

Market Development Approach: CPBD Program

Fresh and Dried Hot Pepper Value Chains



Prepared by Tracy Gerstle
Independent Consultant, Economic & Enterprise Development
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Executive Summary

The past three years have seen significant changes in Liberia, including the end of the fourteen-year civil conflict and the election of a new government in late 2005. The stability brought about by these changes enables the Community Peace Building and Development Program (CPBD) communities to take a longer term view towards their livelihoods and increasing their incomes. CPBD is a five year - \$12 million program jointly implemented by Mercy Corps (MC) and the Academy for Educational Development (AED). The program is designed to promote a greater role for civil society in the transition to improved social, economic and political conditions by working with rural communities. Given the growing focus on economic growth by the CPBD communities, MC and Action for Greater Harvest (AGHA) opted to use a market development approach to identify profitable, sustainable opportunities for communities to engage in high value markets.

Since the majority of community members are engaged in agriculture, opportunities to support subsistence farmers to increase their yields and transition into commercial agriculture by growing cash crops and moving into agro-processing offered the greatest potential. In May 2005, CPBD staff and local partners worked with a consultant, Mary Morgan, to conduct a market assessment of the dried cow pea value chain, which was identified as a high potential crop that offered communities opportunities both to increase their incomes and food security. The analysis examined the constraints that subsistence farmers face to successfully produce, process and market dried cow peas. Then potential solutions were identified that would enable farmers to overcome the most pressing of these constraints, based upon local resources and affordable, commercial inputs and services. Based upon the research findings changes were made by CPBD staff and partners to the program.

The purpose of this second consultancy is to expand upon the program's economic development strategy through the addition of one to two high potential subsectors, while examining the lessons learned in working in cow peas. This will expand upon the potential sectors and resources available to CPBD community members interested in working in cash crops.

A second Market Assessment using the subsector and value chain frameworks found that the hot pepper subsector is particularly promising, since it offers potential returns of up to 300%. Hot pepper is in demand year round, and most of the CPBD communities already have some engagement in the sector, which will enable the program to build upon this interest. The greatest opportunities are in off-season production when prices are at the highest, as well as selling dry peppers in this period. Assisting communities to develop their capacity and the needed resources to follow a dry and hold strategy during the peak season could significantly increase their incomes. Additional research on the peanut subsectors indicates that at least for the counties in which CPBD currently operates, namely Monterrado, Grand Basso and Margibi, peanuts is not a very promising crop in terms of profitability. Rather than expending considerable resources on peanut production, the program would be better served in looking at other crops and activities. However, given the interest in peanuts some recommendations are made here in the event activities in the subsector are pursued.

In reflecting on the initiative last year for the CPBD program to engage in the cow pea subsector, the greatest challenges were consistency in communicating with the communities and in development of the resources needed to assist AGHA in implementing the strategy. This year these issues need to be addressed, and particular focus is needed to develop resources such as activity plans and meeting templates that farmers can use to organize their activities. Success in farm planning will assist communities to succeed in cow peas and any other crops they may

choose to engage in, while building both the communities' and the local partners to exceed in other subsectors.

Looking beyond CPBD to the next phase of programming there are opportunities to work with communities in other subsectors such as rubber and palm oil. Liberia already exports rubber and there is great potential to revive the historical export trade in palm oil. The low purchasing power among consumers in Liberia limits the opportunities in the domestic economy, so ultimately the greatest opportunities will lie in exports. Many of the CPBD communities are already planning or engaging in palm oil and rubber, through palm seed harvesting and processing, cultivating rubber trees on community land etc. The capacity planning in farm management and engagements in markets at the community level via CPBD this year will build communities' capacity to engage in these growth opportunities for the country. Given the high levels of fragmentation and market-based governance in the country's agricultural sectors, a value chain approach could be very useful in promoting opportunities for greater coordination and collaboration. This will also promote peace dividends in the country via economic ties and opportunities for inclusive growth.

Introduction

The past three years have seen significant changes in Liberia, including the end of the fourteen-year civil conflict and the election of a new government in late 2005. The stability brought about by these changes has changed the priorities in the communities working with CPBD, the Community Peace Building and Development Program (CPBD), also known as Diompilor. CPBD is a five-year - \$12 million program jointly implemented by Mercy Corps (MC) and the Academy for Educational Development (AED). The program is designed to promote a greater role for civil society in the transition to improved social, economic and political conditions by working with local civic organizations and 200 communities. This is in line with the program's intended contribution to USAID Liberia's Strategic Objectives 4 & 5:

- Increased Food Security in Targeted Areas
- Civil Society Role in Democratic Governance Strengthened

Reflecting the recent stability in the country, community members increasingly express the desire to focus on the economic development and incomes in their communities. Given that the majority of community members are engaged in agriculture, opportunities to support subsistence farmers to increase their yields and transition into commercial agriculture by growing cash crops and moving into agro-processing offer the greatest potential.

In line with the program's strategy to focus increasingly on economic development and incomes, investments are being made to conduct market research to inform program approaches, while building the capacity of CPBD's local NGO partners in using market-based approaches, such as Value Chains. The decision to take more of a market-based approach was strategic, recognizing it would foster program initiatives with a greater potential for sustainability, impact and scale.

Sustainability is fostered by building communities capacity to engage more profitably in their local markets, aware of the different market trends that affect their business. **Scale** is promoted since a market-based approach leverages trends in the private sector for programmatic ends.

Impact is measured in terms of the changes in incomes at the community level, which will be more significant if program interventions address the specific challenges that communities face both in their business and in engaging with markets.

In May 2005, CPBD staff and local partners worked with a consultant, Mary Morgan, to conduct a subsector analysis of the dried cow pea value chain, which was identified as a high potential crop that offered communities opportunities both to increase their incomes and food security. The analysis examined the constraints that subsistence farmers face to successfully produce, process and market dried cow peas. Then potential solutions were identified that would enable farmers to overcome the most pressing of these constraints, based upon local resources and affordable, commercial inputs and services. Based upon the research findings changes were made by CBPD staff and partners to the program.

The purpose of this second consultancy is to expand upon the program's economic development strategy through the addition of one to two high potential sectors, while examining the lessons learned in working in cow peas. This will expand upon the potential sectors and resources available to CPBD community members interested in working in cash crops. Additionally the consultancy is designed to re-enforce the training in market-based programming, provided to CPBD's local NGO partners, Action for Greater Harvest (AGHA) and National Adult Education and Literacy (NAEL) and MC staff, as well as continuing to mentor the staff through field work.

Activities Completed During the Consultancy

- Conduct one and a half day workshop with leadership from Mercy Corps and CPBD partners, AGHA and NAEL to build consensus on the consultancy and research objectives, review lessons learned from the work in cowpeas and to identify two potential subsectors for the market assessment
- Train research team, consisting of staff from MC, AGHA and NAEL in approaches to market development in a one day review of the prior year's training
- Spend nine days conducting the market assessment, identifying and evaluating the demand and supply side constraints for the two subsectors, and opportunities to address these constraints
- Work with the research team over two days in Monrovia to analyze the data collected, to discuss the research findings and to develop feasibility analyses of smallholder production in the two sectors, as well as to identify the constraints-opportunities and potential solutions for the two subsectors
- Prepare a Power Point summary of the assessment findings that the research team presented to Bill Massaquoi, USAID Liberia during the consultancy, which was subsequently also presented to the Ministry of Agriculture the following week
- Facilitated a half day workshop for the research team and MC management to review the findings of the research, and to develop potential program strategies for the two sectors: hot pepper and peanuts, as well as to develop some of the parameters for a work plan to roll out the program
- Held a debrief of the research findings for AED in Washington, DC

Appendices 1 and 2 provide the scope of work for the consultancy and a timeline of the activities undertaken. Appendix 3 provides a list of participants in the sector selector workshop and the members of the research team for the market assessment.

Scope & Limitations

This year's assessment had a considerable advantage over the prior year in that the levels of market literacy among the research team are much improved. This reflects well upon the training and field experience the team gained with Mary Morgan. As a result we were able to save time on training in market assessment technique and focus our efforts on conducting the market

research, which is fortunate since we needed all the time available. Conducting a market assessment in a post-war context such as Liberia is very challenging and this impacted the quality of the research. Following the consultant's arrival, members of the research team visited the FAO, the Ministry of Agriculture and other sources to compile any and all available research and data on potential subsectors for the study. Very little exists on the current, post-war status of the economy and we were unable to source any secondary information on cultivation, pre and post war levels of production and import/export patterns of the potential subsectors. Therefore, the research product is the result of all primary interviews conducted over the three weeks the consultant was in Liberia. As a result our identification of subsectors to study for the market research was not optimal, since we had to go more on intuition than data. To counterbalance the local NGOs' and MC staffers' intuition, we evaluated potential sectors on a number of criteria, which required staffers to do some additional analysis as discussed in the section on identifying subsectors for the market assessment.

In the future, as MC and the local partners consider additional sectors for market assessments, they would be well advised to do more external research by conducting interviews with a number of actors in both the public and private sectors before choosing a subsector. Two to three weeks should be set aside for this, with staffers scheduling a couple of interviews each week interspersed with their other duties. This would then provide a more sound knowledge base, which could be tested via a week of interviews with market actors in two to three potential sectors prior to finalizing a sector for study. This may seem labor intensive, but would be a good use of time before making the investment in time and money needed for a larger study.

While staff capacity is increasing, the team still needed considerable guidance in using critical thinking to evaluate the answers they received in interviews, so as to identify relevant additional information or to question a non-logical response. This was so pervasive that we opted to use multiple choice questionnaires and more closed questions than is usually optimal in this type of market research, which generally is conducted with open-ended questions. In studying informal markets there are many other factors that influence business and incentives that are difficult to capture via multiple choice questions. Additionally not all members of the research team, regularly followed the questionnaires or filled in the responses. In part, we did not have sufficient time to test and train the research team in administering the survey, but it was also an indication of staff capacity since some of the team continued to fill out surveys incorrectly after more than a week of field research and guided feedback from the consultant. This prevented a full tabulation of all the survey responses, since in many instances it was not possible to clearly determine respondents' answers, particularly for critical information such as price data. These challenges are however not a reflection of the staffers' dedication to their work. Given that we had less than two weeks to conduct the market research, the team worked very intensively, including many late nights and weekends. Throughout they maintained a very positive attitude and went the extra mile when needed to collect additional information.

The legacy of the civil war and the many years of relief operations it precipitated breeds a culture of dependency and incentives for communities to cater to NGOs' interests in order to receive handouts. This legacy certainly colored many of the survey responses we received both at the community level and within the various value chains as well. With the exception of the some of the import sectors, there was not a sector within the economy untouched by relief funds, whether it was a NGO providing grants for emergency production or a NGO purchasing tools from agro-input suppliers or seeds from a farmer. Communities were also too eager to jump into peanut or pepper production, since they hoped for "support" from the program. This culture of dependency illustrates how careful NGOs need to be when conducting market

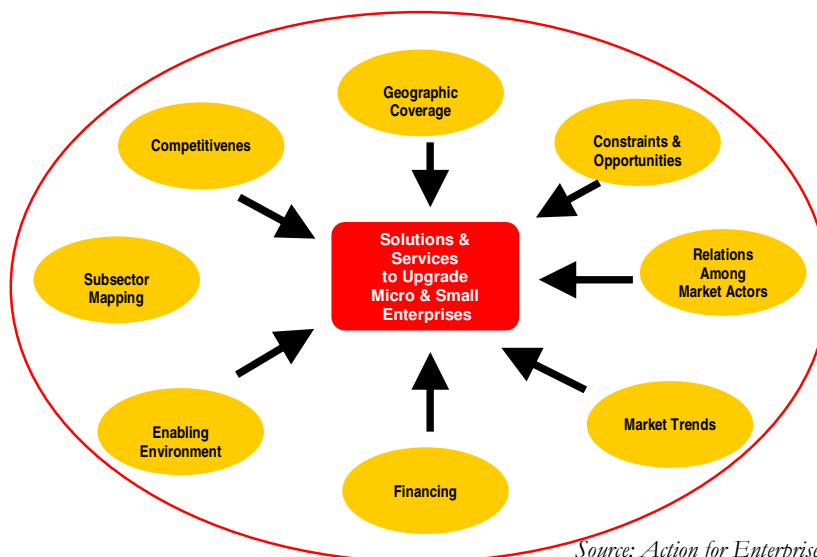
research and the “light touch” that is required in implementing programming, so as to not foster false incentives that distort people’s actions and livelihoods.

Overview of Market Development Frameworks: Subsectors & Value Chains

It is worth reviewing the market development frameworks: Subsectors and Value Chains briefly in this report, since there continues to be some misunderstanding around how to employ market development frameworks in the program. An understanding of how to do this work is critical in designating the roles and responsibilities played by the different stakeholders in the program, namely the development agencies: AGHA, MC and NAEL and the communities and smallholder farmers with which the program interacts. As Mary Morgan

noted in her report, “smallholder farmers do not operate in a vacuum, but rather within market systems which may be local, regional or even international.” The Subsector and Value Chain frameworks act as tools by which to assist development practitioners, the communities and farmers with which the practitioners work to better understand these market systems. This allows for targeted programming addressing the constraints that smallholders face to engage more profitability in these market systems. Figure 1 lists the many factors that market development practitioners need to take into account in assessing and designing programs.

FIGURE 1: FACTORS CONSIDERED IN SUBSECTOR ANALYSIS



Source: Action for Enterprise

Here I have re-included Mary’s explanation of the concepts given their importance. Figure 5 provides a map of the Hot Pepper subsector and its four value chains. This may act as a useful reference when reading about the structure of subsectors and value chains below.

“A subsector can be defined as follows:

- All the firms that buy & sell from each other in order to supply a group of closely related products or services to final consumers
- The range of activities that brings a product from raw material to the final consumer: input supplies → production → processing → wholesaling → retailing → exporting
- These transactions, based on the farms and the flow of activities are also sometimes referred to as horizontal and vertical linkages
- The different market channels reach distinct consumer groups

Value chains exist within a subsector. A value chain maps the transformation of a product along only ONE market channel. There are usually several value chains within a subsector.

Subsector analysis seeks to identify the different value chains operating within one subsector and the final consumers that they serve. It then looks at the range of activities undertaken in each of these value chains and the different actors operating in each in terms of input suppliers, producers, retailers, traders, etc. It also attempts to map supporting services such as credit,

since these services play an important role in facilitating the activities. Once the linkages and relationships are identified it is possible to understand the distribution of benefits along the different chains as well as the constraints to efficiency and greater revenues faced by all the actors operating in the different value chains.

The distinct value chains within a subsector, cater to consumer groups differentiated by specifications of the different products they consume, typically based upon the level of the product's upgrading. As more value is added to the product, the product will meet the specific desires and needs of a higher value chains. Analyzing the entire subsector reveals the different value chains, proving a opportunity to analyze not only the competitiveness of each value chain within a subsector, but also identify which value chain would provide the best market opportunity for a large number of poor people. Micro and small enterprises (MSEs) and smallholder farmers often operate in a market channel which targets other poor consumers as their market. This may be because their product is of poor quality, or they do not have access to transportation and other market outlets, or they cannot access the financing needed to upgrade their processing technology. However, the conclusion should not be made that poor producers would be best served by moving into the highest value chain. Sometimes the investments and/or capabilities needed to meet the requirements of this chain may not merit the investment required. Although this constraint can sometimes be overcome by linking smaller producers to lead firms. Research is therefore needed to determine where the greatest opportunities for poor producers exist.

The value chain analysis reveals these constraints, as well as identifying potential opportunities to promote MSEs and smallholders engagement in higher value chains. Once constraints and opportunities are identified, the assessment looks for solutions, which may include promoting access to business development services (BDS). For example, a potential constraint may be a lack of value added products among poor producers, due to unaffordable processing equipment. A potential solution would be to work with a financial services provider to design a credit product that enables poor producers to procure the equipment and/or the development of and introduction of a more affordable processing technology. The provider of this credit product or the supplier of the process equipment, are BDS providers. An intervention would then be to link farmers to the equipment supplier and the financial services institution. The market transaction is what drives the relationship. The role of the BDS facilitator is to identify the constraints, the solutions, the solution providers and develop an intervention which facilitates the development of the market.”

Additionally value chain analysis may identify other constraints of a non-commercial nature, such as a poor regulatory environment or poor infrastructure. In these cases, the BDS facilitator may work with or on the behalf of smallholder farmers to lobby for changes in the regulation. Or in the case of infrastructure, an assessment needs to be made as to whether a solution can be found or if the lack of infrastructure is insurmountable and therefore another value chain or even subsector offers greater opportunities.

Lessons Learned in the Cow Peas Subsector

Given that the program staff and partners had already conducted one market assessment and designed and implemented one “BDS,” or market development, initiative in the past year, we had the opportunity to reflect upon its strengths and challenges. The consultant facilitated several discussions with senior staff and program implementers from MC and AGHA to discuss the initiative and lessons learned. Additionally while conducting field research for new subsectors there were opportunities to meet with farmers working in cowpeas. The goal of these discussions and interviews is to gain an understanding of the work in cowpeas so as to make

some recommendations to strengthen the initiative and to leverage the learnings in the new subsectors.

At the conclusion of the cow peas assessment in May 2005, the research team designed a fairly comprehensive plan as to how they could work with the communities to better support cultivation and marketing of cow peas going forward. Figure 2 provides an overview of this plan. A strength of this exercise is that the research team was comprised of senior leadership and implementers from both AGHA and MC, so the subsectors had management’s buy-in. It also should have resulted in the identification of practical solutions, since it was designed by the same staff overseeing and implementing the program. However, in reflecting back upon the initiative now the team found that they had not realized most of the strategies identified. Our question was to understand why.

FIGURE 2: STRATEGIES TO DEVELOP THE DRIED COW PEA VALUE CHAIN

<p style="text-align: center;"><u>Strategy No. 1:</u> <u>Strengthen Farmers Groups</u></p> <ul style="list-style-type: none"> • Farmers Group selects leader • Farmers Group develops activity plan <ul style="list-style-type: none"> ⇒ Increase farm sizes ⇒ Access tools, seeds & transport collectively ⇒ Link to buyers ⇒ Buy storage container together 	<p style="text-align: center;"><u>Strategy No. 2:</u> <u>Susu Clubs & Asset Development</u></p> <ul style="list-style-type: none"> • Savings clubs - Capital to purchase tools, seeds in bulk & contract transport • Asset Development – Capital to purchase storage 	<p style="text-align: center;"><u>Strategy No. 3:</u> <u>Crop Husbandry, Preservation</u></p> <ul style="list-style-type: none"> • Land Preparation • Planting in rows and with mounds • Intercropping • Crop maintenance (cultural practices) • Harvesting (pre harvest & post harvest technology) • processing • Irrigation methods • Crop budgets • Crop calendars - When to plant • IPM – for ants and weevils • Preserving seeds
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To do this we looked at the program through the lens of two communities with which the program had worked in cow peas: Gardour and Borlorla. In both communities, AGHA attempted to follow the strategy outlined above. In community meetings in June and July 2005, AGHA had meetings with the groups of farmers in the communities to discuss the findings from the cow pea research. The farmers groups were then asked to self-organize into susus so as to save capital to fund their activities. It is unclear what was communicated to farmers in terms of what the capital was to be used for. Staff seemed to indicate that farmers’ responsibility was to save so as to not self-fund their activities as outlined in strategies No. 1 & 2 above, but rather to accumulate the 10% community contribution that CPBD sometimes requires from its communities as a match for the CPBD investment. In this case the match was to be \$10 of the \$100 CPBD was investing in the initiative to buy the farmers tools and seeds. Another complexity of the program was that at this stage CPBD was still working through demonstration plots, which may or may not have belonged to the farmers who were mobilized. Farmers were paid a rate of \$2 USD for every day they worked on these plots. The farmers were also not directly involved in any of the procurement of seeds and tools, and CPBD did not deliver the seeds in time to sow. This greatly hampered the initiative from a technical perspective—and likely hurt the credibility of CPBD in the communities, since the program was then encouraging the farmers to sow seeds late. Farmers were also not asked to make any contributions, and it would have been difficult to secure one despite the earlier advice on how they might save up for

their contribution via a susu since CPBD had done the procurement. Despite these challenges in some of the communities cow peas were successfully cultivated, but program staff did not have the opportunity to work with the communities on the marketing initiatives outlined in strategy No. 1, since these were historical communities in which the program were no longer working. Another challenge was that the CPBD program needed to graduate these communities and focus its efforts on introducing the program in new communities. As a result the program staff could not work through the entire strategy with the farmers, nor did they have the time to go back during a second season to reinforce the new cultivation techniques introduced or to encourage the farmers groups in their organization.

From these experiences we were able to highlight the following key lessons:

Need for consistency in communications with communities and farmers groups

As illustrated above in implementing the cow peas initiative, there was little consistency in what was communicated to the farmers groups and the communities. Initially communities and farmers groups were asked to make a contribution, but then this was not followed up on. It was also unclear as to how the AGHA and CBPD staff re-enforced and supported the other aspects of the strategy over the course of the seasonal calendar, such as the plan to collectively store and market their produce.

Need to work more intensively with farmers to assist them not only in improving their cultivation practices, but also to assist them in better organized and professional in their operations

Promoting behavior change cannot be achieved overnight, particularly among adults and youth, since they are revisiting how they have operated for years if not decades. Effective behavior change requires learning through doing, followed by a period of practical support to reinforce the lessons. Having spent limited time with AGHA in the field, the organization seems to be very good at assisting farmers in learning about “best practice” farming, by working side by side with farmers and communities in the fields. However fewer techniques seem to have been developed and applied by MC and AGHA to assist farmers in revisiting how they *manage* their farm and make decisions on which crops to engage in. This is a critical missing gap—particularly as the program moves into promoting cash crops. Poor people are naturally risk averse since they are struggling to survive. To motivate the CPBD communities to engage in new farming practices, the program needs to help them see how the practices will reduce their costs while increasing their yields.—If this is not the case then CPBD needs to make the case as to how increased costs will be offset by increased yields. Communities need to feel confident that the investment they will make in terms of labor and inputs will be paid off through increased sales and profits. This will also enable the communities to earn the cash they need to continue to invest in their farm in the future. Additionally building communities’ market literacy and assisting them to better link to markets and buyers will enable them to profitable engage in the long run, since they will have opportunities and resources to make smart cultivation and marketing decisions.

Last year Mary Morgan left the team with a template and suggested meeting plan as to how staffers might start to work with farmers on this. It would be useful to start working with this template and to use it as a springboard to promote more consistent activities and planning in the community. This will help farmers to start evaluating the choices they make as well as enabling them to plan both their production and marketing strategies giving them a better chance of success. Additionally at the conclusion of the consultancy, the consultant gave the team a set of resource books developed by the FAO for working with farmers on marketing and farm management for some additional ideas.

Ultimately if communities do not see and realize economic gains from “best practices” or “modern production techniques” then they will quickly abandon them.

Need to proactively trouble shoot challenges and to develop plans to address them

A strength of subsector and value chain tools is that they require implementers to identify as much as possible all of the potential constraints that exist in a given value chain and how these constraints affect all the different actors in the chain. In the cow pea analysis, there were several potential constraints identified including pests. As part of the program planning for strategy No. 3 AGHA and CPBD staff were charged with working with communities and farmers groups to build their ability to recognize and manage pest outbreaks in their field. During this year’s consultancy visit, several of the communities were starting to suffer from pest outbreaks in their cow pea fields; however, they had no plans as to how they would address the outbreaks. There was no reason why the communities should not have had a plan to roll out to address these outbreaks, since it was forecast over a year in advance that this would be one of the constraints and different potential solutions were identified to address this constraint.

Need to identify at which level to work in the communities

One of the challenges in overlaying a community development program with an economic development initiative is incentives. Although the community as a whole may have agreed that the program should work on agriculture and particular subsectors, usually the programmatic activities that result will not benefit all community members. This is definitively the case in the activities promoted under CPBD. The program does not have sufficient funds to outfit all community members with seeds and tools—nor do all community members necessarily wish to engage in cow peas, much less other legume or horticulture crops. Therefore to be effective the program needs to focus on individuals already engaged in or interested in engaging in this subsector. These individuals will generally be acting in their own interest and in the interest of their families. Ultimately if the individuals do not receive tangible benefits from what they are expected to contribute to the initiative then they will have no incentive to insure its success.

Overarching all of these lessons is a challenge that CPBD will likely be unable to overcome at this point in the program cycle, is the way in which the program is designed and operates is not well suited to promoting market development and commercial farming by smallholders. The overarching goal of CPBD is social development and peacebuilding following a protracted civil war. The program’s structure is based upon promoting these goals and does not have all the resources and structures needed to focus primarily on market development. In addition to agriculture, communities have the choice to focus on other activities in health and other small, non-agriculture based businesses. Once the community makes the decision as to which of these activities to undertake, the program has \$1,000 in funds to invest in one of these activities and can provide some technical support. This does not provide the programmatic flexibility needed for the agriculture programs and may indeed skew more sustainable programming, since ultimately the program must spend out the \$1,000 grant. If it does not then the community is at a disadvantage versus other communities that chose activities in health or alternative income generation. This is at no fault to the program which was designed over five years ago, when Liberia was at a very different stage in terms of its political and even economic status. At that time the CPBD communities also had different priorities, and they were less focused on economic development.

Another aspect of market development programming is that it takes a systems view, looking beyond the community level to the broader market systems with which communities interact. Figure 1 presents a schematic of the different factors which may need to be taken into account in designing and implementing a market development program. For example a market assessment

might determine that the best means by which to promote food security across all of the CPBD communities is to actually work not at the community level, but rather in the transportation subsector developing transportation services that allow communities to better transport their goods to market. If this were to be a finding, within the current CBPD structure this issue could not be addressed.

So the challenge is to determine how best in its final year can CPBD assist communities to prepare for the transition and support their desire to move into more commercial agriculture, while meeting the programmatic goals of working in 200 communities. A market assessment is a still a useful tool at this stage, since ultimately an understanding of the private subsector and the markets into which the community link is needed. The analysis can also be tailored to hone in on the types of solutions that are within the purview of CPBD. It also enables the program practitioners to start developing a longer term view as to what form subsequent programming could take. Given this, the recommendations provided in this report will look at both aspects. The first will be to advise the CPBD program based on its current structure as to how it can best continue to reorient its programs towards a greater focus on sustainable economic development and the promotion of the strategic subsectors and value chains identified in this report. The second will be to advise how in subsequent programs the program implementers: AED, AGHA and MC can realize their vision to use market development programming as a means to catalyze economic reconstruction and growth, thereby promoting food security and growing incomes in rural communities.

Identifying Subsectors for the Market Assessment

The main objective of the consultancy is to work with CPBD staff and local partners to identify additional high potential subsectors in which the project may work and to assist the program in developing strategies to work in these subsectors. Subsectors chosen for the project should be in line with the overall impact objective for the economic development component of CPBD:

To work with local partner organizations to effectively increase food security (both food and income) by improving and diversifying food production and other livelihood means for vulnerable CPBD communities.

To kick-off the consultancy a one and a half day workshop was held with the leadership of CPBD's LNGO partners and MC in the MC Buchanan office to discuss the overall objectives for the consultancy and potential subsectors in which the program might work. All of the program partners agreed that the introduction of the concept of market development and the subsector and value chain frameworks in the prior year was a worthwhile addition to the program in that it attuned staff to the core principles of sustainable economic development. However, as noted in the summary of lessons learned in cow peas above, the staff are still struggling with how best to implement the findings of the initial consultancy and most importantly the principles of market development in their work. We agreed to keep these challenges in mind in this second round of research, analysis and strategy design, so as to address them where ever possible, while further building staff's capacity.

In applying the market development framework there are four principles, typically used to guide market research and program/strategy design, namely:

- ***To achieve high impact:*** Impact can be defined in different ways. Within market development programs, changes in income and the number of households or enterprises which experience these changes are often the key indicators of impact. Depending on the

program impact may also reflect other goals such as the number of vulnerable populations that participate or outreach to rural communities.

- **To be focused in the delivery of interventions:** The goal is to promote solutions that will be in demand by the target enterprises and to serve their key constraints in terms of reaching higher value markets and improving the efficiency of their operations.
- **To be market driven:** Market-based programming is all about understanding the incentives of different actors in the subsector and leveraging these and final consumer demand.
- **To be sustainable:** Sustainability is measured in terms of ongoing value creation by the targeted population following the exit of the market facilitator. It is also linked to the target population having on-going access to the commercial services and inputs they need to develop and grow their businesses and to adapt with changing market trends.

FIGURE 3: DESIGNING & IMPLEMENTING A MARKET DEVELOPMENT PROGRAM

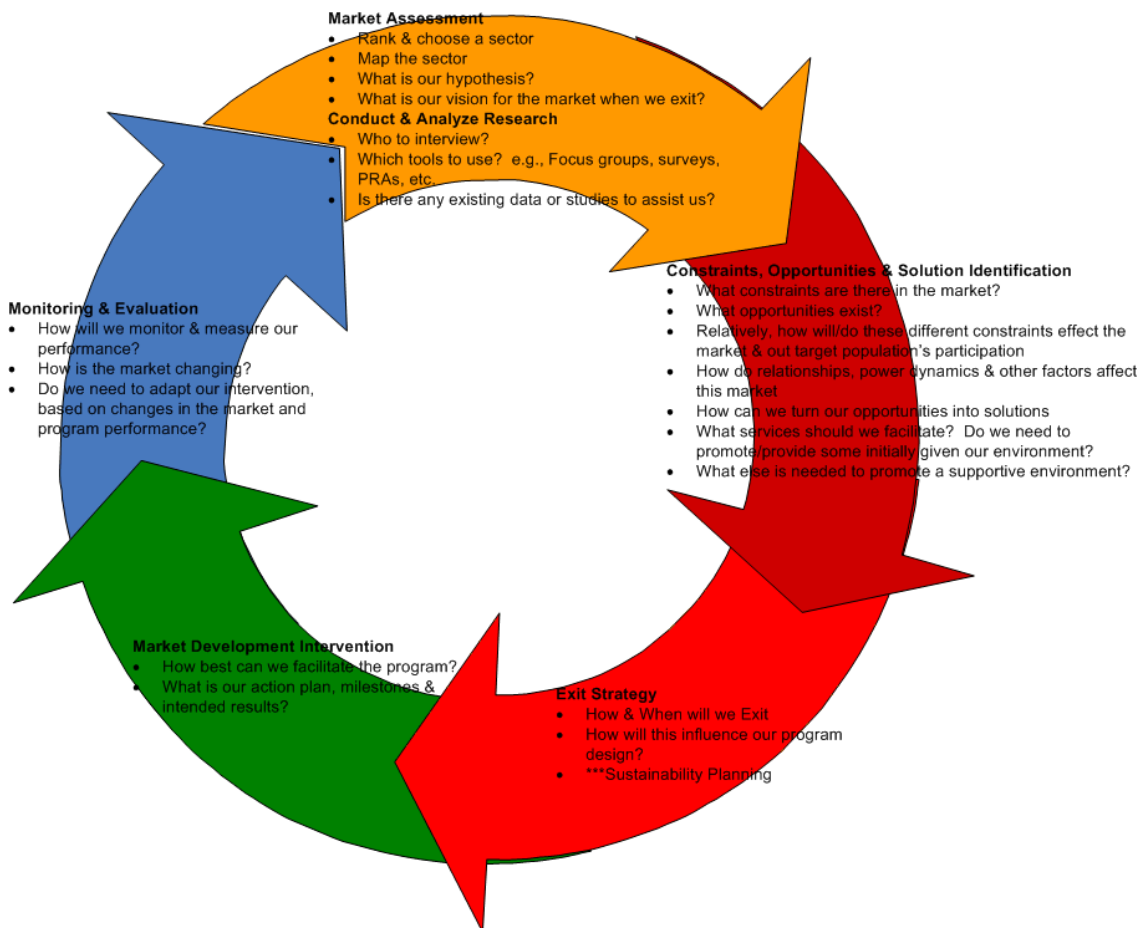


Figure 3 outlines the program cycle and steps in researching, designing and implementing a market development program. To identify subsectors for the market assessment, the consultant sent MC Liberia the following criteria and definitions to assist the country staff in collecting information to help inform subsector selection upon the consultant's arrival. MC Liberia has the data tables they prepared by country in response to this request. However, the information collected was largely anecdotal and not based on any secondary sources or market research and therefore ultimately did not largely influence the choice of subsectors.

In the selection workshop the group reviewed potential criteria and then refined it down to the factors that they felt were the most relevant to the goals of the CPBD program. The choice of

criteria also reflected lessons learned from the group’s work to date in the cow pea subsector and the operational confines of the CPBD program. One such criteria is Time till Impact. Currently CPBD is going into its last year, so the program has limited time with which to introduce new interventions. Additionally, the group picked up the insight that interventions which promote quick gains among their target communities have a better chance of success, since they give the interventions credibility with the community.

TABLE 1: POTENTIAL CRITERIA FOR SUBSECTOR SELECTION¹

CRITERIA	DESCRIPTION
Unmet Market Demand and Growth Potential	<ul style="list-style-type: none"> Evidence of strong effective unmet demand for products being produced Buyers have ready market for products but are unable to meet demand Potential for growth and continued competitiveness of subsector
Potential Increase in Income and Wealth	<ul style="list-style-type: none"> Potential for increased revenues at all levels of subsector. Projected increases in sales, profits, or returns to labor
Opportunities For Linkages	<ul style="list-style-type: none"> Potential forward/backward linkages between large and small enterprise. Large buyers are overlooking MSEs as a source of supply or unable to organize them to meet their demands.
Potential For Employment Generation	<ul style="list-style-type: none"> Potential for enterprises (large and small) to create new employment opportunities as the subsector develops or expands.
Number of MSEs	<ul style="list-style-type: none"> Number of SE operating in the subsector
Value Added Potential	<ul style="list-style-type: none"> Potential for SEs to add value to raw materials and gain higher earnings.
Potential For Increases in Productivity	<ul style="list-style-type: none"> Potential for technologies or management systems to increase the productivity and earnings of enterprises in the subsector.
Competitiveness	<ul style="list-style-type: none"> Competitiveness of the subsector on the world market and/or of SEs in the subsector.

Source: Action for Enterprise

The criteria ultimately chosen by the team to use in the subsector selection is as follows:

Criteria for Subsector Selection

1. Target Population & Their Capacity
2. Potential for Value Add
3. Existing Demand & Growth Potential
4. Potential to Increase Income
5. Financial Feasibility, defined in terms of
 - a. Profitability vis-à-vis other potential subsectors measured by ROI
 - b. Capital Requirements (Total Costs, including startup investments)
6. Time till Impact

Table 2 provides the results of the subsector ranking for nine sectors that the group ultimately decided to evaluate. The nine subsectors were chosen based on their potential as cash crops and their applicability to CPBD communities in the four counties where the program operates and/or intends to operate in the future, namely Margibi, Montserrado, Bong and Grand Basso.

¹ In this table SE stands for Small Enterprise.

These subsectors were also vetted with MC Liberia management prior to the workshop. To produce information to inform the rankings the selection group was split up into three teams, with each team preparing a deeper analysis of three potential subsectors across the criteria. This included breakeven and profitability analyses for the financial feasibility criterion. The smaller teams then regrouped and presented their analysis to the entire group. Summaries of their presentations and financial analyses are included in Appendix 4. For each criterion, the group was asked to rank the subsectors on a scale of 5 to 1, with a score of 5 for a good fit. Based on the presentations the group ultimately chose to focus on peanuts and hot pepper for the market research.

TABLE 2: SECTOR RANKING

	Suitability for Target Population	Potential for Value Add	Existing Demand & Growth Potential	Potential to Increase Income	Profits	Capital Required (Total Costs)	Time till Impact	Total
Goats	3.5	3	5	5	1	1	1.5	20
Sheep	1	2	3	4	2	1	1.5	14.5
Cassava Processed	5	4	5	3	2	1	3	23
Cassava	5	4	5	3	2	5	3	27
Peanuts	5	4.5	5	5	4	2.5	4	30
Plantains	3	2.5	3	4	1.5	2	1	17
Hot Pepper	5	3.5	4.5	4.5	3	3.5	3.5	27.5
Bitter Ball	3.5	1.5	3.5	3	2.5	3.5	3.5	21
Corn	3.5	2	2.5	1.5	1.5	3.5	3.5	18

With completion of the subsector selection the larger group adjourned and MC Deputy Country Director, Tricia Matthews worked with the CPBD local partners to determine who should be on the research team. The final composition of the research team is included in Appendix 3. The team then adjourned for a day, before meeting up again for a one day refresher course on market development programs and market research. The training materials used in the one day seminar are included separate to this report.

Market Research

At the conclusion of the market development refresher course the research team prepared preliminary subsector maps for peanuts and hot peppers. These maps were a useful tool for the team, acting as an outline for the market research, since the maps outlined the different market actors in the two subsectors and the different value chains in each subsector. Figures 4 & 5 provide the final maps that were eventually produced for the hot pepper and peanut subsectors.

Subsector maps are a useful tool to set the stage for a market study, since through mapping the industry all the market actors who need to be interviewed are identified. Additionally, the map provides a useful framework on which to stage a discussion as to the hypothesis and goal of the research. Formulating a hypothesis statement for the research in terms of the potential constraints and even opportunities and solutions that may be uncovered is a good means of helping the research to stay focused. The hypothesis statement is complemented by a goal statement, which helps to ensure that the research identifies potential solutions that can actually

be employed in the program. Appendix 5 provides the research plan the team designed for hot peppers. The research plan for hot peppers was informed by market research, since it was completed after one day of market interviews at St. Johns' Market in Grand Basso country, which is located on the border of Bong country and therefore acts as a bi-county trading hub.

It is important to note that the research plan and the hypothesis statement are just a plan and that the team in its research was instructed to stay receptive to all of the information collected, allowing us to capture potential findings and constraints that we may not have predicted. For example, land title and land usage emerged as a constraint in both subsectors and not one which was highlighted among the potential constraints in the hot pepper research plan.

The research hypothesis for hot peppers and the overall goal for a potential intervention are as follows:

Hypothesis: Pepper production, processing, and marketing offers an opportunity for CPBD communities to increase their incomes, by engaging in a high value crop for the Liberian market.² Following the Liberian Civil War, cultivation of pepper is increasing annually and during the primary harvesting season Liberian markets are sometimes saturated with fresh pepper. To be successful in the fresh and dried value chains for hot pepper, communities will need to enter into off season production as well as looking at means by which they may preserve excess production during the peak season through processing and/or storage for sale when there is scarcity.

Goal: To increase CPBD communities' engagement in value chains for hot pepper, through improved production and processing and the development of a marketing plan.

Notably for peanuts, the research team was much less knowledgeable as to the potential for peanuts. For much of the market research we were unable to bridge the gaps in our knowledge, since we conducting our initial research in Grand Basso and Margibi countries. These counties are more lush, with more low and semi-low land making them less suitable for peanut cultivation. Additionally as we were to learn, peanut cultivation largely stopped during the civil war and is only restarting. So there was little activity to study. It was only in the final stages of our research, when we traveled to Bong county that we started to identify farmers and other market actors working in domestic peanuts. As a result we had insufficient information to formulate a comprehensive research plan for peanuts, so one is not included with this report. However, to keep the research team on track the following goal/hypothesis statement was formulated for the peanut subsector:

Goal/Hypothesis: To examine the potential viability of the peanut subsector as a re-emerging crop, and opportunities in marketing and processing.

To save time, survey questions for the research were based off the prior set of surveys that Mary Morgan developed with the research team in May 2005. Survey questions were developed for small holder farmers, input suppliers, processors, transporters, traders and retailers (small tabletop operations to medium and large with storefronts.) Additionally some questions were added to try to gauge through the research what were some of the trends in the two sectors in terms of competition, levels of production, demand and prices. As discussed in the scope and limitations section of the report, one of our greatest disadvantages was the lack of time to test the surveys and to train the research team in administering them. Since statistically significant

² Per a discussion with an official at the FAO, prior to the Liberian Civil War there may have been exports of hot fresh and dried pepper to neighboring African countries.

results were not needed for this research, throughout the research the consultant worked with the research team to adjust the survey questions as needed so as to gather the most relevant and highest quality information. Copies of the surveys used and the results which could be tabulated are included in a separate attachment to this report.

Another challenge of the research was that the team only had one car, so this limited the team's movements in terms of the number of interviews and geography which could be covered. Appendix 2 provides the travel itinerary for the trip and all the communities and markets visited across the four counties: Grand Basso, Margibi, Montserrado and Bong in conducting the market research.

Based on the lessons learned from the work in the cow pea subsector, we also opted to do participatory economic mappings in each of the communities that we visited. This allowed us to understand the subsectors studied in the greater context of all the economic activities undertaken by the communities. Four different PRAs were used in each of the communities, although based on time limitations and community responses we varied our use of PRAs three and four:

- ***Enterprise Ranking:*** Community members free list all of the activities that community members undertake to acquire money, food or other resources that they require. They are then asked to rank the relative importance of these activities based on three criteria:
 - Importance to the village, based on however they define importance
 - What brings the most money
 - What is easiest to sell
- ***Price Difference by Season and Location:*** Community members discuss the season price trends for the most important sources of income identified in the first PRA. They are also asked to comment as to how prices change based on where they sell.
- ***Enterprise Trends:*** Builds off the second PRA by asking communities to delve deeper on the trends in their key activities in terms of changes in production levels, sales and profit levels and the reasons for any changes.
- ***Gender Roles in Marketing:*** Looks the gender and power roles in the different economic activities, particularly in terms of control of resources generated by the different activities.

The four PRAs and communities' responses are included in Appendix 6, with a broader discussion of the findings below.

General Research Findings

As discussed in the scope and limitations of the study, we were unable to tabulate all of the research questionnaires, since many were not filled in properly or responses were written in the margins. This greatly challenged the data collection and compromised our results. Based on this the comments here are a compilation of the general trends were found among all the different actors in the subsector.

Farmers

TABLE 3: COMPILATION OF FARMERS INTERVIEWED

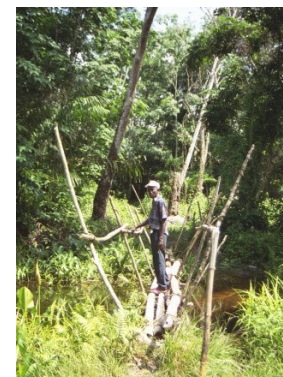
Villages Interviewed	Wrakleen Town	Harbel	David Cooper	Kollie Kain	Bong County	Red Light	Total
Number of farmers	6	1	1	6	11	2	27
# growing peppers	5	1	1	6	1	1	15
# growing peanuts	1		1		10	1	13
# of Single Bags of Peppers Grown	33.5	5.5		81.5	24.5	25	170
# of Single Bags of Peanuts Produced	1.5		9.5		95.5	1.5	108
# of farmers who grew enough to sell	100%	100%	100%	100%	100%	100%	100%

Approximately 27 farmers were interviewed in five communities and two markets, not including the community focus groups. For the one on one interviews, we asked community leaders to introduce the research team to those farmers engaged in commercial levels of cultivation, so we could learn about the hot pepper business. One hundred percent of the farmers we interviewed produced enough hot peppers and/or peanuts to see, which is not surprising since both are traditional cash crops and the farmers we interviewed were in commercial production. A broader profile of all the economic activities undertaken in the community were captured in the community economic mappings.

The majority of farmers interviewed reported that they are increasing their hot pepper production by an average of 12 bags per season, whereas for peanuts there is an equal split between farmers growing the same, more or less peanuts this season compared to last.

The majority of farmers are still engaged in traditional cultivation methods, with most only using a cutlass and a hoe. However, approximately one third of the farmers were using additional inputs to improve upon their productivity, including fertilizers, insecticides and pump irrigation. These farmers tended to be based closer to Monrovia in Margibi and Montserrado communities. Most farmers also indicated a willingness to invest in better farming inputs if it would result in an increase of their productivity.

In terms of constraints, the most commonly cited issues were pests followed by inadequate tools and accessing quality seeds. Approximately 90% of farmers cited insects and/or small animals as some of their greatest challenges. This research was not able to test access to tools and there may be some reporting bias here, since it is well known in many communities that NGOs will often supply farmers with free seeds and tools. When asked how they could best improve their sales, none of the farmers cited marketing or relations with traders and/or agents as a constraint. Rather they focused on how they might improve upon their productivity based on increasing the total size of land they had under cultivation or by improving upon their farming practices. Interestingly through jealousy of success at the community level was often cited, and some farmers noted that community members would vandalize the crops of successful farmers.



Farmers often walk one to two hours or more to reach their fields and must then carry their produce out.

In terms of marketing there was an even split between those who sold their produce to traders and those who went to the market to sell. Traveling to the market to sell is most common

among those farmers selling in larger quantities of five bags or greater in one sale. Half of farmers self carry or hire someone else to carry their goods to the market while the other half hire yellow taxis.

Most of the farmers noted that they belong to a ku and that they use the ku as a source of labor. However, there were several larger farmers who indicated they had paid for their ku labor. Thus from our interviews we were unable to determine how functional most of the ku structures actually are.

The majority of farmers undertake no processing of either their peppers and/or their peanuts. Although 30% reported that they dry peppers, but primarily for home consumption.

Prices paid to farmers for pepper tended to average around 1,500 LD per bag, particularly if it was a bigger farmer with some bargaining power in terms of the number of bags sold. Some smaller farmers did note however, that their prices could be much lower, particularly when they sell by the bucket or half bag with prices ranging from 800 to 900 per bag. We attempted to classify growers based on the range of production levels they achieve, this is illustrated in Figure 4. We estimate that in most communities small growers dominate, with a subset of enterprising medium and larger growers.

Community Economic Mappings

A team of two researchers undertook PRAs in three communities in Grand Basso and Margibi counties. Due to time constraints we were unable to undertake a community mapping in Bong. All of the communities that we visited were CPBD communities that had completed their main activities under the program, and all were located along main roads, which may have influenced the findings since this allows them greater accessibility to markets.³

When asked to rank the different activities undertaken by community members and the relative importance of these activities, the results across all three communities was a mix of cash crops and staple crops, with cash crops dominating. This indicates that the communities are focused on increasing their cash incomes. For example in David Cooper, Margibi Country, community members ranked cassava production as the more important activity to the village, since it is a food staple. However, the three subsequent activities that they ranked in importance were tapping, bitterball and palm oil, all of which community members undertake for cash. Similarly in Wrakleen, the group seemed to be focused on cash crops ranking palm oil as the most important crop to the village, as it generated \$3,000 USD for the community in the past year. Cassava then followed in importance with peanuts, rice and pepper ranked third through fifth. Relatively Kollie Kain, Margibi was the most focused on staple crops of the three communities listing cassava and rice as the most important activities, followed by plantains, which is a traditional source of food during the hungry season. Additionally across all three communities, many communities were growing rubber trees on their private or community land as an upcoming income source in the next six to seven years. This would indicate that communities are starting to take a more long term view to their livelihoods.

Importantly, the communities confirmed that work to strengthen the hot pepper subsector would be of interest to them, particularly in Grand Basso and Margibi where many community members are engaged in the subsector. Communities in these counties also expressed interest in peanuts, but we found very few communities engaged in peanuts and most who were engaged

³ Access is used loosely here since many farmers may have to walk one to two hours or more into the bush to reach their fields. This may include river crossings and other obstacles, when then have to be recrossed with the produce carried on their heads when it is ready for market.

had started as a result of the CPBD program. Whereas in Bong County, where CPBD intends to enter this year we interviewed ten farmers engaged in peanuts. We also found several farmers there engaged in peppers. They have an advantage over other counties in the rainy season, since the soil is sandy in Bong and there is more highland allowing them to harvest and grow peppers for a longer period.

Discussions with the communities on the prices they receive for their produce and particularly peppers and peanuts did not yield any conclusive findings. In terms of pricing for peanuts and particularly peppers the information we gathered is not conclusive. Across the communities there was consensus that they could increase their sale price per bag of peppers by 150 to 300 LD, depending on the season, if they sold their peppers at a local market versus in the village to community members or agents. However, to bring a bag to market by car or to pay someone to carry it in a wheelbarrow or on their head cost between 25 to 75 LD per bag. Community members also noted that particularly during the peak season there is the risk that the product would not sell. As a result most community members only felt it was worth their time and effort to go to market if they had higher quantities to sell. Community members also seemed to have a good sense of what their prices were for both their peppers and peanuts in the market versus at the village level.

Transporters

The team interviewed 28 transporters across all four counties in the following markets: St. Johns, Salala, Harbel and Red Light, as well as at the central markets in Buchanan and Kakata. A variety of transporters were interviewed, including yellow “taxis,” mini-buses and 10 to 12 wheelers. The taxis tend to be operated by their owners, while the mini-buses and 10 to 12 wheelers are operated by hired drivers. Many of the larger trucks are actually owned by Guineas, who hire Liberian drivers. For the import trade of peanuts and pepper, trucks are allowed to cross over into Liberia from Guinea and Cote d’Ivoire. The cars change their license plates at the border and in Liberia they have to be registered with the Federation of Transport Unions for Liberia. The Union charges the following fees for every trip that vehicles make to Red Light:

10-12 Tires & Trailers: LD 1,000
6 Tires: LD 700
Mini-bus: LD 500
Yellow Taxis: LD 10 to 20

The Union also operates in the regional markets and charges similar tariffs there for each trip that drivers make to the regional markets. In return for these fees the union provides the following services to drivers and transportation companies:

Storage (LD 25-500 depending on the volume of bags and length of time)
Parking & Security (LD 100 night per truck)
Arbitration and some assistance in Accident related matters
Advocate for trucks on legal matters

In terms of market activity and demand for transportation, the majority of drivers reported that compared to last year there is growing demand for their services. However, there is still competition among drivers for customers, particularly on market days and this pushes prices down. Many of the drivers also noted that they had expanded the number of routes they covered over the last two to three years. Table 4 details the average costs to transport a single

TABLE 4: TRANSPORTATION COSTS FOR LOCAL MARKETS & RED LIGHT (Liberty)

	Bong		Grand Basso		Margibi		Montserrado	
	Local	Red Light	Local	Red Light	Local	Red Light	Local	Red Light
50 kg peanuts	37.5	75	50	150	40	87.5		27.5
50 kg pepper	32.5	75	50	112.5	45	62.5		27.5

50 kg bag of peanuts or peppers from a community to a local market and the fees to transport from the local markets to Red Light market in Monrovia. The price data is from drivers, communities and drivers. What was noticeable in this price survey is that the prices are not necessarily reflective of the total number of kilometers traveled, but likely is more closely related to road conditions and perhaps competition among drivers. For example in Bong country communities pay 33 LD to transport a bag of pepper to a local market, where as to take a bag to Red Light costs LD 75. Thus communities' cost of transportation is higher to local markets relative to traveling to Red Light in terms of the distance.

Traders

Approximately 30 traders were interviewed across the four counties in the following markets St. Johns, Salala, Harbel and Red Light, as well as at the central markets in Buchanan and Kakata. For the purposes of the research, traders were defined as market actors who purchased produce either directly from farmers and/or via agents in order to sell the produce to retailers who then sell to the final consumer. In reality we found that it was difficult to make clear distinctions between traders, retailers and farmers, since all of these actors sometimes sell to the final consumer. However, the larger a trader the more likely they are to specialize and sell only to retailers. As illustrated in the hot pepper and peanut subsector maps, Figures 4 & 5, we were able to make some distinctions between traders based on the amount of working capital they invested in their business.

Another distinction was based on traders' specialization usually in either fresh or dry goods and the markets from which they buy. Fresh traders, typically work in the Liberian market, buying fresh peppers from farmers and agents. If these traders work in other crops in addition to pepper it tends to be other horticulture crops, but this does not include fresh peanuts. Our research found that fresh Liberian peanuts are still very rare on the Liberian market, so there is insufficient supply to attract specialized traders. Rather they are sold either directly by farmers or by generalist traders who buy whatever goods are available in rural markets for resale in Monrovia. Dry goods traders specialize in dried peppers and/or dry peanuts. These traders travel to Guinea, Cote d'Ivoire and Mali to purchase their goods.

The amount of working capital a trader could invest in the business is important, since it influences the traders' buying power and ultimately profitability. Traders with 15,000 LD or more available to make longer terms investments of a month or more can establish forward buying relationships with farmers. Typically these traders will advance cash or other goods to farmers, including both consumer goods and productive inputs such as fertilizer, a rented water pump, etc., in order to secure a buying agreement at harvest time. At the time of the harvest the trader will subtract an agreed upon price for the advance from the price paid for part or all of a farmer's harvest. Currently there is considerable competition for farmers' harvests, particularly if they will have 20 or more bags available for sale. As a result traders compete with one another to establish buying relationships with these farmers, and the traders we talked with noted they had lost out to other traders who could offer the farmers better deals. Most of these larger farmers tend to cluster in the communities and counties surrounding Monrovia, so as a result traders who can secure buying agreements from these larger farmers have lower operating costs. These traders spend less time and resources going from village to village to find product to buy,

and they do not have to travel to markets far from Monrovia. In contrast the traders with far less working capital to invest must travel much further to find sufficient supplies for sale. They may also have to travel from village to village consolidating ERA buckets of pepper into bags to bring back to Monrovia. This increases their costs considerably. For example one trader we met had 5,000 LD which she invested in buying goods weekly, in addition she set aside another 2,500 LD to cover her weekly costs in terms of transportation, food, etc.

Input Suppliers

Input Supply is still somewhat limited throughout the country, with all of the largest suppliers based in Monrovia. The only exception is Sethi Brothers, which recently opened an outlet in Kakata in Margibi country. Some smaller scale retailers are engaged in selling pesticides. They buy them in Monrovia and break the packages down and sell them in smaller quantities at local markets. Tools are also available in markets outside Monrovia, either carried out by traders to the markets or produced by blacksmiths at the village level. Appendix 8 lists the prices for the different inputs we identified and their availability in the different counties.

Description of the Two Subsectors

Hot Pepper

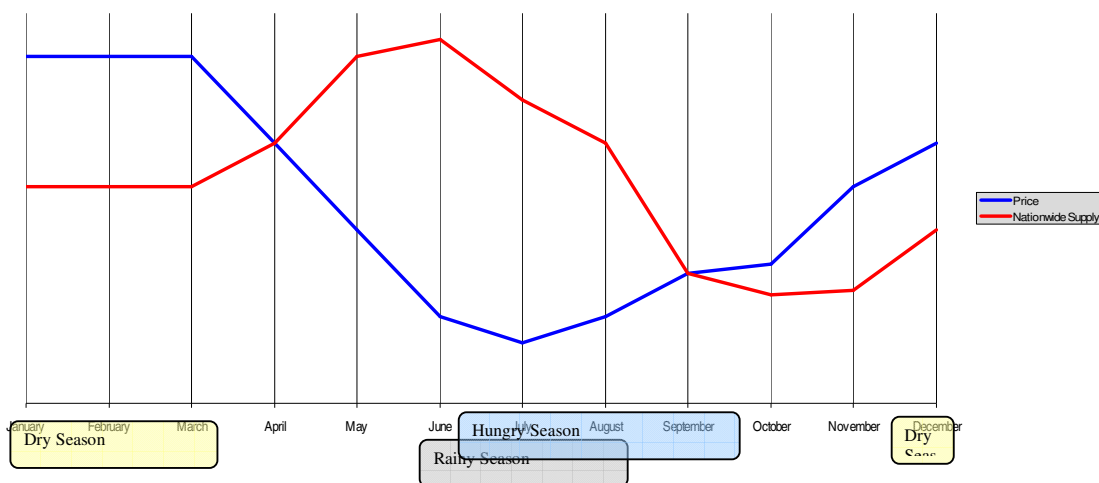
Colloquially known as Hot Peppers, the peppers cultivated in Liberia are of the *Capsicum frutescens* or *chinense* species, both of which are found in West Africa and known for their fiery taste. Many of the varieties found in the region were introduced by repatriating slaves in the last century. Hot pepper is a key ingredient in Liberian cuisine and many Liberians consume it daily.

Hot Pepper was selected as a promising subsector for further study for a number of reasons. As indicated in Appendix 4, it offered the highest profitability of all the subsectors we examined, with a potential Return on Investment on a .3 Ha lot of over 300%. Average start up costs to cultivate hot pepper were average to low, relative to the other subsectors we examined allowing communities to easily enter into hot pepper production. Other advantages of hot pepper are its short cultivation cycle of three to four months and its high, year round demand. There is significant volatility of the supply of Liberian fresh, hot pepper during the year and as a result the price is similarly volatile ranging from 4,000 LD per bag to as little as 900-800 LD a bag in Monrovia. Figure 4 illustrates the supply and price trends for fresh, hot pepper in the Liberian market over the course of a year.



Women harvesting hot peppers to take to the market. Margibi County

FIGURE 4: HOT PEPPER, NATIONAL SUPPLY VS PRICE⁴



During the dry season from January till March and the rainy season from late June through early October fresh and dried pepper is imported from Guinea and Cote d’Ivoire to fill the gap. Dried hot pepper is largely sold in January through March, when pepper production is similarly low in Guinea and Cote d’Ivoire due to the dry season. The rainy season affects production in Guinea and Cote d’Ivoire less than Liberia, so the two countries can supply some fresh hot pepper earlier at the conclusion of the rainy season. However, given the poor transportation infrastructure, the high costs of fuel in Liberia and that fresh pepper is very perishable, the fresh pepper is only imported where the price spikes at 3,800 LD or greater per bag. Averages of the prices we recorded by location, market actor and season are included in Appendix 9.

Liberian consumers value freshness, taste and appearance in their peppers and are willing to pay a premium for these qualities, particularly in urban markets, giving the Liberian pepper an advantage over imported peppers. There are no cold storage facilities by which to import peppers from other countries and locally Liberian-grown pepper is considered to be hotter than all of the imported varieties, with the exception of dried cayenne which comes from Cote d’Ivoire. Given the limited number of markets and farms visited, we did not attempt to size total production or sales levels in the subsector, since we did not have meaningful information on which to make an estimate, and this information was not available from other sources.

Figure 5 illustrates the subsector map for hot pepper. The left hand column is the production and marketing process from the initial input supply through to sale to the final consumer. Across the top are the two distinct consumer groups that consume pepper, and on the bottom are divisions for the four market channels in the subsector: Liberian fresh, Liberian dried, Imported fresh & Imported dried. For the import channels, there is no information on the production process and/or distribution of activities until the level of the wholesaler since this takes place outside of the country and could not be studied. Liberian traders travel to the three pepper producing countries: Cote d’Ivoire, Guinea and Mali. There they work with agents or by themselves buying up all the fresh



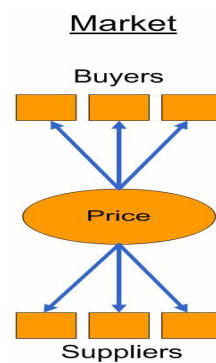
Dried and fresh Liberian hot pepper for sale in Harbel market.

⁴ This graph is for illustrative purposes, based on interviews on supply and price trends with actors throughout the hot pepper subsector. Given how dispersed the production and trade of fresh hot pepper is throughout the country, we were unable to estimate the total size of the market based on the number of locations visited.

or dried pepper they can access. If needed they will stay in one of the countries for an extended period of several weeks accumulating the pepper through small quantity purchases either to keep the price from increasing or when there are shortages. The large traders then bring it back to Monrovia to warehouses at Red Light. The traders hold the pepper till prices rise and they then sell it. Additionally there are a large number of smaller scale traders who will buy a couple of bags at a time and bring it back over the border for sale direct to consumers or to retailers in Monrovia and other markets. For the first two Liberian channels most of the production flows through the fresh channel. All along the two channels different actors will engage in drying as a last resort when the pepper starts to spoil or if prices drop too low. Although in our interviews we did not identify any actors that engaged in drying and holding as a strategy—most prefer to sell the pepper immediately if they can. This seems to be more of a cash flow issue, than of profitability, since in the dry season the dried Liberian pepper can sell for up to 2,000 LD a bag.

Fresh hot pepper is produced by individual farmers. Most source their seeds from their own seed stock or from other farmers in their community or neighboring villages. There are master farmers in the communities who act as seed suppliers. Seeds are sold by the bottle or can be bartered for assistance in land clearing and cultivation. Some community members will work with the Master Farmers both to gain knowledge of cultivation practices and to share a small percentage of their yield and to acquire seeds. Some seeds are imported from Spain and other countries and we found these for sale in Red Light; however, we did not find any farmers using the imported seeds. There are also some small scale seed suppliers in Red Light who process and sell local seeds. High and low prices for all of the inputs used in cultivation by county are included in Appendix 8. Pepper is widely grown in the CPBD communities on a small scale, often by women who use it to earn some cash. These small scale plots typically produce three to four 50 kg bags per season. These small scale farmers often sell their pepper within village, or carry it to local markets to sell throughout they season as they harvest. We also found in several of the communities that there are groups of farmers, mostly men, but also some women who are working to grow on a larger scale, producing usually 20 bags and greater per season. These farmers are split between those who travel to markets to sell there peppers or those who pre-arranged to sell their produce to traders and/or agents at the farmgate. As discussed in the research findings, traders and sometimes agents will offer inputs, cash and other incentives upfront to pepper and other farmers in order to secure agreements to buy at harvest time.

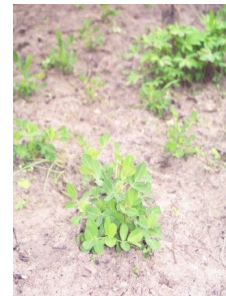
There are large numbers of traders and agents competing to secure produce from the farmers, particularly those farmers closest to larger, urban markets such as Monrovia. As discussed in the research section these traders' power and influence is based on the amount of capital they have available both to invest in farmers and to buy larger quantities of produce. However in both the Liberian market channels and the other two import channels there is a high level of fragmentation. None of the buyers or suppliers operating in the four market channels have a significant market share and therefore they have relatively little influence over each other. Price is the main determination of all relationships. In the value chain framework this type of governance structure where there is little to no formal cooperation among participants and business transactions are primarily at “arms-length” is know as Market-Based. Appendix 11 illustrates the different types of governance structures found in value chains and their characteristics. Often horticulture chains have what are know as Directed governance structures in which a group of firms, often traders and/or agents determine the rules of trade and the prices that small farmers receive. However, in Liberia this currently does not appear to be the case for hot pepper, particularly for the larger farmers who have greater bargaining power. This may be due in part to the shortages of fresh hot pepper on the market during and following the civil war.



There were and are still relatively few farmers growing significant amounts of pepper versus the number of traders and retailers competing to buy their produce, particularly in the non-peak season. As a result the farmers are not price takers, but rather have options in terms of who they will sell to based on the price and other incentives. There are benefits and costs to the current Market-Based governance structure. Currently farmers seem to be getting a better price in this structure, but this will likely not continue if the quantities of pepper supplied continue to grow, particularly in the peak season weakening farmers bargaining power. As the supply continues to grow, the competition among traders will subside and this may result in a more directed governance structure arising. Another disadvantage is that given the low levels of coordination between the market actors, there is a large amount of waste during the peak season of product and increases in traders and farmers costs since they do not coordinate their trade. There are also missed opportunities in that Liberian farmers may be able to supply dried pepper to traders who currently go to Guinea and Cote d'Ivoire to purchase dried pepper at great expense and increasing risk given the unrest in both those countries.

Peanuts

The peanut subsector is far less developed than hot pepper, with production just restarting. Historically it seems that many communities used to grow peanuts, and the CPBD staff and local staff pushed hard for the choice of peanuts as a subsector for study, insisting it is highly profitable, despite the findings in the initial subsector selection workshop which found it had among the lowest returns of the subsector studies at 104%. A revision of the net income and ROI calculations at the end of the assessment found the actual returns to be even lower, with a ROI ranging between 74% to -71% depending on the time of year when the peanuts are sold and if labor costs are included. This would indicate that peanuts are not very desirable as a crop to promote via the



Peanut plant in Bong.

program. It is unclear why the CPBD staff, local partners and the communities are so interested in growing peanuts, and it would be worthwhile to explore this with them some more in case a mistake has been made in calculating the returns or if there are other intangible factors that should be considered. However, a mistake in the ROI calculations seems unlikely as the main driver of the low returns for peanuts is the low yields that the crop provides in the counties where we observed peanut production, namely Margibi and lower Bong. One possibility is that since imported peanuts are so widely sold in the country and for such high prices, in the non-peak season dry imported peanuts sell for up to 7,000 LD per bag, that the CPBD partners and staff instinctively felt that peanuts had to be profitable. This is a good illustration as to why when choosing subsectors it is so important to use empirical data, since sometimes our instincts can lead up astray. This finding also coincides with outside research which confirms that while peanuts can be grown in Liberia, the crop is less productive than in Senegal and Guinea due to climatic conditions.

Given the low potential for peanuts we will not dwell on the subsector analysis conducted for the crop, particularly since our findings were so sparse in terms of fresh production in Liberia.

Currently most of the farmers growing peanuts are growing a variety known as Cro Cro in the local language and we also found Cro Cro seeds available for sale in some of the local market places. Other varieties available in the country are known in the local language as Red or Citizen, white and baka. Samples of the different varieties sold in the markets were left with Mercy Corps Liberia for species identification. Most farmers are interesting in cultivating the red peanuts, since they are both more productive and the red peanuts are popular among Liberians for consumption. Reportedly the red is sweeter in taste and has a higher oil content, making the

red more popular among consumers as well. There are no red seeds available at the markets, so farmers are cultivating red dried peanuts that were brought in from Guinea and Cote d'Ivoire for consumptions. The peanuts are then sold boiled for 850 up to 3,200 per bag, with the average price around 1,600.

Similar to hot pepper, the peanut industry is very fragmented, particularly on the import side with dozens if not hundreds of Liberians traveling over the borders with Guinea and Cote d'Ivoire to buy peanuts. There are two cooperatives of larger traders, who are all women and based in Red Light market. Many of these women have been importing dried and salted peanuts from Guinea and Cote d'Ivoire for 20 years or more, which also indicates that these are trade flows that operated before the Liberian Civil War. As a result the governance structure for the peanut value chains is Market-based, although perhaps a little more directed, particularly in terms of wholesale markets for the imported peanuts given the large traders in Monrovia.

Figure 5: Hot Pepper Subsector Map

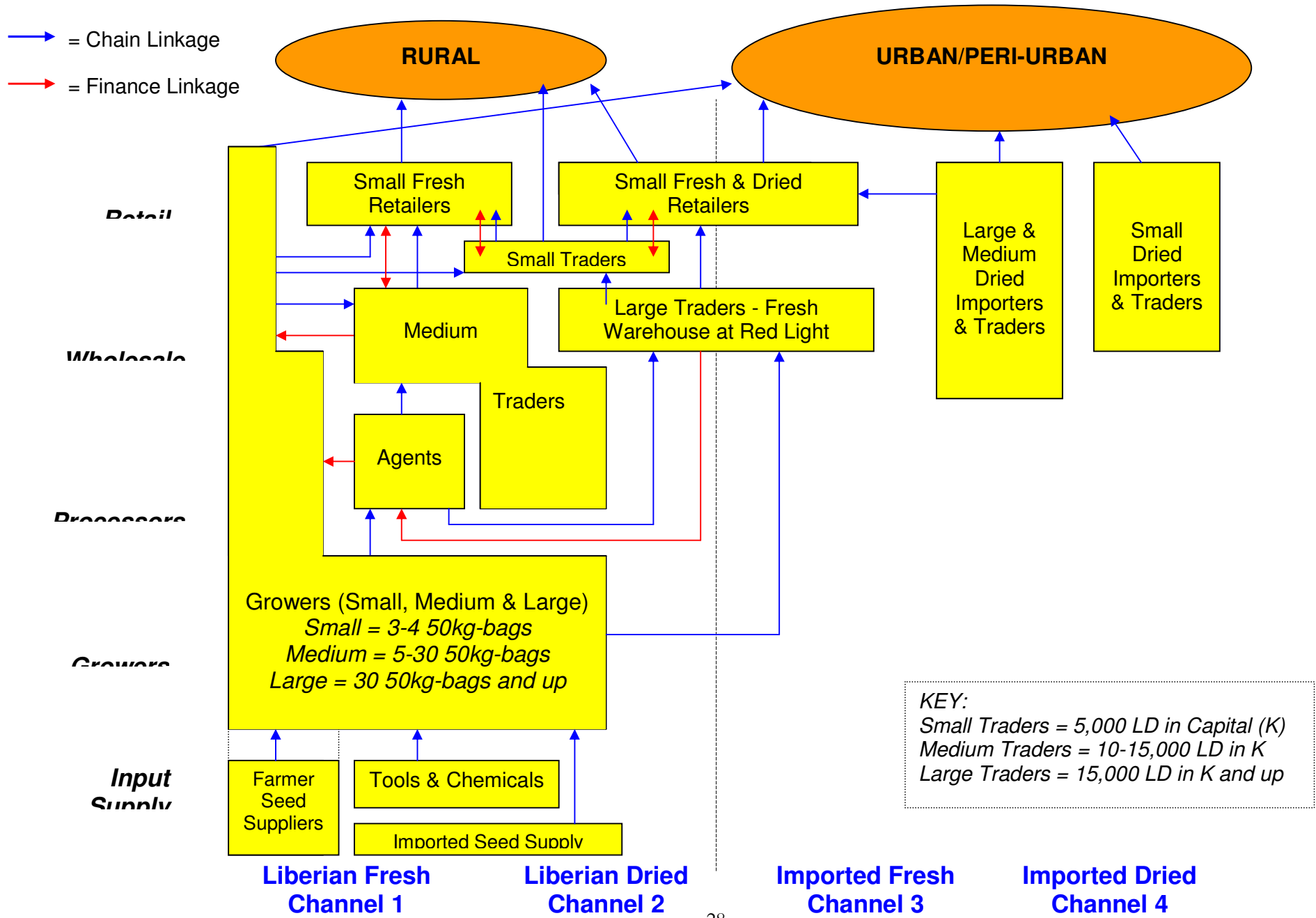
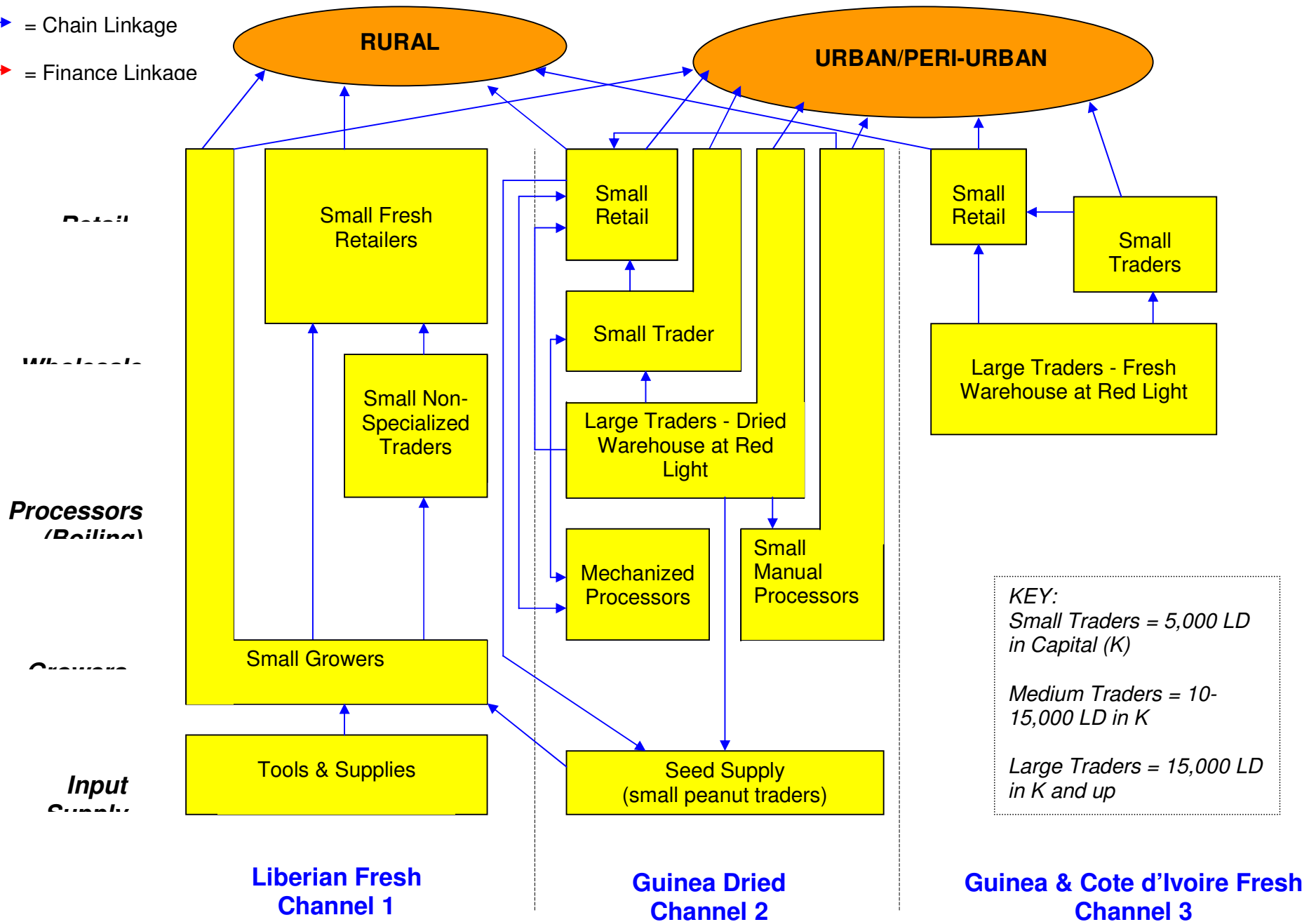


Figure 6: Peanut Subsector Map

→ = Chain Linkage
→ = Finance Linkage



Identification of Constraints in the Two Subsectors

One advantage of the choice of two horticulture subsectors for the study is that there were many overlaps between the two subsectors, in terms of their value chains, the market actors and the supporting services required, e.g. tools, seeds, financing, etc. This made it possible for us to look at the two subsectors simultaneously, which would not have been possible in other subsectors. Given all the overlaps, the constraints for both subsectors are presented together here, with a notation at the end for the few constraints specific to each subsector.

A challenge in identifying and isolating constraints in a market environment such as Liberia is in identifying the most pressing constraints and then determining which constraints can actually be addressed in terms of a project's resources and timeline. Frankly there are so many constraints in a reconstruction environment that even identifying all of them is daunting and provides limited utility. Therefore, rather than trying to list all of the constraints in these two subsectors, the goal of this exercise is to highlight the most pressing constraints to promoting the engagement of the CPBD communities in these two subsectors. A second criteria, is to identify constraints that may be within the capability and competencies of organizations such as AED, AGHA and MC to address or to partner with another organization to work on. If the constraints identified are so great as to prevent success in the subsector if they are not addressed and these constraints are not with the capabilities of the project to address, then this would indicate that the program may have greater success in another subsector. A summary of the constraints identified in hot peppers and peanuts is as follows:

- ***Pests Dramatically Reduce Yields***

Universally, all of the farmers cited all manner of pests (fungus, insects, and small animals) as a constraint to their production. This can dramatically affect their yields from season to season and a large scale farmer in pepper one year can fall back into subsistence production the following year due to pests. It also causes stress all along the value chain for fresh hot peppers since traders cannot find reliable supply sources.

- ***Lack of Certainty Around Land Access***

Land access is restricted in many of the communities in which CPBD operates, since the communities are ringed by land private land holdings which are used for rubber and other large scale production. There is a history of the communities working with the private land owners to use this land for small-scale cultivation, but there are many risks involved for farmers given lack of clarity around land access, use of the cultivation's proceeds etc. We found instances where there were misunderstandings or lack of formalized agreements and the farmers lost access to their crops or at worst were arrested. This also acts as an disincentive for farmers to increase their production.



- ***Lack of Financing for Inputs***

To engage successfully in larger scale production farmers need access to inputs such as fertilizer and irrigation. However, most farmers do not have the upfront financing needed and while there is some credit available from traders, they are disinclined to invest in start up ventures preferring to work with farmers already producing on a larger scale.

Lack of Access to Quality Seeds

This problem is particularly acute for peanuts. Currently there is very limited availability of what is known in Liberia as the Red variety or Citizen seeds. Farmers are buying dry peanuts meant for consumption purposes from Guinea and selectively sowing and harvesting these peanuts to replenish their seed stock. Quality seeds is also somewhat of an issue for hot pepper. Some seeds are imported, but most are produced at the village level by Master Farmers who then sell them to the community or trade them for labor. These Master Farmers need to improve upon their varieties and seed production techniques.

▪ *Reduced Bargaining Power for Small-Scale Producers*

Perhaps in contrast to the popular conception, we found many farmers that were very savvy in terms of marketing their products and who had a good overall sense of the prices in different markets. However, most of these farmers are engaged in larger scale production of 30 bags or more of peppers for example per season. Smaller scale growers selling ten bags or less a season are at more of a disadvantage, since they tend to sell their peppers in small quantities by the bucket or by the half bag. As noted elsewhere in the study our survey of pricing information was not conclusive, but there seems to be consensus across market actors that these small scale producers earned the lowest prices for their produce.

For hot peppers in particular we identified the following additional constraints:

▪ *Market Saturation During Peak Production Season*

With a return of peace to Liberia, many farmers are re-establishing their farms and they are eager to engage in cash crops. Given the recognized demand for pepper in Liberia as a high value crop that is consumed daily by most families, many farmers have moved into fresh pepper production. As a result the price for hot, fresh pepper (as for most other good products) has fallen, particularly at the height of the harvest, when prices can drop as low as 700 LD per bag in urban markets. Currently the majority of hot pepper production in Liberia is rain fed, so all of the pepper plants peak together. Nevertheless vis-à-vis other crops, hot, fresh pepper still generates good returns. Fresh peppers are in demand in Liberia year round, given the desire by Liberian consumers to spice their foods and to make fresh pepper sauce. In Monrovia during the winter months fresh, hot pepper prices can rise up to 3,000 LD to 3,500 LD per 50 kg bag, and dried pepper substitutes from Guinea and Cote d'Ivoire can generate as much as 6,000 to 7,000 LD per bag.

▪ *Waste & Poor Processing*

Given the market saturation issues above, a related constraint is the waste of hot pepper during the peak production season. Communities and traders focus on the sale of fresh peppers, only opting to dry peppers when they start to spoil. As a result a large volume of peppers are wasted.

For peanuts we did not identify any constraints that were specific just to peanuts. Peanut production is just restarting in Liberia and the subsector is so nascent that we were unable to have a great level of depth in our analysis. As noted above the chief constraint for peanuts currently is the lack of seeds.

Another more general constraint which applies to the CPBD program as a whole is the knowledge and abilities of the MC and AGHA staff. Both organizations have several experienced agronomists on staff. However, given the war and the lack of opportunities to interact with the broader agricultural community their technical skills could be upgraded. During the assessment there were often disagreements among staff as to the optimal number of growing

seasons for different types of seeds, cultivation conditions and growing seasons. This is a challenge for the program and a reflection of the greater need for technical upgrading of skills, knowledge and resources to support agricultural production in the country. In the short term staff could use an upgrade in their knowledge, perhaps via mentoring from an experienced agronomist. In the long term MC and other organizations may be better served to look at how to build the capacity of national extension networks. There will also be increasing opportunities to work with input suppliers who will have a financial incentive to provide some of this information and services.

CPBD Programming Parameters for Work in the Hot Pepper and Peanut Subsectors

In considering potential opportunities and solutions for the CPBD program, we need to keep the program's operating parameters in mind, so as to ensure that the solutions identified are practical. These parameters are as follows:

1. CPBD is ending in approximately one year.
2. As of July 2006 there are approximately two planting seasons and two or more harvesting periods left for both peanuts and pepper in the next year.
3. CPBD is now working in 50 new communities, in addition to the 98 it worked in previously. The plan is to expand into an additional 50 communities in the next year in order to reach the overall program target of 200 communities.
4. This is an ambitious expansion plan, based on operational progress to date.
5. The program has \$1,000 per agriculture community to invest.
6. Staffing is tight across the program and will be reduced in the final year as program funding winds down. This will constrict how often and for how long the program can work in and monitor the communities.
7. The program has the opportunities to pursue complementary funding from other sources, which could allow it to add new program components—perhaps based on constraints identified in the subsector analysis that could not be addressed in CPBD.
8. The entry of Mittal Steel and other investors in the country will provide new markets for the horticulture subsectors studied here as well as complementary subsectors.

Some of these parameters conflict with the underlying philosophy of market-development programs, namely the promotion of commercial solutions. Commercial solutions are generally based on fee-for-service arrangements where there is strong supply and demand and/or material incentives. This is desirable, since upon a program's completion there is a far greater probability of the solution continuing, since there are clear economic incentives. However, these types of solutions need time to take root, particularly in transition environments. Additionally CPBD does not have the full programming flexibility needed to promote all of the potential commercial solutions identified. One particularly challenging constraint is that in the prior four years of the program, the current CPBD communities have had to invest little to none of their own nonlabor-based resources in the program. As noted in parameter No. 5 CPBD made the investments required by the communities to move into new activities. Given the changing operating environment and the desire to move into longer term development, the recommendation is that where ever possible the program try to move into the direction of commercial solutions, and wherever possible look for funding sources in the future that will allow the flexibility needed.

Identification of Opportunities and Solutions

These tables lay out potential opportunities and solutions for the constraints identified in the market assessments for hot pepper and peanuts. The opportunities and solutions identified are based on local conditions and the desire to move the CPBD program toward more commercial solutions.

TABLE 5: OPPORTUNITIES & SOLUTIONS IN HOT PEPPER

Constraints	Opportunities	Solutions
Pests drastically reduce yield	Bring in horticulture expert from the FAO or OSU to study common local pests & diseases for pepper and other horticulture, and recommend appropriate pest management techniques ⁵	<p>Introduce identified pest management techniques via community agriculture trainings</p> <p>Future Opportunity : Work with input suppliers to develop regional supply network of the identified pesticides, complemented by field trainings & radio shows on appropriate usage</p>
Market saturation during peak season	Promote off season production, when prices increase 100% to 300%	<p>Introduce communities to the potential in off-season production, and use CPBD grants for financing requirements</p> <p>Assist communities to develop action plans & promote implementation of the plans via follow up visits throughout the year</p> <p>Use community grants to establish irrigation service providers who rent out irrigation systems during the dry season</p> <p>Future Opportunities: Facilitate access to irrigation through shared irrigation systems and/or water pumps partially financed by the communities</p> <p>Further investigation on the potential to introduce low cost, drip irrigation technologies</p>
Lack of certainty around land access	Promote land usage agreements with private landholders & rubber plantations	<p>Speak with community leaders and promote their more active involvement in assisting community members to realize land use agreements with private landowners</p> <p>Future Opportunity Train community members to draft legally recognized usage agreements for land owners and small holders</p> <p>This could be done on a fee for service basis, encouraging community members to specialize in this</p> <p>Build demand for the service through a marketing campaign in the communities and among land owners, plantations, etc.</p>

⁵ Mercy Corps has an agreement with Oregon State University, allowing the program to access agricultural experts from the University for voluntary consultancies. MC covers their travel and lodging costs.

Lack of financing for irrigation and fertilizer prevents many smallholders from increasing production in the off season	Strengthen existing informal credit networks of susus and trade credit that are available for farming	Future Opportunity Initiate agreement with the ARC's microfinance institution, Liberty, to provide credit to traders, interested in extending trade credit for pepper to farmers OR/AND Work with AGHA to promote its ambition to start a rural credit program OR/AND Provide training to susus interested in lending to nonmembers in agriculture Susus could be linked to a bank, allowing them to onlend for the bank for a fee or retaining a percent of interest paid
Waste and poor storability of dried Liberian	Promote practice of drying fresh pepper when prices bottom out during the peak season and sell the dried pepper during times when fresh pepper is scarce on the market Introduce new drying and storage techniques to increase production and availability of Liberian dried	Work with communities to plan their production strategy, including when they should dry & hold Use CPBD grant to work with communities to build storage houses, where communities can store dried peppers and other goods to sell in the non-peak season Conduct further investigation on drying techniques and technology appropriate to Liberian Peppers
Lack of access to quality seeds	Promote better practices in seed production for hot pepper Forge partnership with the FAO or other groups experienced in horticulture to look at means by which to improve upon local pepper varieties	Work with communities to build upon their collective knowledge of seed production OR work with master farmers who currently act as seed suppliers Further research is needed on what else can be done to improve upon the productivity of hot pepper production, including the seed stock, this may be best promoted via a partnership with an organization specialized in agriculture
Reduced bargaining power for small-scale producers	Promote collective selling Increase transparency around current prices for pepper	Work with smaller producers to help them coordinate their production and harvests, so that they may easily aggregate their production and sell it collectively Link smaller producers to a larger farmer in the community or to an agent who is willing to pay a higher price for an aggregated product Promote price transparency via weekly or daily price reports on community radio stations

The Liberian value chains for peanuts are still nascent as production of fresh peanuts has still not recovered following the end of the civil war. Our market assessment determined that there is demand in local markets for Liberian peanuts and that many communities wish to go back into peanut production. However, given how the low levels of fresh peanuts currently sold on the market there is not a very developed fresh peanut value chain for study. As a result the main opportunities are around encouraging production, and solutions to do this are provide in Table 6. More study is then needed to determine the opportunities and the total demand in the market. Additionally, peanuts share many of the same constraints as hot peppers, namely:

- Pests Dramatically Reduce Yields
- Lack of Certainty Around Land Access
- Lack of Financing for Inputs

- Reduced Bargaining Power for Small-Scale Producers

The solutions outlined for hot pepper in regards to these constraints are also applicable to peanuts.

TABLE 6: OPPORTUNITIES & SOLUTIONS IN PEANUTS

Constraints	Opportunities	Solutions
Unavailability of seeds at the market or community level	Communities can produce peanut seed which in high demand, while using some of the seed to increase their peanut production, providing two sources of income	Facilitate access to red peanut seeds from Guinea or Lofa to increase local production Research whether local seed production or annual sourcing of seeds from an outside source is a better option in terms of seed productivity. If local seed production is appropriate there is the potential to use the CPBD grant to assist communities in establishing peanut seed banks Future Opportunity Assess demand for and profitability of peanut seed production and marketing vs. fresh vs. roasted red peanuts Assist communities to develop packing and organized selling of seeds in local markets

Hot Pepper: Program Strategy

In hot pepper the CPBD strategy is to work with communities on off-season production of fresh peppers and to assist communities in drying hot peppers during the peak season for sale in the off season. This is based on the market assessment which found that in Liberia in the peak season, there is an oversupply of fresh pepper versus demand causing prices to drop. As illustrated in Appendix 7, production and sale of fresh pepper in the peak season results in a net loss to a small scale farmer when labor costs are included, where as nonpeak production generates a 56% ROI and \$56. This figure improves when labor costs are not included to a net income of \$297 and a ROI of 250%. To realize this strategy the CPBD program and its partners will need to hold discussions with the communities. This will provide the program the opportunity to share the results of the market research with the communities and to solicit their feedback. The program can then work with those communities interested in the strategy to plan a seasonal activity calendar, with CPBD support and community activities coinciding with the calendar. July and August are an ideal time to hold these discussions and to assist communities in developing action plans as during the rainy season farmers are less active in the fields. Figure 4 provides an illustration of the national supply and price trends for hot pepper and indicates where are the opportunities for nonpeak production and sale of dried peppers. Currently there are two periods when pepper prices spike: the dry season in January through early March and the rainy season between late July through early October. More work is needed with the CPBD program staff to determine the seasonal calendars for these two seasons, based on the county and soil conditions. Table 7 provides some approximations developed on the last day of the consultancy for the first period. Table 8 outlines the traditional seasonal calendar that most communities currently follow, which would provide for drying excess production in May, June and July. The activity planner developed by Mary Morgan for cow peas and re-attached here in Appendix 7 is a good resource to start this process, and could be useful with some adaptation. Additionally the consultant will provide a series of workbooks developed by the FAO on

assisting farmers with farm management that could be adapted as another resource, see Appendix 8 for the resource titles.

TABLE 7: NON-PEAK/SEMI-LOWLAND PLANTING CALENDAR – PEPPER

Activities	Timeframe
Site Selection	Jul-Aug
Nursery Preparation	Aug-Sept
Land Clearing/Brushing	Aug-Sept
Land Preparation	Sept-Oct
Planting	Oct-Nov
Maintenance	Nov-May
Harvesting/Processing	Jan-Mar
Marketing	All year

TABLE 8: PEAK SEASON UPLAND PLANTING CALENDAR – PEPPER

Activities	Timeframe
Nursery Preparation	February
Land Preparation	March
Transplanting	April
Harvesting for Fresh	May-early July Late October-December

Implementation of some of the other potential activities identified in the section on opportunities and solutions is dependent on program capacity and resources. The most pressing challenge of pest management should be addressed as soon as possible.

In using the grant funds set aside for the program, the CPBD staff and partners should also take a long term view, anticipating all of the potential activities over the course of the year and the two potential production seasons.

Peanuts: Program Strategy

In peanuts, the CPBD program strategy is to assist communities that wish to engage in peanuts to increase their production. As indicated in the subsector analysis, the fresh peanut subsector is relatively nascent in Liberia currently, since the bulk of production ceased during the civil war. Initially the program needs to identify sources of quality red seeds and to determine whether communities can then reproduce the seeds or if it is more efficient in terms of crop productivity to produce new seeds each season. If seed replication is possible at the community level then there may be opportunities at the community level to engage in the production and marketing of peanut seeds as well as the fresh peanuts. Discussions with the FAO and the Ministry of Agriculture should help to determine this. Similar to the implementation planning for hot peppers, the CPBD staff and partners should discuss the market research findings with those communities currently working with peanuts and in new communities who indicate an interest in peanut production. If it is determined that peanut seeds can not be replicated at the community level then the program needs to work with communities to identify savings or credit mechanisms that will allow them to produce seeds with each new season. If seed replication is possible then models for seed banks and marketing can be explored.

Similar with hot pepper CPBD should engage the communities in activity planning for whatever activities are identified for peanuts.

Cow Peas: Program Strategy

As discussed in the cow peas lessons learned there were some challenges implementing the strategy developed by Mary Morgan, the CPBD staff and partners. Farmers that engaged in cow peas tended to do so on an individual rather than a group basis and this extended into their marketing strategies. Additionally, the communities need to be more active in farm management planning both for production and marketing, as well as related constraints that may arise, such as pest management.

In revisiting the cow peas strategy and action planning two factors should be considered. First the market for cow peas and the level of cow pea production in the communities. Much of the demand for cow peas came from IDPs from the North of the country, who were living in and around Monrovia. With the recent resettlements these IDPs have gone back to Lofa and other counties and as a result demand patterns in the markets around Monrovia may have shifted. This may be quickly determined via interviews with some of the larger traders in cow peas at Red Light. Second, it would be worthwhile to examine how many communities opted to engage in commercial production of cow peas and are succeeding. The scale in terms of numbers of communities working in the subsector will help to determine the most appropriate actions.

Initially, the CPBD team should revisit the seasonal calendar for cow peas, since this will indicate when the team needs to engage in different activities. The other finding from this assessment is that more time needs to be invested in assisting communities to market their cow peas. A brainstorming with the CPBD team and partners to strengthen the marketing aspect came up with the following ideas:

- Increase market literacy through community field trips to urban markets (where cowpeas are sold)
- Encourage community to re-visit cooperation in selling
- Link communities with traders to discuss selling

Conclusion

The peace and new government in Liberia bring opportunities for Liberians to start taking a longer term view towards their livelihoods. This has awakened a desire in the CPBD communities to focus more and more on increasing their incomes through agriculture and other economic activities. In its support of its partner communities, Mercy Corps and AGHA opted to use a market development approach, so as to assist communities in identifying profitable opportunities to engage in high value markets. The hot pepper subsector is particularly promising since it offers potential returns of up to 300%. Hot pepper is in demand year round and most of the CPBD communities already have some engagement in the subsector, which will enable the program to build upon this interest. The greatest opportunities are in off-season production when prices are at the highest, as well as selling dry peppers in this period. Assisting communities to develop their capacity and the needed resources to follow a dry and hold strategy during the peak season could significantly increase their incomes. Additional research on the peanut subsectors indicates that at least for the counties in which CPBD currently operates, namely Montrrado, Grand Basso and Margibi, peanuts is not a very promising crop in terms of profitability. Rather than expending considerable resources on peanut production, the program would be better served in looking at other crops and activities. However, given the interest in peanuts some recommendations are made here in the event activities in the subsector are pursued.

In reflecting on the initiative last year for the CPBD program to engage in the cow pea subsector, the greatest challenges were consistency in communicating with the communities and in development of the resources needed to assist AGHA in implementing the strategy. This year these issues need to be addressed, and particular focus is needed to develop resources such as activity plans and meeting templates that farmers can use to organize their activities. Success in farm planning will assist communities to succeed in cow peas and any other crops they may choose to engage in.

Looking beyond CPBD to the next phase of programming there are opportunities to work with communities in other subsectors such as rubber and palm oil. Liberia already exports rubber and there is great potential to revive the historical export trade in palm oil. The low purchasing power among consumers in Liberia limits the opportunities in the domestic economy, so ultimately the greatest opportunities will lie in exports. Many of the CPBD communities are already planning or engaging in palm oil and rubber, through palm seed harvesting and processing, cultivating rubber trees on community land etc. The capacity planning in farm management and engagements in markets at the community level via CPBD this year will build communities' capacity to engage in these growth opportunities for the country. Given the high levels of fragmentation and market-based governance in the country's agricultural sectors, a value chain approach could be very useful in promoting opportunities for greater coordination and collaboration. This will also promote peace dividends in the country via economic ties and opportunities for inclusive growth.

Appendix 1: Scope of Work for BDS Consultant

Introduction

For the past 3 years, the CPBD program has worked with community groups in Liberia to develop economic projects. In 2005 Mercy Corps and AED conducted a market analysis of the cowpea subsector which showed great opportunity for income-generation: farmers' returns on a 50 kg bag of cowpeas could be 10 times more than what they currently get in the local market for a 50 kg bag of cassava, if they can grow cowpeas as a cash crop.

This year, CPBD will investigate another subsector supply chain with the potential to increase farmer income. Developing a second cash crop or market will increase the options available to communities, farmers' economic stability, and Liberia's overall food security. Potential areas of investigation may include peanuts, non-timber forest products, citrus fruits, and handicrafts. CPBD will use a sub-sector approach, incorporating community mobilization through farmers groups and linking farmers to input and output markets while providing on-farm technical assistance with trained community people.

Objectives

- a. A quick review of progress on the cowpea sector with recommendations for improvement and next steps. (1 day, field visits if possible and interviews with key participants)
- b. A review of the BDS strategy which was introduced in 2005 through market data collection, analysis, interpretation and results application training course with Mercy Corps and LNGO partners' staff. Review what was done, what is remembered, and incorporate the answers to 5 questions into new work plan for second market assessment.
- c. A training in market assessment to a mixed group of MC staff and LNGO partners (some of whom should have attended the May 2005 training) and preparation for the second market assessment to be conducted via this trip (3-4 days)
- d. A second market assessment of another promising sector, evaluating both demand and supply side constraints for the sector, and opportunities to address these constraints (at least 7 days for interviews in the field, if we can have 3 teams)
- e. A recommended second sector program strategy and implementation plan developed with MC and LNGO staff (1-2 days at the end of the trip to review findings and brainstorm on program design).

Activities

- a. Conduct 2 day workshop at beginning of consultancy to kick off new activities, review previous activities and training from 2005 and design strategy for 2006.
- b. Conduct a 3-day training course in market assessment and value chain analysis and design of second market assessment.
- c. Increase AGRHA ability to serve as local BDS providers to smallholder producers and entrepreneurs. Assess staff and partners BDS skills and performance, including client service delivery on core BDS skills, data collection, analysis, interpretation and application skills. Further develop skills in market research and client demand by working closely with local local staff and partners on assessment and providing additional training, as needed.
- d. Prepare Step-By-Step Guide for the development of a new sub-sector for use by the BDS Facilitators and Agriculture Extension Officers of AGRHA, via brainstorming sessions the last two days in the field.

Deliverables

- a. A comprehensive report
- b. A set of recommendations for a new sub-sector in Liberia.

Assumptions:

To ensure the best use of field time, the CPBD staff will collect as available all market data on the potential targeted sectors prior to the consultant's arrival. This may include doing some primary research and interviews with key informants to gather information to inform the assessment. The consultant will provide CPBD will some guidance on the types of information that they should collect.

The group participating in the analysis will include several individuals from the prior May 2005 training. These individuals will be asked to fill out a brief five question survey prior to the second training to help improve upon the first.

CPBD staff will provide electronic notes of interviews and other information they help to gather with the Consultant every two to three days. The note taking can be shared, but everyone will need to take notes and provide electronic versions—particularly given the amount of information that will be collected in a short time.

CPBD and key LNGO staff will reserve two days at the end of the consultancy for a brainstorming session on program design.

Timeline

3 Weeks (19 working days, including 4 days for preparation and report writing, excluding Saturdays and Sundays) in May - June, 2006.

Appendix 2: Travel and Meeting Itinerary

Saturday, May 13th – Sunday, May 14th

Travel from Washington, DC to Monrovia via Brussels

Monday, May 15th

Unity Day in Liberia

Meet with Tricia Matthews, Deputy Country Director & Tom Ewert, Country Director to discuss trip objectives and logistics

Meet with Bakayoko Amadou, General Program Officer, Mercy Corps

Tuesday, May 16th

Travel to Buchanan, Grand Basso County

Attend coordination meeting for Mercy Corps (MC) & its LNGO partners Action for Greater Harvest (AGHA) and National Adult Education and Literacy (NAEL)

Hold half day workshop for MC & LNGO partners on:

- Objectives for the consultancy
- Performance of the Cow Pea project to date
- Potential sectors for a second market assessment

Wednesday, May 17th

Work with MC, AGHA, & NAEL to conduct analysis of potential subsectors for a market assessment

Rank potential subsectors, resulting in the selection of peanuts & peppers for the market research

Return to Monrovia

Thursday, May 18th

Preparation for Training and Market Research

Visit to the Food and Agriculture Organization (FAO)

Friday, May 19th

Travel to Buchanan

Hold training for market research team, comprising MC, NAEL and AGHA staff on concepts in:

- Entrepreneurship
- Market Development

Conduct first mapping of peanuts and hot pepper subsectors

Design research plan

Saturday, May 20th

Research team travels to St. John's Market, Frank Diggs Town, Grand Basso County

Test questionnaires for market research interviewing traders, transformers, retailers and farmers

Discuss day's findings with research team

Sunday, May 21st

Design & print questionnaires for market research

Monday, May 22nd

Finalize logistics for the research

Research Team travels to Wrakleen Town, Grand Basso County

Interview community on activities in peanut and pepper production and marketing

Conduct community mapping of the village's economic activities

Interview farmers in second community

Tuesday, May 23rd

Research team conducts interviews in Buchanan town

Travel to Harbel Market and conduct interviews, Montserrado County
Arrive in Kakata, Margibi County

Wednesday, May 24th

Research Team conducts interviews in Kakata town
Travel to Kollie Kain & David Cooper communities
Interview community and individual farmers on activities in peanut and pepper production and marketing
Conduct community mapping of the village's economic activities
Overnight in Kakata

Thursday, May 25th

Travel to Bog Mines
Conduct interviews in the local market
Attempted to identify communities producing peanuts, with no success
Travel to Salala Market in Bong County
Conduct interviews in communities surrounding Salala
Overnight in Bong County

Friday, May 26th

Conduct interviews in Salala Market & surrounding villages
Travel to Yes communities
Interview farmers and communities working in peanut and pepper production
Travel to Monrovia

Saturday, May 27th

Interviews in Red Light Market & Benson Street, Monrovia

Sunday, May 28th

Input data from market surveys

Monday, May 29th

Interviews in Red Light & Benson Street Markets, Monrovia

Tuesday, May 30th

Consultant Out sick
Research Team reviewed peace building manual

Wednesday, May 31st

Research team compiled data from the surveys
Discussion on research findings, including pricing trends

Thursday, June 1st

Sub-team visits Red Light Market to collect additional price data
Financial Analysis with Research Team
Constraints, Opportunities and Solutions Analysis with research team

Friday, June 2nd

Preparation and practice session with Research Team for presentation for USAID and MOA
Presentation to Bill Massaquoi, USAID Liberia

Saturday, June 3rd

Workplan discussion with research team, Tricia Matthews & Tom Ewert

Sunday, June 4th & Monday, June 5th

Meet with Tom Ewert for final debrief
Return to Washington, DC via Brussels

Appendix 3: Research Team & Workshop Participants

SECTOR SELECTION WORKSHOP PARTICIPANTS

Participant name	Institution	Position
Dee-Maxwell S. Kamayan, Sr.	AGHA	Executive Director
Rev. Benjamin B.M. Bangura	PNO	AEDO
Jerry S. Fumbah	MC	Project Officer
Cecelia Nimely	AGHA	BSDO
Thomas Marwolo	NAEL	NA
A. Faiya Leebor	AGHA	BSDO
D. Solomon Harris	AGHA	NA
Zowolo Seepo	AGHA	Project Officer
J. Vaari Kiazolu	MC	Office Manager, Kakata
Tawah Blamal	MC	Office Manager, Buchanan
J. Faiya Tandanpolie	AGHA	NA
Tricia Matthews	MC	Deputy Director, Liberia
Bakayoko Amadou	MC	General Program Officer
Stephen Parker	MC	Project Officer

RESEARCH TEAM

Participant name	Institution
Jerry S. Fumbah	MC
Cecelia Nimely	AGHA
Thomas Marwolo	NAEL
A. Faiya Leebor	AGHA
Stephen Parker	MC
J. Faiya Tandanpolie	AGHA
Bakayoko Amadou	MC

Appendix 4: Information from Subsector Ranking Exercise

These presentations were prepared by AGHA and CPBD staffers, providing their thoughts on the promise of different subsectors based on six criteria, including the potential returns on investment and capital requirements. Much of the comments here are somewhat subjective, since we could not field test them so they should be viewed as such.

PRESENTATION FOR PEPPER, BITTERBALL & CORN

Criteria	Pepper	Bitterball	Corn
Targeted Pop & Capacity	10 farm family in a given community	10 farm family in a given community	10 farm family in a given community
Potential for Value Add	Fresh, dried stored, added to sauce, pounded into powder, prepared as a sauce	Cooked as sauce, dried	Fresh, roasted, dried/shelled, boiled, pounded into powder, corn meal
Existing Demand & Growth Potential	High in demand all year around. 90% of homes consume	High consumption	Very high
Potential to Increase Income	Is high especially in the dry season	Is high	Is high but seasonal
Financial Feasibility	Relatively high start up costs due to seeds, but has the highest ROI of all the sectors reviewed	NA	NA
Time till Impact	Crop from nursery to harvest is 90-110 days Two harvest seasons: Sept-Dec., March-May	Also a short growing cycle of three months or less.	NA

PRESENTATION FOR CASSAVA, PEANUTS & PLANTAINS

Criteria	Cassava	Peanuts	Plantain
Targeted Pop & Capacity	20 farmers per village. Can form a cooperative if they are strong.	Ditto	Ditto
Potential for Value Add	Raw, Fufu, Garie, Jeeper, Starch	Fresh peanuts, patched, peanut butter, weaning good. Candy	Cooked, fried rice bread
Existing Demand & Growth Potential	There is high existing demand & growth potential.	Ditto	Ditto
Potential to Increase Income	There is high potential because of access to planting materials throughout the year	Ditto	Very high potential because new sucker emerges every favorable season
Financial Feasibility	Average capital requirement vis-à-vis the others. ROI of 158%	There was considerable debate amongst the group as to the returns on peanuts. At 100% not an impressive ROI and income of only \$55, but start up costs were also low.	Average capital requirement vis-à-vis the others. One of the lower ROIs.
Time till Impact	8 months	4 months	10 months

PRESENTATION FOR GOATS

Criteria	Goats
Targeted Pop & Capacity	Both rural and urban community dwellers have the capacity to buy most especially in the cities. (e.g. Monrovia). Production communities have always the interest in this sector.
Potential for Value Add	Easily maintained, clean for marketing. Can be sold bodily in carcass
Existing Demand & Growth Potential	Can be consumed/sold during festivals. High demand. High rate of multiplication. Low cost of maintenance, feeding and medication
Potential to Increase Income	High cost (income) A lb of goat meat cost LD 180 as compared to cow meat LD 125 easily marketed, with high demand.
Financial Feasibility	Depending on the location. In Grand Bassa you can get a pair of mature goat for US 100. Production requires medications shelter, supplementary feeding.
Time till Impact	More than one year before it the enterprise breaks even. Calculated ROI for one and two years production to look at this

- The figures for this table were calculated by the different sector working groups for their presentations. All the groups used the same parameters, namely 0.3 Ha of land and one season of production. The calculations also included the costs of tools required. Live animals were the exception as there were not comparable parameters so the group looked at the economics of purchasing two males and three females for breeding. Returns were generated through a combination of live animal sales, and we also looked at change in total assets. Since the returns were so poor in Year 1 we looked through Year 2. All groups in working in crops included labor costs, while the groups working with livestock did not since it was assumed that the animals would be allowed to roam, rather than taken to grazing land.

FINANCIAL FEASIBILITY ANALYSIS

	Net Income	Total Costs	Return on Investment
Cassava	\$270	\$132	159%
Peanuts	\$55	\$52.67	104%
Plantains	\$136	\$131.42	103.8%
Hot Pepper	\$827	\$213	388%
Bitter Ball	NA	NA	NA
Corn	NA	NA	NA
Goat Year 1	-\$328	\$458	-70.25%
Goat Year 2	\$290	\$317	91.64%
Sheep	NA	NA	NA

Appendix 5: Research Plans

RESEARCH PLAN FOR HOT PEPPER IN GRAND BASSO, BONG, MONTSERRADO & MARGIBI COUNTIES, LIBERIA

Hypothesis: Pepper production, processing, and marketing offers an opportunity for CPBD communities to increase their incomes, by engaging in a high value crop for the Liberian market.⁶ Following the Liberian Civil War, cultivation of pepper is increasing annually and during the primary harvesting season Liberian markets are sometimes saturated with fresh pepper. To be successful in the fresh and dried value chains for hot pepper, communities will need to enter into off season production as well as looking at means by which they may preserve excess production during the peak season through processing and/or storage for sale when there is scarcity.

Goal: To increase CPBD communities' engagement in value chains for hot pepper, through improved production and processing and the development of a marketing plan.

Choice of Hot Pepper Value Chains:

- Highest ROI among the potential sectors examined, at 388% per production cycle⁷
- Short production cycle of 3 months till first yield
- Staple of the Liberian diet and it is in demand year round
- Liberians will pay a premium for fresh hot pepper in the off season

Objectives of the Market Research:

- To map the dynamics of the relevant pepper value chains—likely fresh and dried hot peppers, sweet or garden peppers and cayenne, fresh and dried—for markets in Monrovia, Buchanan and greater Liberia
- To identify other actors, particularly input suppliers along the relevant value chains that can support off-season production, as well marketing, storage and other productivity improvements
- To identify current and potential markets for residents' products
- To assess the investments needed to promote residents participation in the industry and potential sources and means of financing

Activities:

- Map an estimate of the current level of pepper production and market in a sample of CPBD communities and identify potential clusters of communities with which to collaborate on a project in hot pepper value chains
- Gather relevant local agriculture and business statistics
- Contact the Ministry of Agriculture and other relevant institutions to identify their current initiatives related to hot pepper and horticulture
- Identify traders, marketers, input suppliers, wholesalers, etc. to outline the supply chains and economics of the relevant pepper value chains
- Identify high potential market channels and linkages for CPBD communities

⁶ Per a discussion with an official at the FAO, prior to the Liberian Civil War there may have been exports of hot fresh and dried pepper to neighboring African countries.

⁷ Need to double check this calculation and then cite in plan

- Calculate financing requirements and potential profitability of different types of operations related to pepper value chains
- Estimate based on seasonality and program startup the length of time before residents may start to see results
- Research the efforts of other organizations working in pepper and/or horticulture in Liberia

Interview Contacts

See pepper subsector map.

Potential Constraints and Opportunities

Given that the CPBD partners and Mercy Corps staff already do work in pepper and related sectors, we hypothesize that the market research will identify the following constraints. Accordingly, the research will delve deeper on these constraints and potential opportunities, for which the market research will attempt to identify sustainable solutions.

Constraints	Opportunities
Market Saturation in the High Season	<ul style="list-style-type: none"> ▪ Means by which to continue cultivation during the rainy season ▪ Irrigation in the Dry Season
Lack of storage	<ul style="list-style-type: none"> ▪ Storage facilities for fresh peppers ▪ Better storage during transport
Traditional & inefficient processing & drying	<ul style="list-style-type: none"> ▪ Identify alternative methods and potentially technology by which to <ul style="list-style-type: none"> ○ Reduce waste during drying and/or smoking ○ Increase storability of the dried product ○ Introduce new pepper-based products, based on other processing methods
Inefficient or Nonexistent Distribution Networks outside of Urban Areas	None identified initially
Production	<ul style="list-style-type: none"> ▪ Introduction of better seeds ▪ Training in seed selection techniques ▪ Training in Modern Production Processes
Lack of trust between different actors in the chain	None identified initially

Appendix 6: Participatory Economic & Marketing Appraisals with Communities

KOLLIE KAIN, MARGIBI COUNTY

ENTERPRISE RANKING MODULE

No.	Product	Ranking in Order of Importance			Reason
		Importance to Village	Brings the Most Money	Easy to Sell	
1	Peanuts	1	1	1	<ul style="list-style-type: none"> ▪ Fast to produce ▪ Provide more revenue ▪ High demand ▪ Pay school fees
2	Pineapple	9			
3	Pepper	5	2	2	<ul style="list-style-type: none"> ▪ High demand ▪ Easy to sell ▪ Use in daily diet
4	Cassava	2			<ul style="list-style-type: none"> ▪ Staple crop
5	Bitterball	6		3	<ul style="list-style-type: none"> ▪ Jointly demanded with pepper ▪ Easy to sell ▪ High demand
6	Rice	3			<ul style="list-style-type: none"> ▪ Staple crop for consumption
7	Plantain	4			
8	Corn	7			<ul style="list-style-type: none"> ▪ Easy to grow on any type of land ▪ Use for food & cash
9	Tapping				<ul style="list-style-type: none"> ▪ Most men engage in it ▪ Brings more money & fast
10	Kerosene				
11	Okro				
12	Fishing				
13	Palm Oil				
14	Sell fish				
15	Potato	8			

COMMENTS:

1. Discussions were likely biased, since the community knew we were studying peppers and peanuts. This is evidenced by the ranking of peanuts as the most important crop to community, although they do not grow it currently and historically Margibi is not known for peanut cultivation.
2. The community doesn't grow peanuts now because they don't have money to buy seeds and there is scarcity on the market, but used to grow before the war. Based on that they were able to tell which crops would bring the most money into the community. Now almost all the young men are tapping to get money, so it brings the most money into the community.



3. Usually buy peanuts for household consumption. Because the production of pepper was not large and most of them were not producing for the market, it was difficult for them to determine their total sales and their profit. They stated financial problem being the factor hindering their capacity to produce for the market, but the willingness is always there. Also to get the community organized to undertake mass production was another factor preventing them to engage in that venture. Only three (3) men are producing the pepper for the market and they were not at the PRA meeting. The seeds were easy to get, and mostly they could be obtain in the community with the local farmers without disbursing any money.
4. Had a demo plot of peanuts, but it was overtaken by pests.
5. Almost everybody is growing pepper but at a smaller scale for local sale and consumption.
6. Only a few grow pepper in large scale, its hardier than peanuts.
7. Other crops are mostly produce for local consumption and from time to time they sell some to get some cash.

PRICE DIFFERENCE BY SEASON AND LOCATION (Liberty)

No.	Item	Unit	Price in Village		Price Outside village		
			Non-Peak	Peak	Harvest	Peak	Location

DAVID COOPER

ENTERPRISE RANKING MODULE

No.	Product	Ranking in Order of Importance			Reason
		Importance to Village	Brings the Most Money	Easy to Sell	
1	Cassava	1	5	4	<ul style="list-style-type: none"> ▪ Takes a longer period to grow ▪ Easily process in gari, fufu, deepor
2	Peanuts	10	4	2	<ul style="list-style-type: none"> ▪ Fast to harvest compare to cassava ▪ Generates more money ▪ Scarcity of good seeds ▪ Produce twice a year ▪ Cro cro type only available
3	Pepper	9	3	3	
4	Pineapple	11			
5	Plantain				
6	Bitterball	3	2	1	<ul style="list-style-type: none"> ▪ Fast to harvest ▪ More people growing it ▪ 1st in bringing money for women
7	Construction	7			
8	Midwives	8			
9	Okra				
10	Fishing	5			
11	Tapping	2	1		<ul style="list-style-type: none"> ▪ All men involved in tapping ▪ Fast cash
12	Palm oil	4			
13	Rice	6			
14	Corn				

COMMENTS:

1. Most if not all the women in that community are engaged in garden production, since its easy to do and garden crops bring more money.
2. Bitter ball was first for them in terms of bringing the mof money because it is easy and fast to harvest and sell. They can harvest many times in a season compare to pepper or other crops.
3. Men classified tapping as first activity bringing the most money because what they grow takes a longer period before they can harvest (rice, cassava, etc).
4. The peanuts were classified in 10th position in terms of importance for the village because of scarcity of seeds and also unavailability of quality seeds. Sometimes when they plant the seeds bought from at the market, the seeds do not succeed. Less people were involved in peanut production for that reason, and those growing peanuts were doing so on a small scale for their own consumption or retailing them in pile of LD 5 of tied them in plastic bag for LD 5.
5. The main problem with pepper is the prevalence of pests and insects, which destroy the plants. Sometimes the production goes down, but few use insecticides or chemicals due to its costs and limited availability.

PRICE DIFFERENCE BY SEASON & LOCATION (Liberty)

No.	Item Marketed	Unit	Price In Village				Price Outside village
			Harvest	Peak	Harvest	Peak	Location
1	Bitter ball	Bucket	75	150	75	75	Kakata
		Pile	5	5	5	5	
2	Pepper	Bag	900-1,000	1,000-1,200	1,200-1,500	1,500-1,400	
		Pile	5				
3	Peanuts	Bag	1,000-1,500	3,000	1,500	4,000-5,000	
		Pile	5	5	5	5	

COMMENTS:

In shortage period, the pile reduces in size but the price remains always at LD 5. Most at time people come to buy the pepper and peanuts from the community because the community members seek to reduce their transportation costs.

GENDER ROLES IN MARKETING

No.	Product	Who sells the product?		Who controls the earnings from sales?	
		Women	Men	Women	Men
1	Bitter ball	X		X	
2	Pepper	X		X	
3	Peanuts	X		X	
4	Cassava	X		X	

COMMENTS:

1. Women are primarily in charge of selling the crops because they have more contact (relationships) with people operating in the market, and they are more skilled in trading than the men.
2. Women control the business income, since they are in charge of the family daily expenses, and they know how to manage it by investing in a susu to earn more profits.
3. The spending of the revenue varies according to each family in the community, but usually the husband receives some "something for his pocket" while the woman has total control over the overall expenditures of the family. Additionally many men have more than one wife, so often the man's income is not sufficient to meet the family's needs.
4. They don't save money in banks or with business people in town for lack of confidence. Save money always in the community by using it in susu. They mostly registering all the family members to make sure they get more profit to solve their problems and make their life.

**WRACLEEN
ENTERPRISE RANKING MODULE**

No.	Product	Ranking in Order of Importance			Reason
		Importance to Village	Brings the Most Money	Easy to Sell	
1	Pepper	5	3		<ul style="list-style-type: none"> ▪ Fast money to buy school fees, hospital supplies
2	Cassava	2	2		<ul style="list-style-type: none"> ▪ Seedlings always available, & seedlings can be used for up to three years.
3	Bitterball				<ul style="list-style-type: none"> ▪ Hard to sell since too much available. ▪ Wastes since there is not way to preserve it ▪ Women's crop.
4	Peanuts	3	4		<ul style="list-style-type: none"> ▪ Fast and more money to pay school fees
5	Plantain	6	5		<ul style="list-style-type: none"> ▪ Always available for food in hunger period
6	Rice	4			<ul style="list-style-type: none"> ▪ Stable food sell on needs basis when no other options available
7	Palm Oil	1	1		<ul style="list-style-type: none"> ▪ Always available
8	Beans				
9	Tapping				<ul style="list-style-type: none"> ▪ Very few people in the village have tapping jobs, since only one person is needed for every 50 to 100 trees. ▪ Men in the village are planting rubber trees for future income.
10	Weaving				
11	Fishing				
12	Cocoa				
13	Hunting				
14	Poultry				
15	Blacksmith	7	6		<ul style="list-style-type: none"> ▪ Repair the tools for farming

Comments

1. Community made over USD\$ 3,000 last year on 30 drums of palm oil.
2. Many prefer to sell at the village level, since risk if you go to the market that you will not sell your goods.
3. Limited market for cow peas at St. Johns since people do not usually eat it here.
4. Insects are a challenge across all the horticulture crops.
5. This year have a demo plot of peanuts, but it has been overtaken by pests. Peppers are more hardy and have fewer problems.

PRICE DIFFERENCE BY SEASON & LOCATION (Liberty)

No.	Item Marketed	Unit	Price In Village				Price Outside village
			Harvest	Peak	Harvest	Peak	Location
1	Bitter ball	Bucket	75	150	75	75	Kakata
		Pile	5	5	5	5	
2	Pepper	Bag	900-1,000	1,000-1,200	1,200-1,500	1,500-1,400	
		Pile	5				
3	Peanuts	Bag	1,000-1,500	3,000	1,500	4,000-5,000	
		Pile	5	5	5	5	

ENTERPRISE TREND MODULE

No.	Production	Price	Production	Sales	Profits	Reason for change
1	Palm Oil	Last year 100-125 now 75-80	Up to 7 bags	?	?	More production with the returness
2	Cassava	Up last year 50- 80 this yr ?150				No seed rice two years ago. Last year shifted so more planint cassava now
3	Pepper	Down last yr. 1200- 1500 up 750-1300				
4	Peanuts	Down last year up this year				Unavailability of seeds last yr. Crocro doesn't produce much
5	Bitterball	Last year 400-600 down to 300-350 this year				

Appendix 7: Hot Pepper & Peanut Feasibility, Production Methods

Hot Pepper, Modern Production, One Season (\$USD)

Land Size	0.3	Ha
No. of workers	3	
1 \$USD	56	LD
No. of plants, with 10 % loss	2700	
Total Productive months (1)	4	months
Total No. of Harvests	8	
Total Peppers Produced, kg (2)	1080	
Total Bags, 62 kg	17.3	

One Time Costs/Capital

Tools (3)	Units	Price	Total Cost
Cutlass, Small	2.00	2.95	5.89
Hoe, Regular	1.00	5.98	5.98
Hoe, Scratching	1.00	2.68	2.68
Watering Can, Small	1.00	10.00	10.00
Sharpening File	1.00	3.50	3.50
Shovel	1.00	10.00	10.00
Twine	2.00	1.50	3.00
Tapeline	1.00	7.50	7.50
Rake	1.00	3.50	3.50
Total One Time Costs			52.05

Recurring Costs/Working Capital

	Units	Price	Total Cost
Seeds, 1 Jumping Deer Bottle (4)	1.00	26.79	26.79
Insecticides, ml	0.2	44.64	8.93
Fertilizer, kg	0.52	60.00	31.20
Total Recurring Costs			66.91

Labor Costs

	Units	Price	Total Cost
Brushing	10.00	1.34	13.39
Clearing	25	1.34	33.48
Land Preparation	25	1.34	33.48
Planting	25	1.34	33.48
Field Maintenance	25	1.34	33.48
Total Labor Costs			147.32

Sales, Two Scenarios, Peak and Non-Peak

	Units	Price	Total Sales
Non-Peak	17.3	24.11	416.57
Peak	17.3	12.50	216.00

Net Income & Return On Investment

	Net Income	ROI
Non Peak	150.28	56.44%
Non Peak, without labor	297.60	250.15%
Peak	-50.29	-18.89%
Peak, without labor	97.03	81.56%

Two Year NPV (5)

Discount rate:	35%	(5)			
		Season 1	Season 2	Season 3	Season 4
Cash Inflows, without tools		202.34	1.76	202.34	1.76
Cash Inflows, without tools & labor		349.66	97.03	349.66	97.03

NPV	\$211.12
NPV, without labor	\$523.92

Notes:

- (1) Useful life of a pepper plant can be extended from 6 months up to 2 years. Here using a conservative 4 month estimate, since many farmers only harvest for one season.
- (2) Further field research is needed on the average yield for a pepper plant.
- (3) Most farmers, including those growing on a larger scale, undertake cultivation with far fewer tools than included here.
- (4) Traditional units seeds supplied by a local farmer used here. 85 grams of seed needed for .3 Ha of land.
- (5) Here one year's cash flows are calculated as Peak plus Non-Peak Season. No depreciation of equipment calculated, since given low quality assumption of two year life.
- (6) Unable to check with microcredit institutions on current rates of interest, so given Inflation rate of 15% to 20% and high operational costs, estimate cost of capital at 35%.

Hot Pepper, Traditional Production, One Season (\$USD)

Land Size	0.3	Ha
No. of workers	3	
1 \$USD	56	LD
Total Productive months (1)	4	Months
Total No. of Harvests	8	
Total Peppers Produced, kg (2)	700	
Total Bags, 62 kg	11.2	

One Time Costs/Capital

Tools	Units	Price	Total Cost	
Cutlass, Small		2.00	2.95	5.89
Hoe, Scratching		2.00	2.68	5.36
Watering Can, Small		1.00	10.00	10.00
<hr/>				
Total One Time Costs				21.25

Recurring Costs/Working Capital

	Units	Price	Total Cost	
Seeds, 1 Jumping Deer Bottle (3)		1.00	26.79	26.79
Insecticides, ml		0.2	44.64	8.93
<hr/>				
Total Recurring Costs				35.71

Labor Costs

	Units	Price	Total Cost	
Brushing	10.00	1.34	13.39	
Clearing	25	1.34	33.48	
Land Preparation	25	1.34	33.48	
Planting	25	1.34	33.48	
Field Maintenance	25	1.34	33.48	
<hr/>				
Total Labor Costs				147.32

Sales, Two Scenarios, Peak and Non-Peak

	Units	Price	Total Sales
Non-Peak	11.2	24.11	270
Peak	11.2	12.5	140

Net Income & Return On Investment

	Net Income	ROI
Non Peak	76.96	39.87%
Non Peak, without labor	224.29	490.63%
Peak	-53.04	-27.47%
Peak, without labor	94.29	206.25%

Two Year NPV (4)

Discount rate:	35%	(5)			
	Season 1	Season 2	Season 3	Season 4	
Cash Inflows, without tools	98.21	-31.79	98.21	-31.79	
Cash Inflows, without tools & labor	245.54	115.54	245.54	115.54	
NPV	64.41				
NPV, without labor	444.33				

Notes:

- (1) Useful life of a pepper plant can be extended from 6 months up to 2 years. Here using a conservative 4 month estimate, since many farmers only harvest for one season.
- (2) Further field research is needed on the average yield for a pepper plant.
- (3) Traditional units seeds supplied by a local farmer used here. 85 grams of seed needed for .3 Ha of land.
- (4) Unable to check with microcredit institutions on current rates of interest, so given Inflation rate of 15% to 20% and high operational costs, estimate cost of capital at 35%.
- (5) Unable to check with microcredit institutions on current rates of interest, so given Inflation rate of 15% to 20% and high operational costs, estimate cost of capital at 35%.

Peanuts, Modern Production, One Season (\$USD)

Land Size	0.3	Ha
No. of workers	3	
1 \$USD	56	LD
No. of plants, with 10 % loss	1080	
Total Bags	3.5	

One Time Costs/Capital

Tools	Units	Price	Total Cost
Cutlass, Small	2.00	2.95	5.89
Hoe, Regular	1.00	5.98	5.98
Hoe, Scratching	2.00	2.68	5.36
Sharpening File	1.00	3.50	3.50
Shovel	1.00	10.00	10.00
Twine	2.00	1.50	3.00
Tapeline	1.00	7.50	7.50
Total One Time Costs			41.23

Recurring Costs/Working Capital

	Units	Price	Total Cost
Seeds	18.00	0.89	16.07
Total Recurring Costs			16.07

Labor Costs

	Units	Price	Total Cost
Brushing	5.00	1.34	6.70
Clearing	15	1.34	20.09
Land Preparation	25	1.34	33.48
Planting	25	1.34	33.48
Field Maintenance	25	1.34	33.48
Total Labor Costs			127.23

Sales

	Units	Price	Total Sales
Non-Peak	3.5	28.57	\$100.00
Peak	3.5	15.18	\$53.13

Net Income & Return On Investment

	Net Income	ROI
Non-Peak	-84.54	-45.872%
Non Peak, without Labor	42.70	74.509%
Peak	-\$4.18	-2.26%
Peak, without labor	-\$131.41	-71.21%

Two Year NPV (4)

Discount rate:	35%	(5)			
		Season 1	Season 2	Season 3	Season 4
Cash Inflows, without tools		-43.30	37.05	-43.30	37.05
Cash Inflows, without tools & labor		211.16	37.05	211.16	37.05
NPV		-49.29			
NPV, without labor		278.82			

Appendix 8: Input Supply Prices

SURVEY OF INPUT SUPPLY PRICES, (Liberty)

		Bong		Grand Basso		Margibi		Montserrado	
		High	Low	High	Low	High	Low	High	Low
Seeds	Local, Peanuts (Cro Cro), salmon cup	30	15	25	20				
	Imported, Peanuts, salmon cup							50	
	Local, Pepper, jumping deer bottle					1,100	950	950	325
	Imported, Pepper, 110 grams							550	500
Chemicals (2)	Fertilizer, 15-15-15, 50 kg					3,360	3,000	2,800	2,520
	Urea, 50 kg							3,080	3,000
	Insecticides, Decis, 1 liter							2,240	2,000
	Insecticides, Dursban, 1 liter							2,520	2,300
Tools	Cutlass, Small					150	140	196	165
	Cutlass, Large					175	165	165	160
	Hoe					335	225	280	200
	Shovel					560	500	560	500
	Watering Can, Large					392	380	672	600
	Watering Can, Small							560	500
	Sprayer, Knapsack							9,800	8,960
	Sprayer, Knapsack, 5 gallon					4,480	4,200		
Irrigation (1)	Lg. Pump, 30 m tube, 5 gallon					25,200	25,000	29,400	29,000
	Sm. Pump, 30 m tube					22,400	22,000	26,400	26,000
	2 in. tube, per yard							280	
Processing	3 in. tube, per yard							560	
	Grinding, Retail			875		6,750			
Processing	Hand Grinding, Retail							3,750	
Notes:	Grinding, Service							450	400

(1) Pump prices inc. 30 meters of tubing, which is sufficient to irrigate 1 Ha of land.

(2) Other insecticides we found available and in use by farmers are:

Thionex	2,240
Agristom	2,520
Cydim	2,240

Appendix 9: Prices for Hot Pepper & Peanuts

HOT PEPPER PRICES BY COUNTY, MARKET ACTOR & SEASON (50 Kg Bags, Liberty)

		County: Margibi				County: Bong				County: Grand Basso				County: Montserrado			
		Wholesale		Retail		Wholesale		Retail		Wholesale		Retail		Wholesale		Retail	
		Non-Peak	Peak	Non-Peak	Peak	Non-Peak	Peak	Non-Peak	Peak	Non-Peak	Peak	Non-Peak	Peak	Non-Peak	Peak	Non-Peak	Peak
Farmer	Fresh	1,500	550	3,750	1,125	1,500	1,225	3,000	1,125	950	725						
	Dried Lib									2,000	750						
Traders	Fresh					1,000	900			1,750	800			3,500	650		
	Dried Lib																
	Guinea, Dried					7,000								3,500	2,000		4,875
	Cote d'Ivoire, Dried													5,000	4,000		
	Guinea, Fresh													3,500	1,400		
Cote d'Ivoire, Fresh					1,500	1,200											
Retailers	Fresh		850				1,125	3,000		1,875	975					4,500	2,625
	Dried Lib			3,750													
	Guinea, Dried												5,000	4,500	4,500		
	Guinea, Fresh		6,500					5,250								6,000	2,888
	Cote d'Ivoire, Dried							4,500								5,250	
Cote d'Ivoire, Fresh																	

PEANUT PRICES BY COUNTY, MARKET ACTOR & SEASON (50 Kg Bags, Liberty)

		County: Margibi				County: Grand Basso				County: Bong				County: Montserrado			
		Wholesale		Retail		Wholesale		Retail		Wholesale		Retail		Wholesale		Retail	
		Non-Peak	Peak	Non-Peak	Peak	Non-Peak	Peak	Non-Peak	Peak	Non-Peak	Peak	Non-Peak	Peak	Non-Peak	Peak	Non-Peak	Peak
Farmer	Fresh					1250	850	1250	800	1500	600	3250	1000	1850	850	3375	1850
Traders	Fresh															6000	5000
	Imported					4750	3250	4500	3750					4000	5000		
Small Retail	Fresh					3500	3000	5000	4000								
	Imported													6000	5000	6875	5000

Appendix 10: Activity Plan Meeting with Farmers⁸

Materials needed to facilitate the meeting:

- 1 calculator
- 1 pen
- 1 notepad
- Flipchart/picture of calendar

June	July	August	September

- Reference sheet with tool costs, seed costs, transportation costs

1. Introduction

- Welcome and thank farmers for coming together
- Ask them for their names and record this on a paper
- Go over the purpose of the meeting: to develop an activity plan so that they will be ready to plant cowpeas
- Review some of the constraints and solutions and the reason that they are getting together to develop a plan – go over pictures
- During meeting they will select a leader of the farmers group and develop an activity plan

2. Selecting a Leader

- Brainstorm what are the characteristics of a good leader: good character, respected by everyone, can run a meeting, is not single
- Have pictures ready of the characteristics
- Ask: “Who has these characteristics amongst you?”
- Vote for the individual

3. Making an Activity Plan

- Facilitator asks: How much land does each farmer want to plant? Each farmer announces what they want to plant and puts one stone down for each ½ acre they want to plant. (if they want to plant 1 acre they put two stones, 1.5 acres – 3 stones, etc.) As a facilitator – beside each farmers name put down how much land they are committing to cultivate of cowpeas

⁸ Developed by Mary Morgan.

- Facilitator asks: If the group wants to plant by October, what are the things that need to be done by September? Ask them to pick the pictures out from the constraints. When they have picked out the pictures, then ask them to put the pictures in order:
 - Buy tools
 - Make farm bigger
 - Buy seeds
 - Contact buyers
 - Contract transport company
- Facilitator asks: “When will we do all these things?”
 - Ask the farmers to put the pictures of the activities in the month that it should be done
- Facilitator asks: “How can we pay for these things?” – putting small small money together – ask someone to pick out the picture of the savings group
- Facilitator asks: “how much can each person save a week?” Farmers can put down the number of stones that represents LD\$1.00 for each stone. This can then be counted together.
- Facilitator asks: “How many weeks in each month?” – 4- how much can we save in a month?- Facilitator multiplies number of stones by 4 and this is the amount in a month

Buying Tools

- Facilitator asks: “what tools do you want to buy? And how many?”
- Facilitator then uses calculator to go over how much each tool costs – draw picture on sheet of paper of tool and amount of the individual tool and write the total amount for the number they want to buy

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Buying Seeds

- Facilitator has pictures of amount of seeds needed with cost for .5, 1, 1.5, 2 and 2.5 acres
- How much seeds do we need to buy? – quantify amount in relation to the land being cultivated
- Calculate the amount and write on a paper – total kilograms and price

Preparing the land

- Facilitator asks: When do we start to prepare the land?
- Who will help each other?

Facilitator needs to record all this and then hand over to the leader as well as keep copy for themselves.

4. Closure

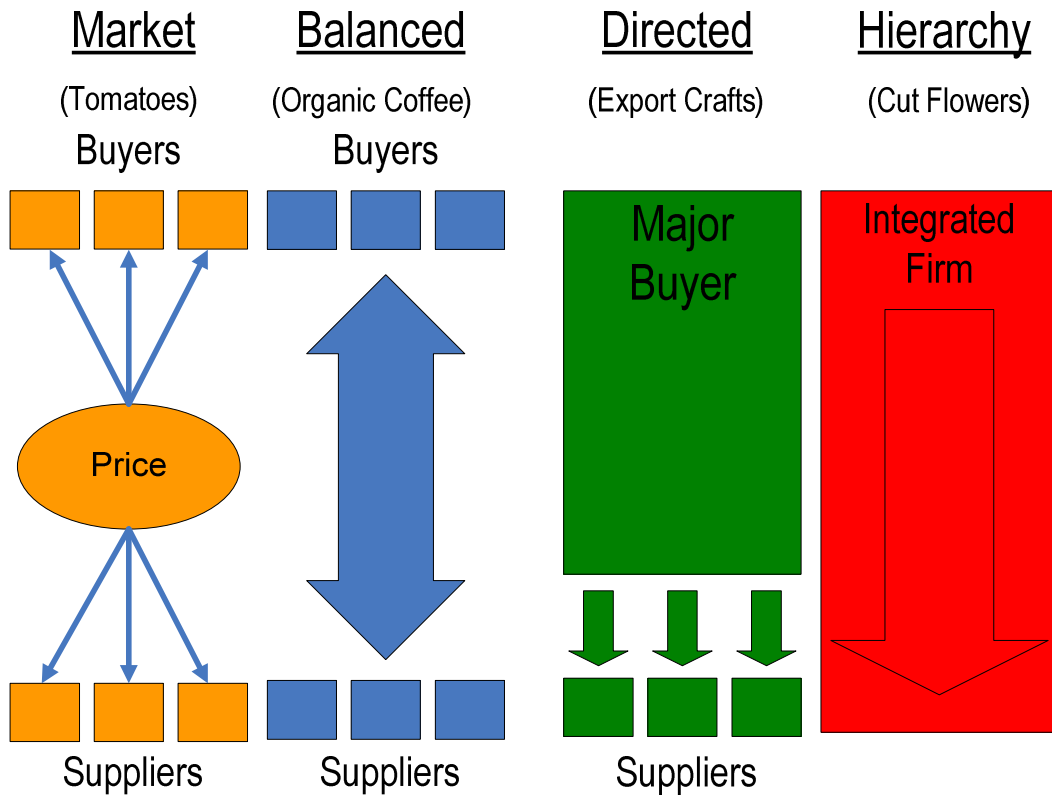
- Have farmers set next meeting
- Thank farmers again for coming
- Let them know when you will be back

Appendix 11 Value Chain Governance Structures

Governance structures in Value Chains determine the nature of trade relationships between all the chain actors. Depending on the structure they may also determine how benefits and profits are shared throughout the chain and decisions on what will be produced and sold in the chain. It is important to understand the governance structure both in terms of looking at benefits sharing and the chain’s overall competitiveness. Does the chain’s governance structure provide it with the qualities it needs to stay competitive in the market place in which it operates?

The characteristics of the following four governance structures are as follows:

- Market Based
 - “arm’s length” transactions between buyers & sellers
 - little or no formal cooperation among participants
- Balanced
 - fairly equal decision making among participants
 - cooperation but no one dominates
- Directed
 - controlled by firm(s) who determine product specifications, trade rules, etc.
- Hierarchy
 - vertically integrated enterprise that controls various functions along the value chain



Appendix 12 List of Handouts and Materials Given to the Research Team & Program Management

IDE and Triple Trust Case Studies: Hard copies left with team in Liberia. Useful examples of LNNGOs moving from a service provider role to a facilitator.

FAO Handbooks for Organizing Smallholder Groups

Care Case Study on Informal Producer Groups in Bangladesh and Selling Points