……………………………………………………………………………

Section E: Requisite support required by actors to form a strong value chain

33. What do you need to have a functional value chain?……………………………………

34. What is the District Assembly doing now to support value chain development?...

……………………………………………………………………………………………

35. What do you want the Assembly to do to support the value chain?…………………

36. What role should NGOs (IFDC, GTZ/MOAP, etc) play to improve the functioning of the chili value chain?……………………………………………………

……………………………………………………………………………………………

APPENDIX 4.

Questionnaire for Agro-Input Dealers

Section A: SOCIO-DEMOGRAPHIC DATA

1. District...

2. Name of community/village..

3. Gender a) Male b) Female

4. Age a) 20 – 30 b) 30 – 40 c) 40 – 50 d) 50 – 60 e) 60+

5. Marital status a) Single b) Married c) Divorce d) Widowed

6. Number of children a) 1 - 2 b) 2 - 3 c) 3 – 4 d) 5+ e) None

7. Number of people in your household a) 1 – 3 b) 3 – 4 c) 4 – 5 d) 5 +

8. Main occupation? a) Farming b) Trading c) Salary based job d) Food processing e) Other (specify) ....

9. Educational level a) No formal education b) Primary/JHS/Middle c) SSS/SHS d) Teacher Training College e) Tertiary f) Others (specify) ....

Section B: Extend to Which Value Chain Development Can Lead to Market Access.

10. Do you belong to any agro-input dealers group/association? a) Yes b) No

11. Have your sales improve as an actor in the chili value chain?

a) Yes b) No

12. If yes, how did it come about?..

Section C. Strategies for Upgrading in Terms Of Products, Process and Functions

13. Do you sell certified inputs? a) Yes b) No

14. Do chili pepper farmers buy agro- inputs from you? a) Yes b) No

15. Are you into any form of formal/Informal contract with chili farmers?

a) Yes b) No

16. What kind of business relationship do you have with your buyers? …………

……………………………………………………………………………………………......

17. Do you offer any embedded services for buyers of your inputs?

a) Yes b) No

18. Have you received any training as an agro-chemical dealer? a) Yes b) No

19. If yes, by which organisation?..

Section D: Constraints Face by Actors in the Value Chain Development Process

20. Are you constrained in meeting the demand criteria of your buyers?

a) Yes b) No.

21. If yes, which of the following most constraints your sales?

a) Meeting the volume requirements of farmers

b) Meeting the quality standards of farmers

c) Meeting the quality needs of farmers

d) Other (specify)……………………………………...

22. Are you constrained with information asymmetry as an actor in the chili value chain development in the district? a) Yes b) No

23. Do you get regular feedback from your customers about the products which you sell? a) Yes b) No c) Sometimes d) Other (specify)…………

24. Outline the constraints that affect the growth of your business? …………………

Section E: Prospects of a Well Functioning Value Chain

25. Mention some of the opportunities that you have realised as a beneficiary of the chili value chain development in the district?..

……………………………………………………………………………………………

26. Are these benefits relevant to your business? a) Yes b) No

27. If yes, explain…………………………………………………………………………...

28. If no, why?..

Section F: Requisite Support Required by Actors to Form a Strong Value Chain

29. What do you need to have a functional value chain?...

……………………………………………………………………………………………

30. What is the District Assembly doing now to support value chain development?....

31. What do you want the Assembly to do to support the value chain?........................

32. What role should NGOs (e.g. IFDC), bilateral organisations (GIZ/MOAP) and government agencies/departments (SARI, UDS, NRGP etc) play to improve the functioning of the chili pepper value chain?...

APPENDIX 5

Questionnaire for Chili VC Implementers (GIZ, IFDC, SARI, UDS)

1. Which level in the chili value chain is your organisation targeting (e.g. producers, processors, retailers, consumers) and why?..

   ....

   ....

. Which category of services does your organisation provide to the target sector?........................

   ....

3. How can your organisation support the target sector to become more competitive? ....

   ....

   ....

4. What are the conditions for receiving your services?..

   ....

   ....

5. What are the urgent needs of the chili industry in the district?...

   ....

   ....

   ....

6. What are the key constraints preventing the proper functioning of the VC development in the district?..

   ....

7. What are the prospects of a well functioning chili pepper value chain?...................................

   ....

APPENDIX 6

Check List to Focus Group Discussions

1. How many people live in your household and depend on you? What informs the size of your household?
2. Your main occupation? Is chili considered as a livelihood activity?
3. What is your motivation for going into chili business?
4. Do you do collective marketing of your produce? If no why?
5. What are your reasons for belonging to the chili VC?
6. What are the varieties grown by you? Are these varieties demanded by the market? If yes explain? Is there a variety that you wish to grow but could not due to certain factors? If yes, explain?
7. Does the volume you produce meet the quantity demanded by the market? If no explain?
8. Who are buyers of your produce and why have you chosen to sell your produce to them?
9. By what means do you sell your produce?
10. How often do you meet with your buyers to discuss business information? Do you do this in group or individually?
11. What are the market requirements of your produce? Do you comply with this standard and why?
12. Name some of the market information that is available to you and give sources of these information's?
13. Have you realise any benefit as a chili VC beneficiary actor? Please explain?
14. Do you use certified seeds for cropping? Explain
15. Do you have access to financing for your production? Explain?

16. Have you adopted a method aim at improving the quality of your produce/products? Please explain.
17. Do you produce the volume requirement for the market? Please explain.
18. Do you have any formal or informal business relationships with your buyers? Please explain.
19. Enumerate your major constraints as a chili VC beneficiary actor?