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The AGRIBUSINESS PROJECT

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Baseline Study Report - 2012

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USAID Agribusiness Project

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ABBREVIATIONS AND ACRONYMS

AOR	Agreement Officer's Representative
ASF	Agribusiness Support Fund
BDS	Business Development Services
BDSPs	Business Development Services Providers
BRC	British Retail Consortium
EA	Environmental Assessment
COP	Chief of Party
FAO	Food and Agriculture Organization of United Nations
FEG	Farmer Enterprise Group
GAP	Good Agricultural Practices
ICT	Islamabad Capital Territory
IEE	Initial Environmental Examination
IFS	International Featured Standards
KFS	Kissan Field School
M&E	Monitoring and Evaluation
NGO	Non-Government Organization
PEA	Programmatic Environmental Assessment
PTC+	Practical Training Centre
PRC	Planning and Review Committee
PRHA	Participatory Rural Horticultural Appraisal
PRLA	Participatory Rural Livestock Appraisal
PERSUAP	Pesticide Evaluation Report and Safe use action plan
RSP	Rural Support Programme
SEDF	Sindh Enterprise Development Fund
SMC	Strategic Management Committee
SoW	Scope of Work
TA	Technical Assistance
UAP	USAID's Agribusiness Project
USAID	United States' Agency for International Development
VCP	Value Chain Platform

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The baseline study report is the output of collective efforts made by Agribusiness Project staff, particularly M&E teams and international & national consultants. The contributions, however, varies from direct facilitation to indirect support and encouragement. Indeed, all of that was crucial in timely development of this report.

Khurram Jilani (M&E Advisor), Sadia Hassan (M&E Manager), Muhammad Shahwar (IT Advisor), Azmat Ali (GIS Specialist) and Tajamal Aziz (Database Specialist) actively participated in all the stages of the report; however, their leading role in developing the data collection methodology, managing data analysis, and in producing the report is commendable. I am especially grateful to CNFA M&E and IT team in managing the IT component of the baseline study, and international and national consultants for their technical support, guidance, and feedback in all the stages of baseline study work. The newly recruited Mussarat Perveen (M&E Manager) and Inam-ullah (M&E Specialist) also provided their valuable inputs in preparing the report. Salman Naizi (Manager Administration) and Omar Badar (Manager HR) also extended their endless cooperation, technical guidance and facilitation in managing administrative, human resource and financial aspects of the baseline study.

My gratitude is also due to all the regional staff, particularly Regional M&E Managers and Regional Admin & Finance Managers for their valuable contribution in finalizing the questionnaire, efficiently supervising and managing field enumeration work and providing useful comments on results and analysis. The contribution of all the Regional Program Managers is also commendable as without their support it would have been hardly possible to carry out this much extensive exercise so efficiently. Shad Muhammad (COP) and Shamshar Khan (CNFA TA Coordinator) have also provided highly valuable support and encouragement in successfully accomplishing the baseline study.

The worth-mention contribution of male and female enumerators and supervisors in collecting data from the respondents can't be left unrecognized. Despite confronted with number of challenges in the field such as hard terrains, extensive traveling, and outstation stays, they never get baffled and remained focused with their work, in an honest and devoted manners. At the same time, I would like to avail the opportunity of acknowledging the level of keenness and sincerity shown by the interviewees in responding to our questions and sharing business related and individual information so openly and positively. Moreover, the hospitality of visited households in targeted areas is also worth-mentioning here.

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Proclamation:

The project team accepts the responsibility of any error, omission and mistake, if appeared in the report. Moreover, the results and findings section of the report is based upon the collected data, review of literature, and abstract observations of the study team and specialists. These selected respondents may or may not represent the entire districts' population, as they project-registered clients. The data results can be validated, if desired, only to an equivalent extent.

EXECUTIVE SUMMARY:

While embarking on the first year of USAID funded Agribusiness Project, the project monitoring, evaluation and communication section teamed up with international and national consultants conducted a baseline study to benchmark impact, outcome and output indicators. Setting the baseline value for project indicators is part of results tracking measures that ASF has undertaken.

The baseline study will not only underscores current performance of the project targeted value chains and value chain actors but also enable the project to systematically and objectively ensure the relevance, efficiency, effectiveness and impact of project intervention areas i.e. income, employment, production quality and quantity, market linkages, value addition, post-harvest losses, use of improved production practices, and access to business development services; concurrently, it will serves the purpose of project quality assurance by indicating the project grey-areas for the course correction.

A systematic approach – by involving the international and national consultants and regional monitoring and evaluation teams – has been followed for establishing baseline survey methodology i.e. survey tools, sample size, data collection, cleaning, analysis and interpretation. A total of 6393 value chain actors from a total of 22 prioritized value chains, including 2892 horticulture farmers, 1312 livestock farmers, 1209 market agents, 423 processors, and 557 service providers, were interviewed during the baseline study. Considering the diverse nature of sub-sectors and targeted regions, a deliberate effort was made to ensure genuine representation from all the 22 value chains and 10 targeted regions. These sampled respondents were taken based upon confidence interval of 5 and a confidence level 95% by using purposive sampling. The baseline questionnaire for horticulture farmers, livestock farmer, processors, market agents and service providers has been developed and uploaded on survey-monkey software. The software is used for real time data collection from field using tabs/devices. The collected data is analyzed in the software and in Ms. Excel using pivot table and cross tabulation option. The analysis of the baseline results and findings is structure in a way that the baseline has three main section including: a) baseline introduction, objectives and methodology, b) overview of horticulture and livestock sector using secondary data, c) data analysis of horticulture value chains on project indicators, and d) data analysis of livestock value chains on indicators.

The baseline results highlights against key project indicators are as:

- On-average 4 employees per acre are engaged in horticulture sector, whereas majority of the horticulture producers are engaging between 6 to 20 employees/ labor per farm;
- Per acre average income of the horticulture farms is 41,104 rupees per production cycle;
- Responding farmers are earning on-average 60% of their household income from their respective prioritized value chain;
- On-average 70% of the responding farmers are selling their produce to local markets, whereas the 27% to the national market and only 3% to the international markets;
- For all the value chains farmers are selling 70% or above of their produce to markets for , except for apricot where the selling average is less than 10%;

- Less than 8% of the farmers have formal contracts with buyers for selling of their produces. The rest of the producers are selling their produce through informal negotiations and contracts;
- On-average 25% of the farmers reported their labor as unskilled, whereas farmers reported 70% are skilled labor working at their farmers. The skillfulness of labor is judged by the farmers based upon traditional production practise. This also reflect that most of the farm managers are also not informed about best farm management practices;
- Only 35% of the farmers are practicing improved production practices at farm and off-farm level, whereas during the interviews it has been observed that most of the responding farmers were not clear about most of the improved management practices and on use of improved technology.
- The production losses reported by interviewed farmers is on-average 10%, whereas, processors reported processing losses as 12% and market agents reported during-marketing losses as 10%;
- The study also include opinion poll on some of the aspects of business development such as opportunity to increase income, employment, quantity and quality produced and market linkages. More than 80% of the responding farmers have expressed keenness to improved and expand their businesses.
- The livestock farmers are engaging on-average 20 employees per commercial farm. The employment in livestock sector is comparatively high than horticulture sector because of their full time engagement in livestock management activities;
- Livestock farmers are earning on-average 30,000 rupees per month from their farms;
- More than 85% of the meat and milk produced by livestock farmers are sold in local markets through formal and informal contacts;
- 20% of the livestock farmers perceive their labor as unskilled, whereas 75% as skilled labor. This is again based upon the perception of livestock farm managers which may or may not be clear about the best farm management practices;
- On-average 55% of the livestock meat and milk farmers are following improved production practices, whereas rest of the farmers feel themselves ignorant about these practices;
- More than 65% of the responding livestock farmers are reporting on-average 10% losses of their produced; and,
- More than 50% of the responding famers feel that there is an opportunity to increase milk and meat production, whereas only 8% feel the opportunity to increase employment at their farms.

The baseline study not only underlined the project start-up findings on baseline indicators, concurrently the study articulated the factors that are directly and indirectly influencing these indicators. The baseline findings at indicator level are used to benchmark indicators and track project progress on performance indicators at outcome and impact level.

1. INTRODUCTION

1.1. PROJECT BACKGROUND

Agriculture continues to be one of the major sectors of the economy in Pakistan. Majority of the country's population is, either directly or indirectly dependent on this sector. Agriculture contributes 21 percent towards the Gross Domestic Product (GDP), accounts for about more than half of employed labor force and is a major source of foreign exchange earnings[1]. However, there is a continued reliance on major crops, high yields gap and the absence of a dynamic and diversified high-value agribusiness sub-sector. A diversified and competitive agribusiness sector can contribute to export-led growth, food import substitution, enhanced food security, employment creation thereby contributing to poverty alleviation. The potential of expansion in agribusiness sector is substantial, specifically in the area of value addition, processing and marketing of horticulture and livestock sub-sectors. To realize these potentials, interventions are required across all functions of value chains to improve its competitiveness and to enhance capabilities of value chain operators to respond to domestic, regional and international market requirements.

The Agribusiness Project (Agribusiness Project) is funded by USAID and implemented by Agribusiness Support Fund (ASF) and its partners. The overall goal of the Project is to support improved conditions for broad-based economic growth, create employment opportunities and contribute to poverty alleviation through increase in competitiveness of horticulture and livestock value chains in partnership with all stakeholders. Specific objectives of the project are to: (i) strengthen the capacity in horticulture and livestock value chains to increase sales to domestic and foreign markets; (ii) strengthen the capacity of smallholders and farmer enterprises to operate autonomously and effectively; and, (iii) increase agriculture efficiency and productivity through adoption of new farming techniques and technological innovation among targeted beneficiaries.

During the first year of this five-year project, a preparatory program has been launched to gauge the potential of the sub-sector and to prioritize value chains in the context of various project regions. The project planned and conducted Participatory Rapid Horticulture/Livestock Appraisal (PRH/LA) in all the project regions throughout Pakistan. Findings from PRH/LA enabled the project to identify and prioritize; horticulture and livestock value chains, opportunities, constraint; and state of the business development services to provide required basis for focusing project interventions. On the basis of PRHA/LA findings a baseline study was planned and executed in all regions. The main objective of the baseline study is to set benchmarks in selected sub sectors, value chains and support establishment of a database for supporting the monitoring, evaluation and communication functions of the project.

This report articulates the consolidated ground situation of prioritized value chains throughout Pakistan. Within the framework of the cluster and value chain approach, a two-prong approach was adopted, first analysis of secondary data and relevant information gathered during the

[1] Economic Survey of Pakistan 2011-12

PRHA/LA exercise and preparation of baseline exercise in the field including development of appropriate tools/questionnaires. This report pertains to work completed based on both secondary data and baseline data collection.

1.2.RESULT FRAME WORK

The overall framework for the monitoring and evaluation of the project ensues from the assistance objectives of the USAID. This is to be achieved through the intermediate results which are further realized through the sub-intermediate results and underlying three objectives. The result framework is depicted below.

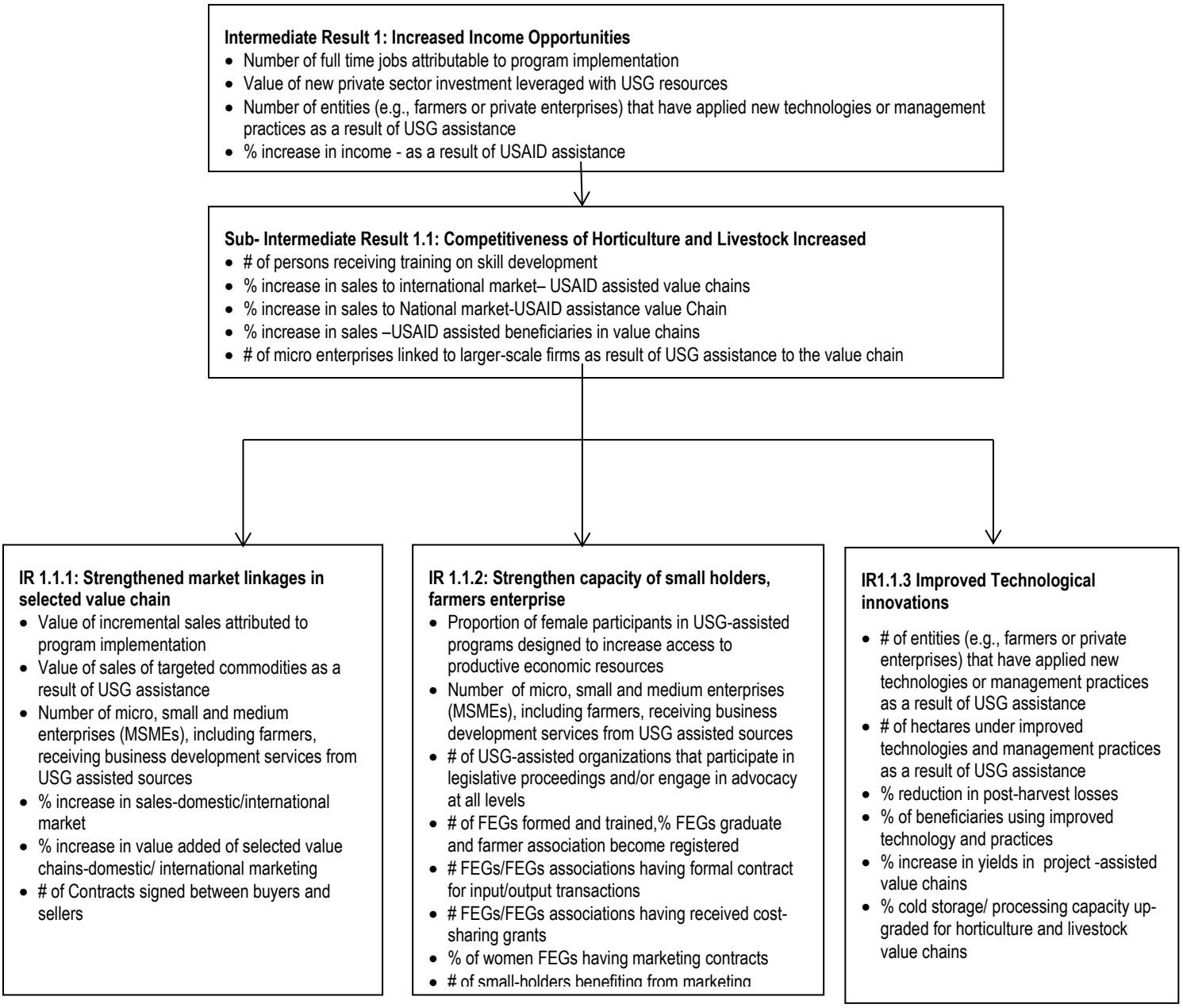


Figure 1: Project Result Framework

1.3.PROJECT COMPONENTS

USAID's Agribusiness Project has been designed to increase productivity, product quality, and value addition by removing constraints that occur throughout the target product value chains. It will focus on horticulture and livestock value chains that show significant market potential. The project encompasses several innovative aspects including the establishment of value chain platforms to support dialogue between the stakeholders, a participatory approach which will develop sustainable capacity within farmers' groups, a sub-sector and region-specific approach to formulate targeted interventions and an integrated strategy to address constraints across value chains. The project is comprised of two key components which are functionally integrated and comprehensively supplement each other. They are: (i) Technical Assistance (TA) for Capacity Building and Program Support; and, (ii) Partnership Window for Cost-Sharing Grants.

1.3.1. Technical Assistance (TA) for Capacity Building and Program Support:

The first component of the Agribusiness Project offers a wide range of technical assistance and capacity building initiatives to players across the value chains on a nationwide basis, focusing on building of overall capacity of the agribusiness sector in adoption of modern production, marketing, and business management technologies to transform value chains of specific product lines to higher levels of production, productivity, efficiency, and profitability leading to increased demand for rural labour and products emanating from all levels of producers. Under this component international firms are also be engaged for program support and implementation. Activities under this component are a regular and on-going feature and will serve to identify high-potential sub-sectors / partners and facilitate interventions under the cost-sharing. It comprises of the following four sub-components:

i. International Technical Assistance & Program Delivery Support,
ii. International Market Linkages Development,
iii. Kisan Field Schools (KFS), and
iv. Capacity Building, Training & Awareness

1.3.2. Partnership Window of Cost Sharing Grants:

Component-2 of the Project involves launching of a national cost-sharing grants program, offering a wide range of customized assistance to key players within the priority value chains. Focused assistance will be provided in the priority value chains, including: agribusinesses (including processors, exporters, market operators, value adding and other related SMEs), farmers and farmer enterprise groups, strengthening farmers' associations, processors and exporters, transporters, service providers including business development service providers, and other key players in order to address weakness and market failures with the ultimate objective to strengthen private sector and market systems. Focus of investments will be on up-stream marketing and processing (off-farm) aspects of the value chains for fostering value addition and to capitalize on strengthened capacities through assistance provided under component-1.

2. OBJECTIVES OF THE STUDY

Embarking upon the inception of USAID funded The Agribusiness Project, ASF intended to establish and document the pre-project situation of agribusiness and prioritized value chains; for further tracking of its progress on impact, outcome and output indicators. The baseline study supplemented Agribusiness Project's monitoring efforts by collecting information on outputs, outcomes and impact level indicators for comparison with subsequent studies. The baseline study underscored the project relevance, its challenges and opportunities by indicating the scope of intervention for the improvement of agribusiness in Pakistan.

The Agribusiness Project baseline study intended to:

i. Collect baseline information of prioritized value chains for project indicators;
ii. Set targets against indicators based upon the gap between current and potential situation; and,
iii. Identify factors (risks and assumptions) influencing project indicators.

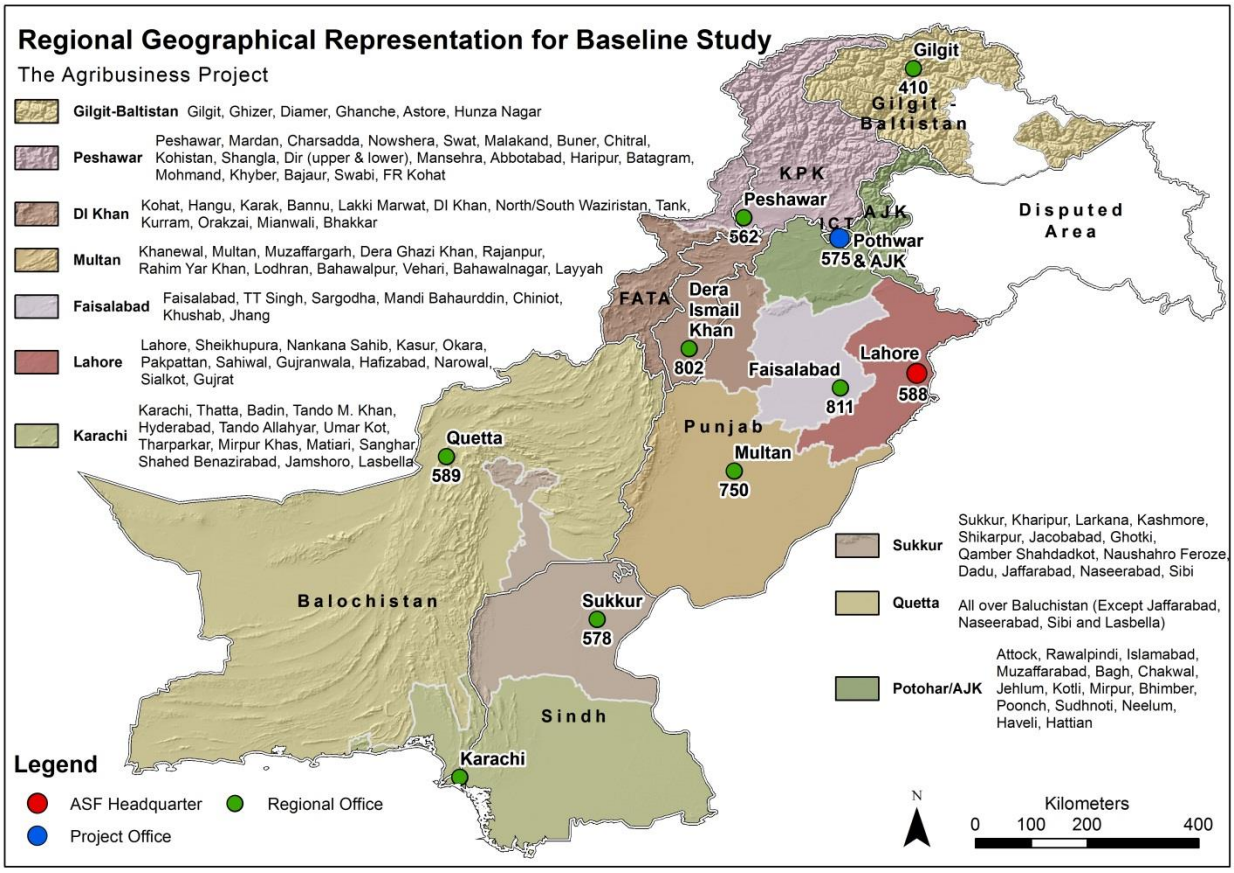
3. STUDY METHODOLOGY

A composite approach i.e. a blend of producers/farmers, processors, market agents and BDS providers' questionnaire, opinion poll and review of secondary data has been adopted to collect required data and information. A coordinated rigorous process led by Agribusiness Project and consultants was followed during development, review and finalization of the baseline plan and processes. Furthermore, the indigenous combined with research based knowledge was considered during the development of this context based i.e. economically, physically, socially and culturally sensitive baseline methodology.

3.1. SCOPE OF THE BASELINE

Baseline study was conducted in the project regions on the basis of findings from PRHA/LA studies. Baseline study comprised of a cross-sectional study of the prioritized value chains in order to get detailed quantitative information at a particular point in time to benchmark prioritized value chains in all project regions.

This baseline report is based on an extensive study conducted throughout Pakistan in all of the Agribusiness Project regions. This study comprises of (i) analysis of available, published reliable and valid secondary data; (ii) PRHA/LA study findings and (iii) primary data collection through field survey.



Map 1: Regional Geographical Representation for Baseline Study

3.2. TECHNICAL FRAMEWORK

Baseline study involved collecting information from the respondents based on USAID Agribusiness Project (Agribusiness Project) indicators which focus on improving conditions for broad-based economic growth, create employment opportunities, and contribute to poverty alleviation by increasing the competitiveness of horticulture and livestock value chains. Specifically the project: (i) strengthen the capacity in horticulture and livestock value chains to increase sales of these value chains to domestic and foreign markets; (ii) strengthen the capacity of smallholders and farmer enterprises involved in these value chains to operate autonomously and effectively; and, (iii) increase horticulture and livestock efficiency and productivity through adoption of agricultural and livestock best practices and technological innovations among targeted beneficiaries.

In the baseline study, Agribusiness Project impact, outcome and output indicators were clubbed into themes to bring the consistence and continuity in the flow of questions in the questionnaires. The themes encompass range of corresponding Agribusiness Project indicators and sub-indicators.These themes include:

i. Respondents' Profile
i. Production Quality and Quantity (PQQ)
ii. Market Linkage (ML)
iii. Business Development Services (BDSs)
iv. Enterprise Management (EM)
v. Employment Generation (EG), and
vi. Employment Income (EI)

3.3. DATA COLLECTION

A total of 6393 respondents were interviewed and data was gathered from 2892 Horticulture Farmer Producers, 1312 Livestock Farmer Producer, 423 Processors, 1209 Market Agents, and 557 Business Development Services (BDS) respectively. The baseline study involved collecting the primary data from: a) farmers/ producers, b) processors, c) market agents, and, d) business development service providers from 10 regions and 22 prioritized value chains.

The data collection tool i.e. questionnaires were developed and pretested by the monitoring and evaluation unit of the project in consultation with regional project staff and consultants. Five different types of questionnaires were developed to obtain data on indicators from different VC actors in horticulture and livestock sectors, namely:

- Horticulture Producers/ Farmers
- Livestock Producers/ Farmers
- Processors (Horticulture and Livestock)
- Market agents (Horticulture and Livestock), and,
- Service providers (Horticulture and Livestock)

These questionnaires entail questions on the project impact, outcome and output indicators. The data was collected using Study Monkey which simplifies the study process and tracks the responses from the field and was easy to re-contact if any respondents were missing.

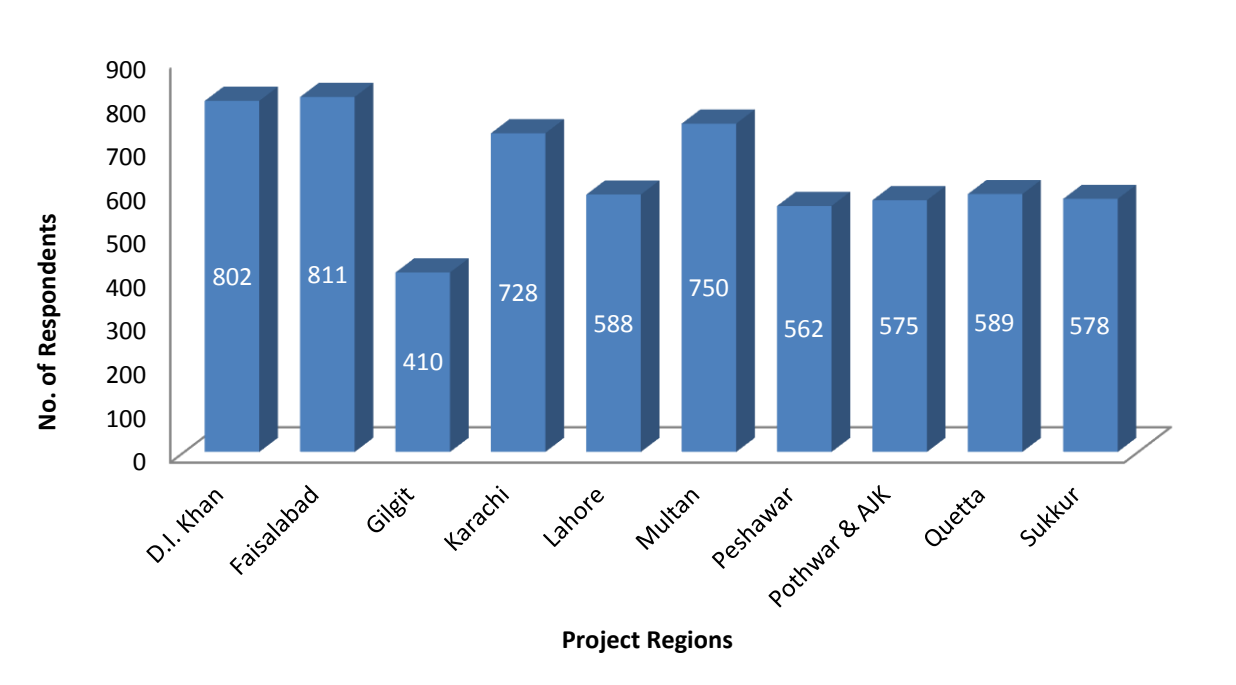
3.4. FORMATION OF BASELINE TEAM

A team of international and local consultants was engaged to work with Agribusiness Project (CNFA and ASF) M&E team in conceptualizing, designing, planning, implementing and reporting the baseline activity. A total of five senior consultants/economists, Agribusiness Project M&E head office and regional teams and sixty-seven (67) enumerators worked under the supervision of international consultant team leader on the baseline activity.
Annex: The list of baseline team is annexed.

3.5.SAMPLING

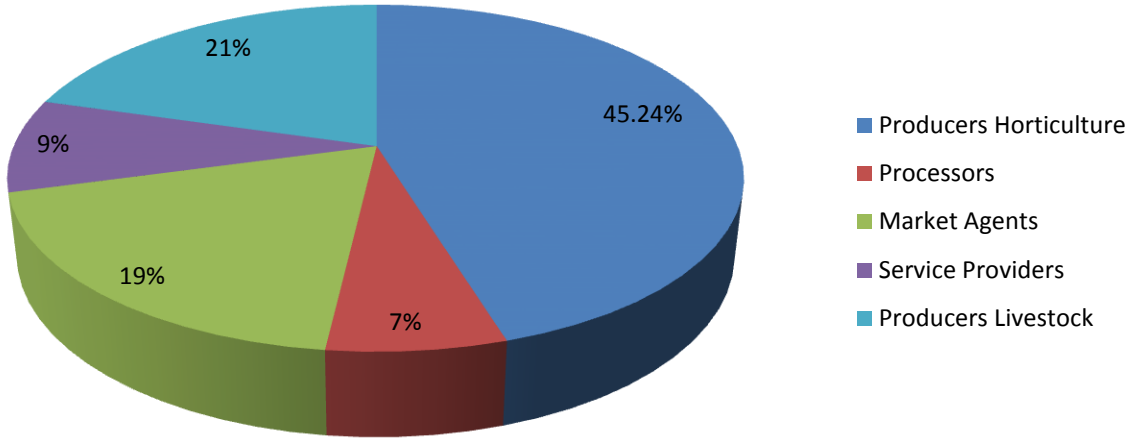
Considering the diverse nature of sub-sectors, a deliberate effort was made to ensure genuine representation from all the ten regions i.e. Lahore (588), Faisalabad (811), Multan (750), Karachi (728), Sukkur (578), Potohwar and AJK (575), Peshawar (562), DIK (802), Gilgit-Baltistan

(410), and Quetta (589). These sampled respondents were taken through wed-based research randomizer.



Graph 1: Region wise respondent's representation for baseline study

Efforts were also made to ensure value chain actor wise representation in horticulture and livestock sector i.e. 65% representation from producers/farmers, 07% representation from processor/value addition, 19% from market functionary/agent and 09% representation from Business Development Service Providers. (Table Annexed)



Graph 2: Percentage of Value Chain Wise Respondents in Baseline

A special consideration was also given to these parameters for ensuing purposive sampling:

i. Agribusiness Project geographical representation i.e. sample from 10 project regions
ii. Representation from horticulture fruits, horticulture vegetables and livestock sectors
iii. Representation from all prioritised VCs and sub-sectors
iv. Representation from various VC actors i.e. input suppliers, farmers/producers, processors, market agents, & business development service provider
v. Representation of small, medium and large VC actors
vi. Ratio of VCs and sub-sectors with high, medium and low influence on Agribusiness Project indicators

The respondents for the baseline data collection were selected based upon the following criteria:

i. Have direct and business association with Livestock and/or Horticulture sector,
ii. Must be an entrepreneur (micro, small, medium and/or large); and not a worker,
iii. Must be engaged in sector related activity on commercial basis (buying-selling), and not for domestic or subsistence level,
iv. Must be able and willing to respond, and an honest response; and not a mad, mentally retarded, angry, ignorant person ,
v. Must be performing business legally; not doing corruption - tax evasion, smuggling, or another illegal business operation

In addition to the above mention criteria, preference was given to registered farmers/producer, entrepreneurs or a service provider, who have two or more employees/ workers, and those who maintain business record and are willing to expand business/ have business plan.

3.6. DATA COLLECTION APPROACH

The data has been collected by regional data collection teams that include supervisors and enumerators. A prudent and systematic scrutiny process has been followed while selecting these data collection teams for enumeration work. Moreover, an extensive training on study tools, methodology, sample size, research ethics and team work, augmented by hands-on data collection exercise, has been conferred, by Agribusiness Project M&E head office staff, to equip these teams with necessary skills required for data collection. Above-all, Agribusiness Project head office M&E team and regional M&E teams remained extensively involved in logistically facilitating, technically guiding and assuring quality.

The individual respondents for the baseline activity were not registered and know to the project; therefore, snowball sampling approach was used to identify the respondents. Initially the data collection team identified a group of farmer respondents in a VC who are known members of the population to create a Starting Point. The starting respondents comprises an existing list that was identified during the PRHA/ LA exercise, but these lists tend to be fairly homogeneous, such as the Agribusiness Project potential respondent, of a VC sub-sector.

3.7. DATA ANALYSIS

The questionnaire-compatible software i.e. Survey-monkey and hardware i.e. Samsung Glaxy Y/ tabs were used and applied for data entry, cleaning and analysis. For extensive analysis, together with survey-monkey, MS Excel/pivoting was also been used. The tabulation and graphic presentation of analyzed data mainly involved MS Excel applications.

The collected data was analyzed to produce a report that well-matches with the baseline objective of benchmarking the Agribusiness Project impact, outcome and output indicators.

4. OVERVIEW OF HORTICULTURE AND LIVESTOCK SECTOR

The baseline activity involved collection and analysis of secondary data from reliable resources on the macro level project indicators including area under cultivation, total production and export to international market. The secondary data supplemented the baseline primary data through a comprehensive triangulation exercise.

4.1. ECONOMY OF PAKISTAN:

Despite numerous challenges, the economy performed better in 2011-12 than many developed and developing economies. The challenges included sharp increase in fuel and commodity prices, recessionary trend globally and weak inflows. Domestically, economy was struck by heavy rains in Sindh and parts of Balochistan costing $ 3.7 billion[2]. Notwithstanding these challenges, the economy is now showing a sign of recovery, the Gross Domestic Product (GDP) growth for 2011-12 has been estimated at 3.7 percent as compared to 3.0 percent last year as per economic survey of Pakistan. The Agriculture sector recorded a growth of 3.1 percent against 2.4 percent last year. The Large Scale Manufacturing (LSM) growth is 1.1 percent during 2011-12 against 1 percent last year. Overall, the commodity producing sectors (CPS) and especially the Agriculture sector have performed better. The Services sector recorded growth of 4.0 percent in 2011-12. This performance has been achieved despite severe monsoon rains triggered floods of an unprecedented scale in Southern Pakistan, engulfing 23 districts of Sindh Province and adjoining areas of northern Balochistan causing damages to crops, infrastructure and human settlements, thus adversely affecting national economy.

4.2. SECTORAL SHARE IN GROSS DOMESTIC PRODUCT (GDP)

The share of Agriculture sector was 21.1 percent of GDP during the fiscal year 2011-12. There has been a clear shift away from the Commodity Producing Sector (CPS) which accounted for almost 62 percent of GDP in 1969-70 to 46.5 percent in 2011-12, a decline of 15.5 percent, which is offset by the increase in the share of the services sector. The share of the agriculture sector has been reduced from 38.9 percent in 1970 to 21.1 percent of GDP in 2012. The decline in the share of agriculture in GDP indicates that the non-agriculture sectors grew more quickly as compared to the agriculture sector. An analysis of performance of each of the sectoral share in GDP is given in Table-1 below.

[2] *According to WB and ADB, Damage and Needs Pakistan Economic Survey 2011-12 Assessment (DNA) Report, approx, 9.6 million people were affected in Sindh & Balochistan as a result of these rains. The total damages amount to Rs. 324.5 billion (US$ 3.7 billion) and the rehabilitation and cost of recovery is estimated at Rs. 239 billion (US$ 2.8 billion). This is in addition to damages of $ 10 billion to the economy during 2010 floods.*

Table-1: Sectoral share in Gross Domestic Product[3]

Table 1: Sectorial Share in GDP

Sectorial Share in Gross Domestic Product(GDP) (At Constant Factor Cost in Percentage)						
	1999-00	2004-05	2008-09	2009-10	2010-11	2011-12
Commodity Producing Sector	**49.3**	**48.7**	**47.1**	**47.6**	**46.7**	**46.46**
1. Agriculture	25.9	22.4	21.8	21.2	20.9	21.1
Major crops	9.6	8.4	7.3	6.9	6.5	6.71
Minor crops	3.5	2.7	2.5	2.2	2.3	2.13
Livestock	11.7	10.6	11.3	11.4	11.5	11.61
Fishing	0.4	0.3	0.4	0.4	0.4	0.37
Forestry	0.7	0.4	0.3	0.3	0.2	0.24
Industrial Sector	**23.3**	**26.3**	**25.3**	**26.4**	**25.8**	**25.4**
2. Mining & Quarrying	2.3	2.7	2.5	2.5	2.5	2.4
3. Manufacturing	14.7	18.3	18.2	18.6	18.7	18.65
Large scale	9.5	12.9	12.1	12.3	12.1	11.9
Small Scale	5.2	4.1	4.7	4.9	5.1	6.74
4. Construction	2.5	2.1	2.1	22.6	2.5	2.15
5. Electricity & Gas Distribution	3.9	3.2	2.5	2.8	2.2	2.19
Services Sector	**50.7**	**51.3**	**52.9**	**52.4**	**53.3**	**53.54**
6. Transport, Storage and communication	11.3	10.4	10.2	10.1	10	14.12
7.Whole sale and retail Trade	17.5	18.7	16.8	17	17.2	17.12
8. Finance and insurance	3.7	4	5.7	4.9	4.5	4.79
9. Ownership of dwelling	3.1	2.9	2.8	2.7	2.7	2.72
10. Public Admin. & defence	6.2	5.9	6.1	6	6.6	6.62
11. Other services	9	9.5	11.3	11.8	12.3	12.65
12. GDP(Constant Factor Cost)	100	100	100	100	100	100
Source: Economic Adviser`s Wing, Finance Division						

4.3. AGRICULTURE SECTOR

The Agriculture sector[4] is a key sector of the economy which recorded a growth of 3.1 percent (2011-12) against 2.4 percent in 2010-11. Agriculture generates productive employment

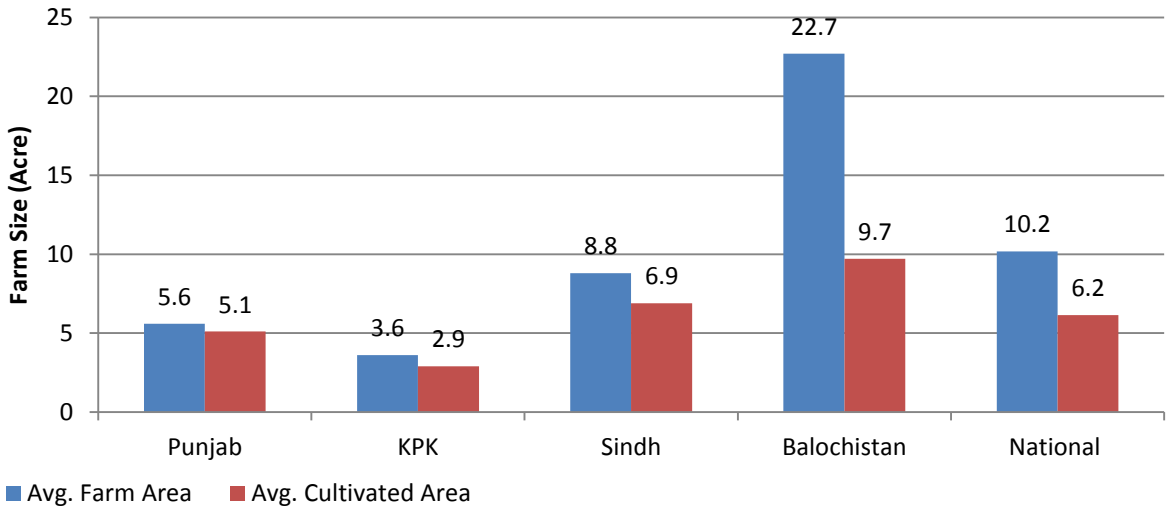
[3] *Source: Economic Survey of Pakistan for 2011-12*

[4] *The agriculture sector consists of crops, livestock, fishing and forestry sub-sectors*

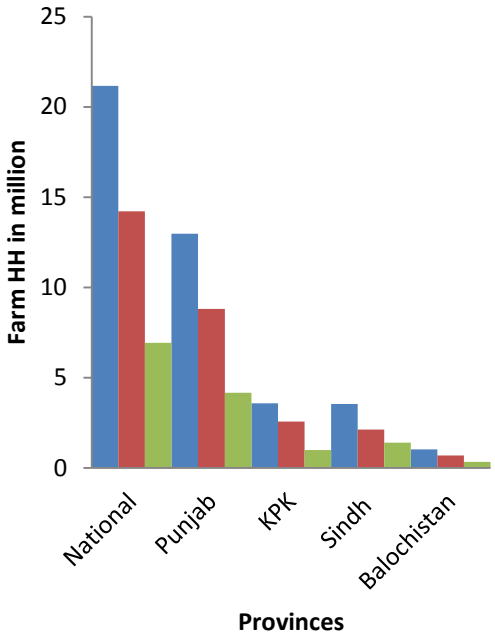
opportunities for 45 percent of the country's labour force and 60 percent of the rural population depends upon this sector for its livelihood. It has a vital role in ensuring food security, generating overall economic growth, reducing poverty and the transforming towards industrialization. Major Crops registered an accelerating growth of 3.2 percent compared to a negative growth of 0.2 percent last year. The major crops including Cotton, Sugarcane and Rice witnessed growth in production of 18.6 percent, 4.9 percent and 27.7 percent respectively. However, preliminary estimates of wheat production showed a negative growth due to late receding of flood waters in lower Sindh, which hampered the timely cultivation of wheat crop. Livestock has witnessed a marginally higher growth of 4.0 percent while Fisheries and forestry sectors showed a growth of 1.8 percent and 0.95 percent respectively.

The average farm size and average cultivated area of farm varies in provinces of Pakistan. The national average of farm size and cultivated area of farm is 10.2 acres and 6.2 acres respectively. Balochistan has highest average farm sizes followed by Sindh and Punjab provinces, while average farm size in KPK province is the lowest as shown in Figure-1. The comparison also shows that 92% of farm area is cultivated in Punjab, followed by 80% in KPK, 77% in Sindh and only 43% in Balochistan.

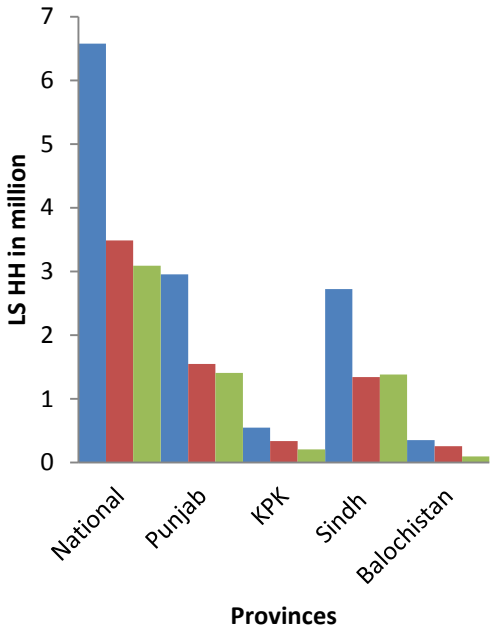
The average household size of 9.3 persons is highest in Balochistan province, followed by 8.2 persons and 7.5 persons per household in KPK and Sindh provinces respectively, while Punjab provinces has lowest household size of 6.6 persons.



Graph 3: Average Farm Size in Pakistan (Acres)

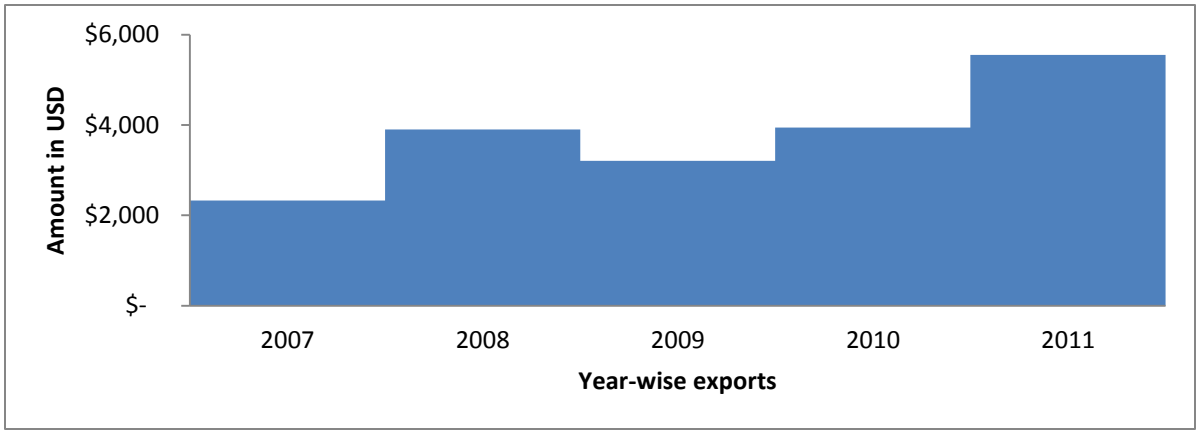


Graph 4: No. of Agriculture Households



Graph 5: No. of Livestock Householders

Competitiveness remains a key issue. Pakistan's global ranking is not encouraging, although it has improved from 123 to 118 in Global Competitiveness Index5 during 2011-12. Pakistan's share of world exports, declined by 23% from 0.16% in 2002, to 0.13% in 2008. The world trade organization data shows an increase in the exports of agriculture products from Pakistan during the last five years as per Figure-1. Pakistan' share of Agriculture Products in World Trade (Source: World Trade Organization)



Graph 6: Pakistan Share of World's Export

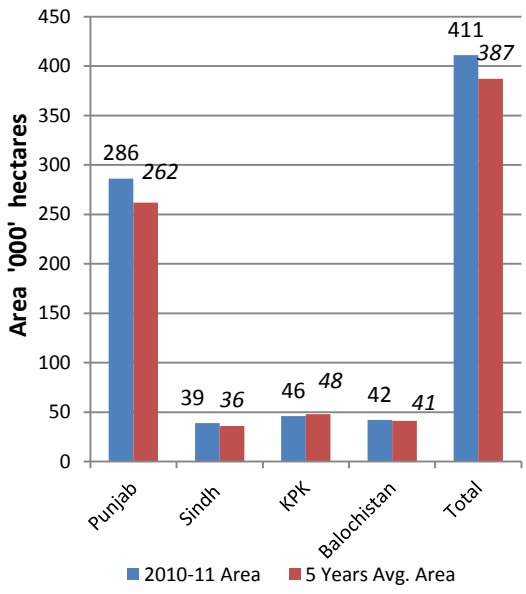
[5] *The Global Competitiveness Index 2011-2012 rankings - © 2011 World Economic Forum | www.weforum.org/gcr*

4.4. HORTICULTURE SECTOR

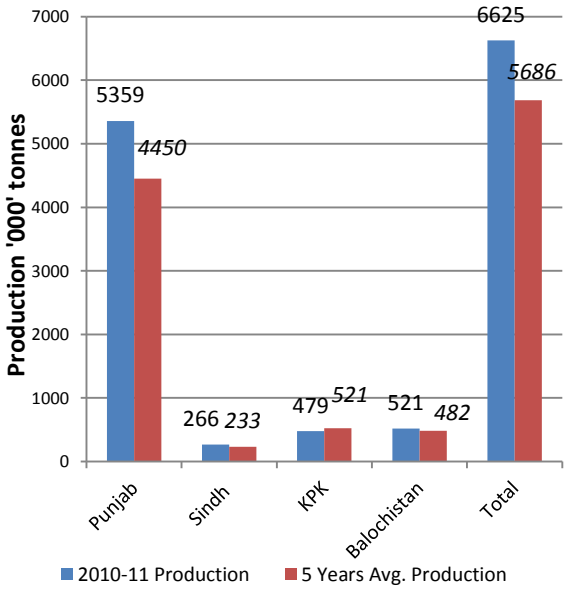
Sixty percent (60%) of the rural population in Pakistan depends on agriculture for its livelihood. Overall, Agriculture contributed twenty one point one (21.1%) percent to the Gross Domestic Product (GDP) recording a three point one (3.1%) percent growth and generated productive employment opportunities for 45 percent of the whole country's labour force in 2011-2012.

Some of the fruits grown have great potential for exports, which are available in volumes, varieties and are of rich flavor. The yearly production of fruits, vegetables and spices is 12 million tons approximately. The important fruits include citrus 2 million tons, mangoes 1.89 million tons, apples 0.526 million tons and Banana, Apricot, Almonds, Grapes and Guava. Important vegetables and spices include potato, onion, tomato, chillies, garlic and a large variety of leafy, root and other crops. In recent years, the floriculture industry has significantly emerged as a viable non-traditional produce, particularly, in the urban centers of the country. A large number of flowers and foliage plants are now being grown for ornamental purposes.

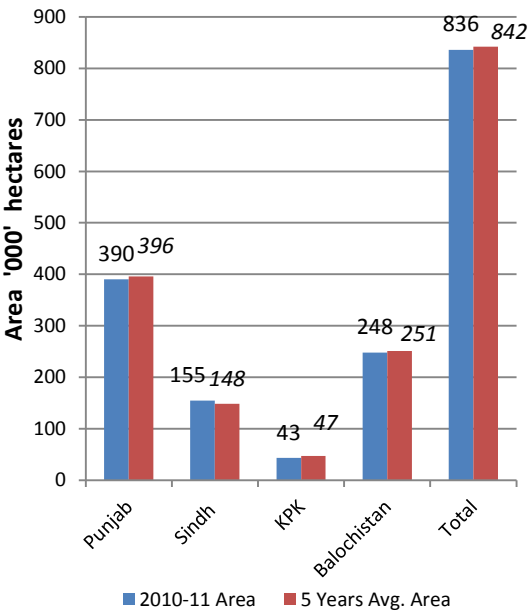
Horticulture i.e. fruits, vegetables and floriculture, is one of the dynamic sub-sector with tremendous potential of growth and expansion. The province-wise area under fruits and vegetables and production for 2010-11 and an average of last five years is given below in the graphs. A total of 23,400,000 hectares is cultivable land under different crops in Pakistan. Out of this two percent (2%) or (411,000 hectares) of cultivable land is under the vegetables while four percent (4%) or (836,000 hectares) is under fruits as per agriculture statistics for 2010-11. A comparison and province-wise break-up of cultivable land under fruits and vegetables during financial year 2010-11 with that of average in last five years (2005-2009) shows an increase in the area under vegetables .



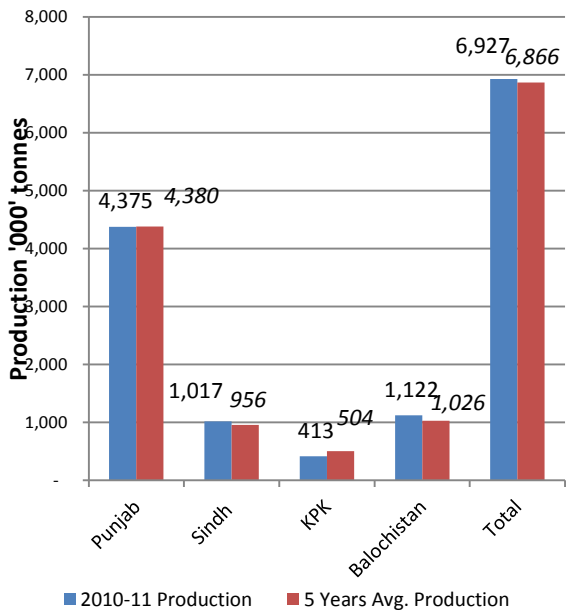
Graph 7: Vegetable Area '000' hectares



Graph 8: Vegetables Production '000' tonnes



Graph 9: Fruits Area '000' hectares



Graph 10: Fruits Production '000' tons

Pakistan produced about 13.6 million tons of fruit and vegetables, during 2010-11, which is more than five years average production of fruits and vegetables of 12.6 million tons. The three top fruit in terms of production are citrus fruit followed by mango and dates. Potato, onion and tomatoes are leading among vegetables and condiments. The area under fruits and vegetables production has increased from 5 years average of 1,229,000 hectares to 1,247,000 hectares during 2010-11.

Horticulture produce holds a huge market for exports. The relative importance of this sector can be gauged with high growth rate of exports of fruits and vegetables from Pakistan due to ever increasing demand in existing and new international markets. Even though a large variety of fruits and vegetables are grown domestically, Pakistan's share in global exports is poor. An estimated one-third of total production is lost due to poor post-harvest facilities and weak infrastructure. The outdated farming practices and poor crop varieties mean the produce does not reach international standards; all these factors have affected the growth of horticulture exports.

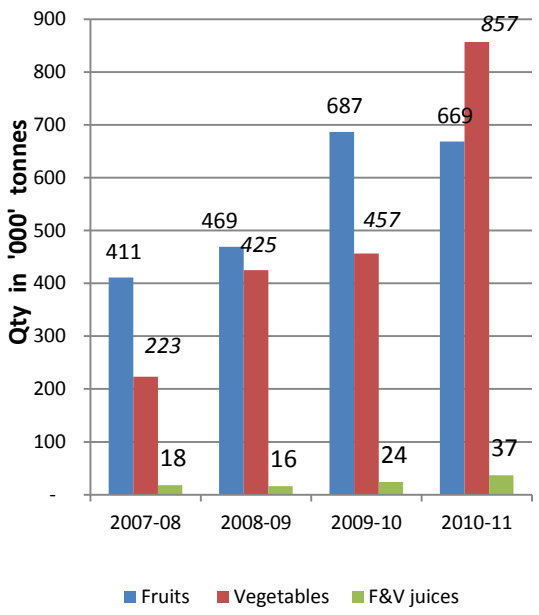
Table 2: Pakistan' Exports

Particulars	2010-11	2009-10	%age change	Absolute changes
Fruits	278.30	223.27	25%	55.03
Vegetables	254.21	112.78	125%	141.43
F&V Juices	30.82	17.71	74%	13.11
Overall	563.33	353.76	59%	209.58

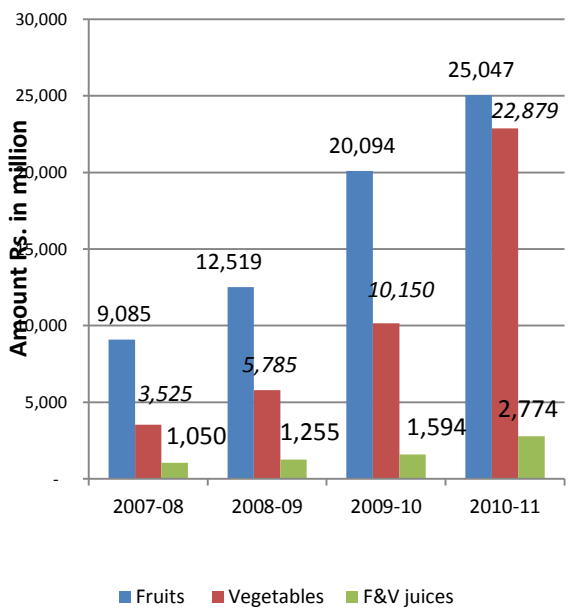
The export of vegetables, fruits and fruits and vegetables (F&V) juices witnessed a 59% cumulative increase during 2011-12; in absolute terms the exports increased by $ 209.6 million during 2010-11 over the same period last year. Pakistan during 2009-10 exported fruits and vegetables worth USD 563.33 million. This include export of fruits amounting to USD 278.30, vegetables worth USD 254.21 million and F&V juices costing USD 30.82 million. The details of horticulture exports are given in Table-3 and figure 9 and figure-10below.

Table 3: Exports of Fruits & Vegetables

	Qty.`000` Tones (Value In Million Rs)							
	2007-08		2008-09		2009-10		2010-11	
Group/ Commodities	Qty	Value	Qty	Value	Qty	Value	Qty	Value
Fruits & Vegetables	**652**	**13659.8**	**909.7**	**19558.6**	**1167.2**	**31837.4**	**1562.8**	**50699.6**
(i) Fruits	411.2	9084.8	469.3	12518.9	686.6	20093.9	668.7	25046.7
(ii) Vegetables	222.9	3524.9	424.8	5785.3	456.5	10149.9	856.9	22878.9
(iii) Fruits & vegetables Juices	17.9	1050.1	15.6	1254.5	24.1	1593.6	37.2	2774



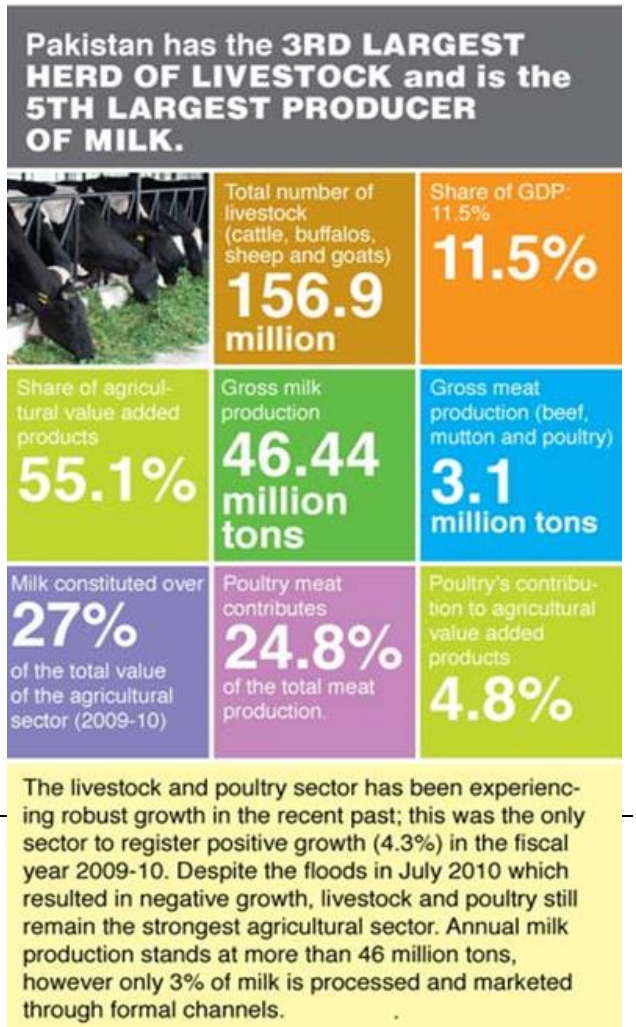
Graph 11: Fruits and Vegetables Export



Graph 12: Fruits and Vegetables Export

4.5. LIVESTOCK SECTOR:

Livestock contributed approximately 55.1 percent to agricultural value added and 11.5 percent to GDP during 2011-12, against 54.6 percent and 11.6 percent during the same period last year. Gross value added of the livestock sector at constant factor cost has increased from Rs. 672 billion (2010-11) to Rs. 700 billion (2011-12); showing an increase of 4.0 percent as compared to the previous year. The major products of livestock are milk and meat. The production of these products for the last three years is given in Table 4 below, while the production of other livestock products over the last three years is demonstrated in Table-6 below. The exports of meat and meat preparation products showed 16% increase or absolute increase by $ 19.6 million during 2011-12 as compared to financial year 2010-11



The export of the meat (beef, mutton and camel meat) has increased from US$108.54 million (2010-11) to US $123.61 million in 2011-12, showing an increase of 13.9 percent. During 2011-12, production of milk and meat (beef, mutton and poultry) was 47,951 and 3,232 thousand tons respectively. This performance is attributable to increase in number of livestock, better veterinary health coverage and better livestock management. Pakistan is the fourth largest milk producing country in the world but faces spoilage losses of milk alone at approximately 15% causing annual loss of Rs 169 billion. The lack of infrastructure such as cooling facilities at farm or collection points and transportation of milk are the prime cause for under development of the sector.

Table 4: Milk and Meat Production (Numbers in 000 tons)

Species	Units	2009-10	2010-11	2011-12
Milk(Gross Production)	000 Tons	44978	46440	47951
Cow	"	15546	16133	16741
Buffalo	"	27848	28694	29656
Sheep	"	36	36	37
Goat	"	739	759	779
Camel	"	808	818	829
Milk (Human Consumption)	000 Tons	36299	37475	38690
Cow	"	12437	12906	13393
Buffalo	"	22279	22955	23652
Sheep	"	36	36	37
Goat	"	739	759	779
Camel	"	808	818	829
Meat	000 Tons	2965	3095	3232
Beef	"	1655	1711	1769
Mutton	"	603	616	629
Poultry Meat	"	707	767	834
Source : Ministry of National Food Security and Research				

The population growth, increase in per capita income and the potential for export is fueling the demand of livestock and livestock products. The rise in production cost has increased the retailer's and consumer's price *index for milk, yogurt, meat, eggs, and other items. The overall livestock development strategy resolves to foster "private sector-led development", with the public sector providing an enabling environment through policy interventions and playing a capacity building role for improved livestock husbandry practices. The emphasis will be on improving per unit animal productivity and moving from subsistence to market oriented and then to commercial livestock farming in the country to meet the domestic demand and surplus for export.

The livestock sector occupies a unique position in the economic development of Pakistan. It provides a net source of foreign earnings. The livestock has been the subsistence sector dominated by small holders to meet their needs of milk, food security and daily cash income. Therefore, livestock is considered a more secure source of income for the small farmers and landless poor; and, is a source of employment generation at the rural level. It also helps to reduce income variability, especially in cases of crop failure due to a variety of causes. The Livestock is central to the livelihood of the rural poor in the country and can play an important role in poverty alleviation. It can uplift the socioeconomic condition of Pakistan's rural masses. The livestock population for the last three years is given in Table 6 below: The estimated production of the livestock products bg is given in Table-7 below.

Table 5: Livestock Population (Numbers in millions)

Species	2009-10	2010-11	2011-12
Cattle	34.3	35.6	36.9
Buffalo	30.8	31.7	32.7
Sheep	27.8	28.1	28.4
Goat	59.9	61.5	63.1
Camel	1.0	1.0	1.0
Horeses	0.4	0.4	0.4
Asses	4.6	4.7	4.8
Mules	0.2	0.2	0.2

Table 6: Estimated Production of Livestock Products

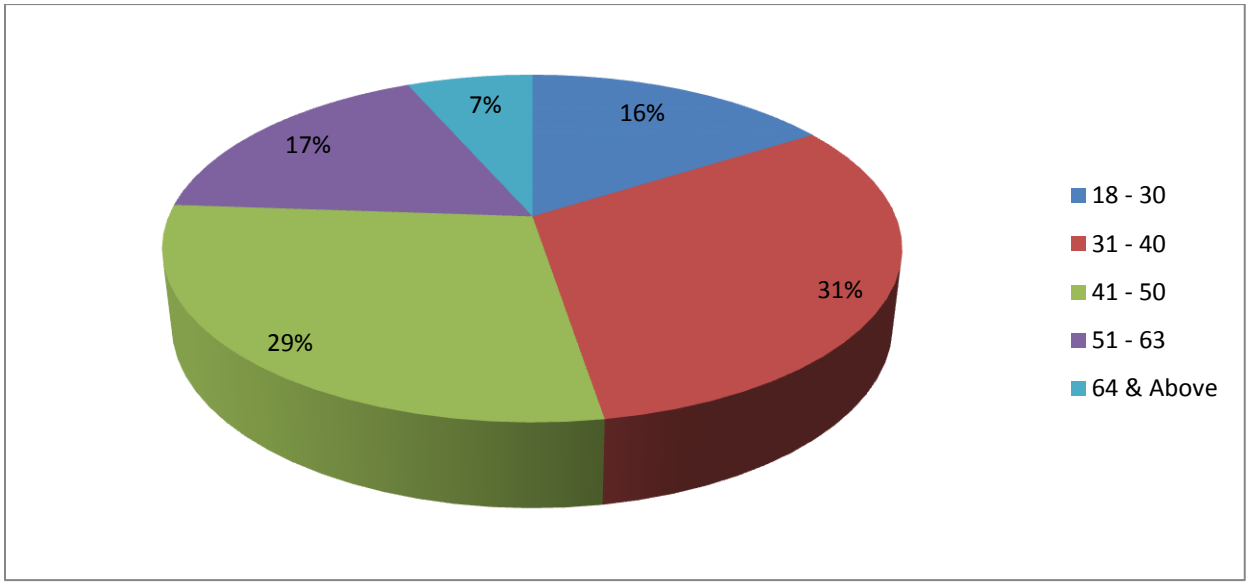
Fiscal Year	Milk	Beef	Mutton	Poultry Meat	Wool	Hair	Bones	Fat	Blood	Eggs	Hides	Skins
2008-09	35160	1601	590	652	41.5	22	692.4	221.6	55.4	11258	12.6	46.3
2009-10	36299	1655	603	707	42	22.6	713.4	228.1	56.8	11839	13	47.4
2010-11	37475	1711	616	767	42.5	23.2	735.1	234.8	58.3	12857	13.5	48.5
2011-12	38690	1769	629	834	43	23.8	757.5	241.7	59.8	13144	13.9	49.6
Source : Ministry of National Food Security and Research												

5. RESULTS & FINDINGS - HORTICULTURE SECTOR

5.1. RESPONDENTS' PROFILE

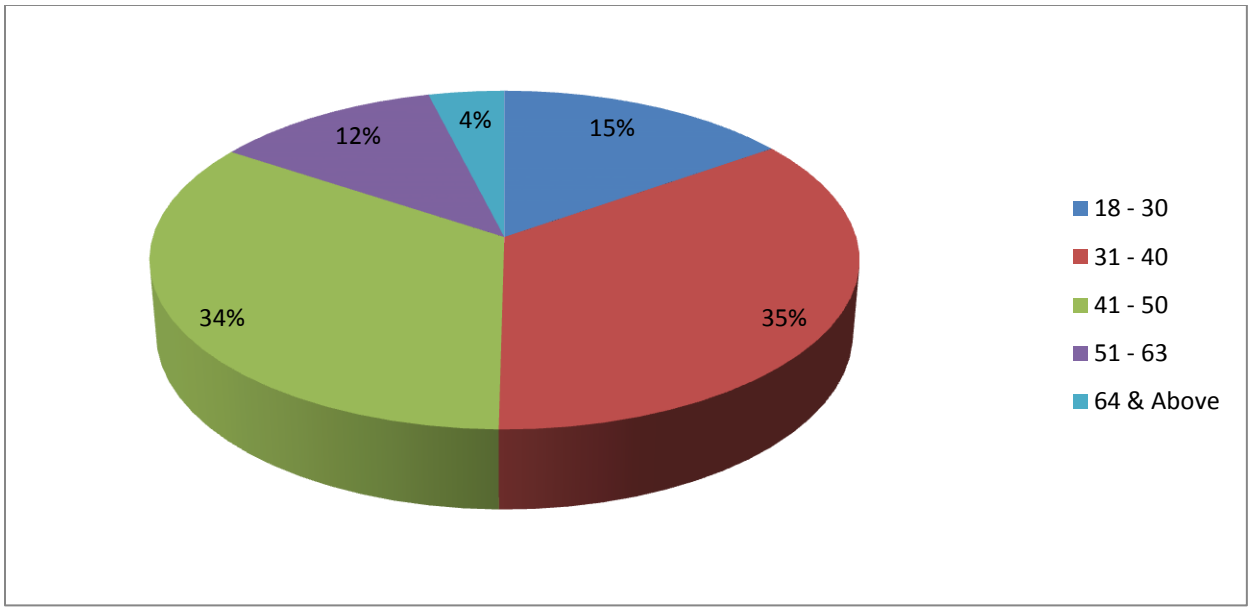
The respondent profile includes information about respondent's age, gender, location, value chain and type of role in the value chain.

5.1.1. Respondents Age



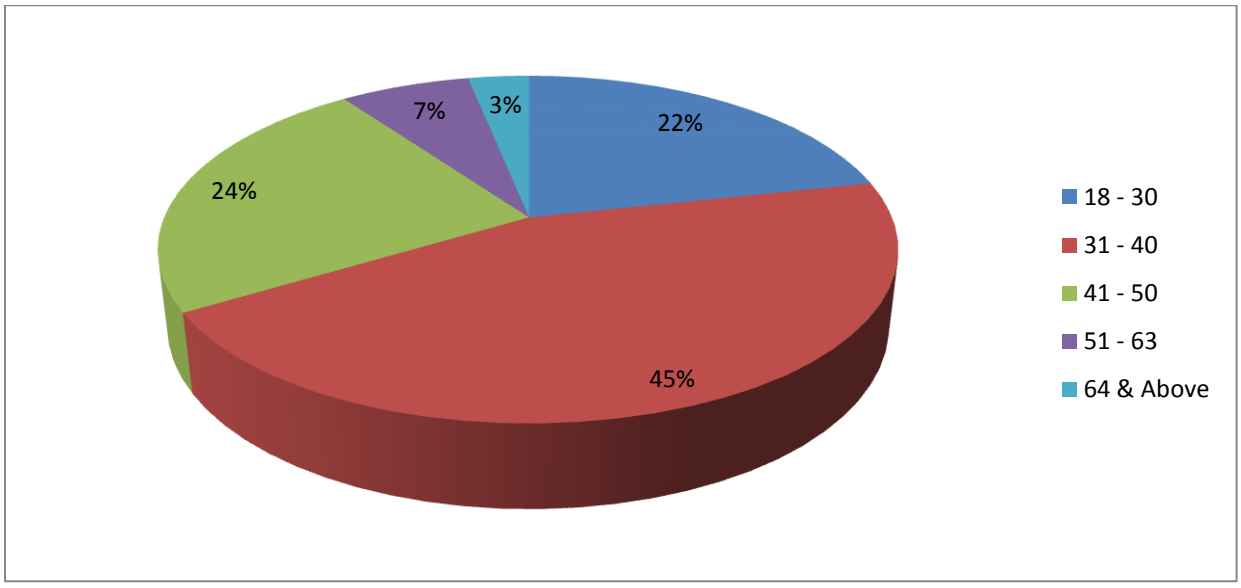
Graph 13: - Producers - Age Wise Percentage of Respondents

Baseline interviews have been conducted from 2893 farmers cultivating the twenty (20) priority horticulture value chains. Out of the interviewed farmers, 60% are 31-50 years old. 17% are 18-30 and 17% are in 51-63 age bracket. Only 6% are 64 & above.



Graph 14: Processors - Age Wise Percentage of Respondents

A similar age distribution has been observed in processors. Of the 129 interviewed, 69% were 31-50 years old. 15% and 12% are 18-30 and 51-63 years, respectively. Only 4% are 64 years old and above.

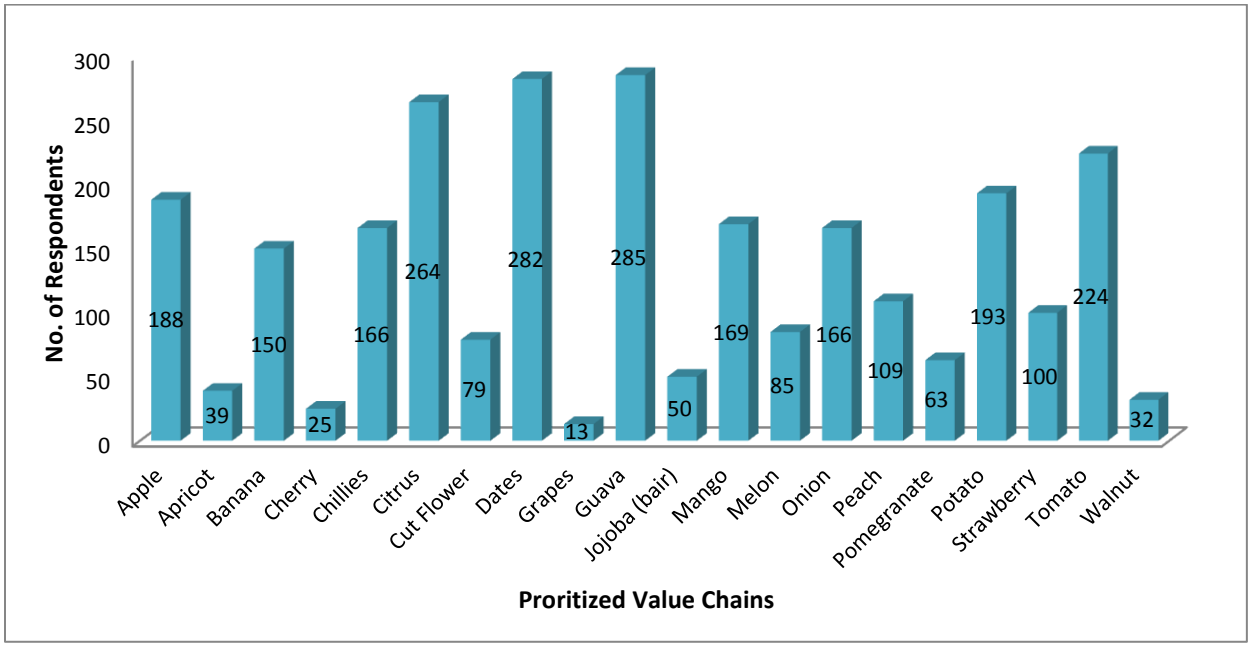


Graph 15: Market Agent - Age Wise Percentage of Respondents

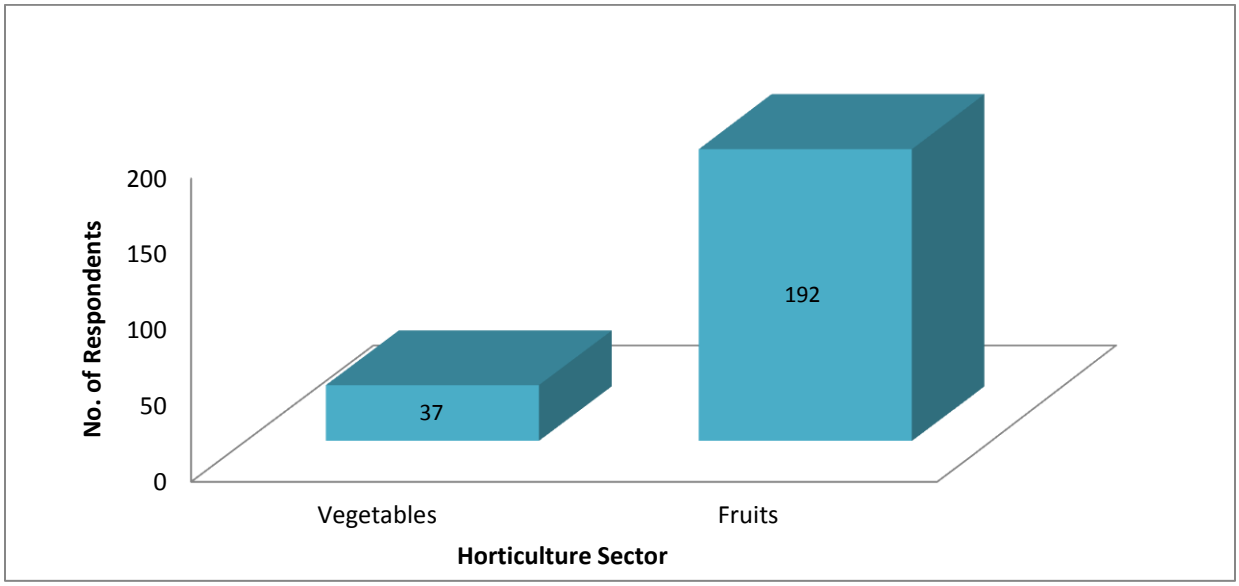
Of the total interviewed, 21% are 18-30 years of age while 40% were 31 to 40 years old. Another 26% were between the age of 41-50 years and 3% are from 64 and above. The finding shows that the majority of the market agents are taking the business professionally.

5.1.2. Value Chains and VC Actor Wise Respondents

Sample size was derived by keeping in view of the existence of the prioritized value chains and the number of the farmers associated with such, as well as the spread of the value chain in different geographical areas in Pakistan. For example, majority of the farmers interviewed are from the citrus, dates and guava value chain because of the presence of these products in most part of the Pakistan.

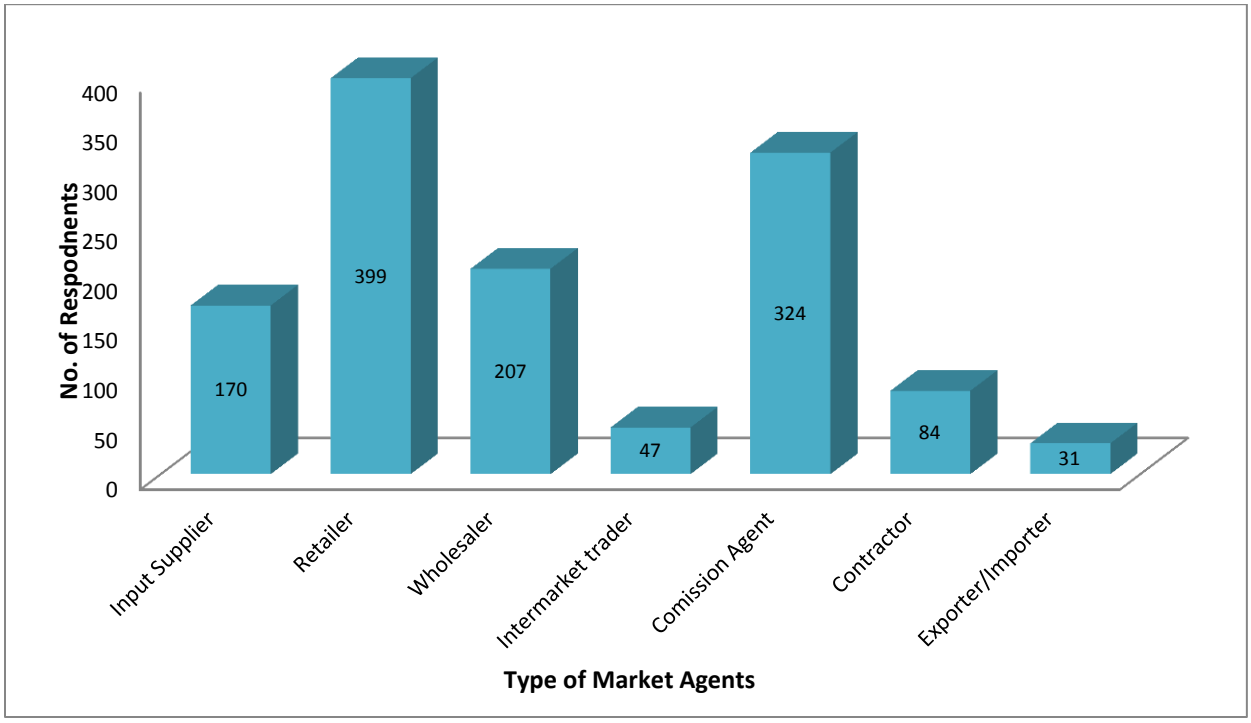


Graph 16: Farmer - VC Wise Number of Respondents



Graph 17: Processors - No of Respondents

The number of respondents also reflects the situation in project regions. There were 192 fruit processors interviewed as against only 37 of vegetables. The volume of produce and number of fruit value chains are clearly more than those of vegetables.



Graph 18: Market Agents - Type and No. of Respondents

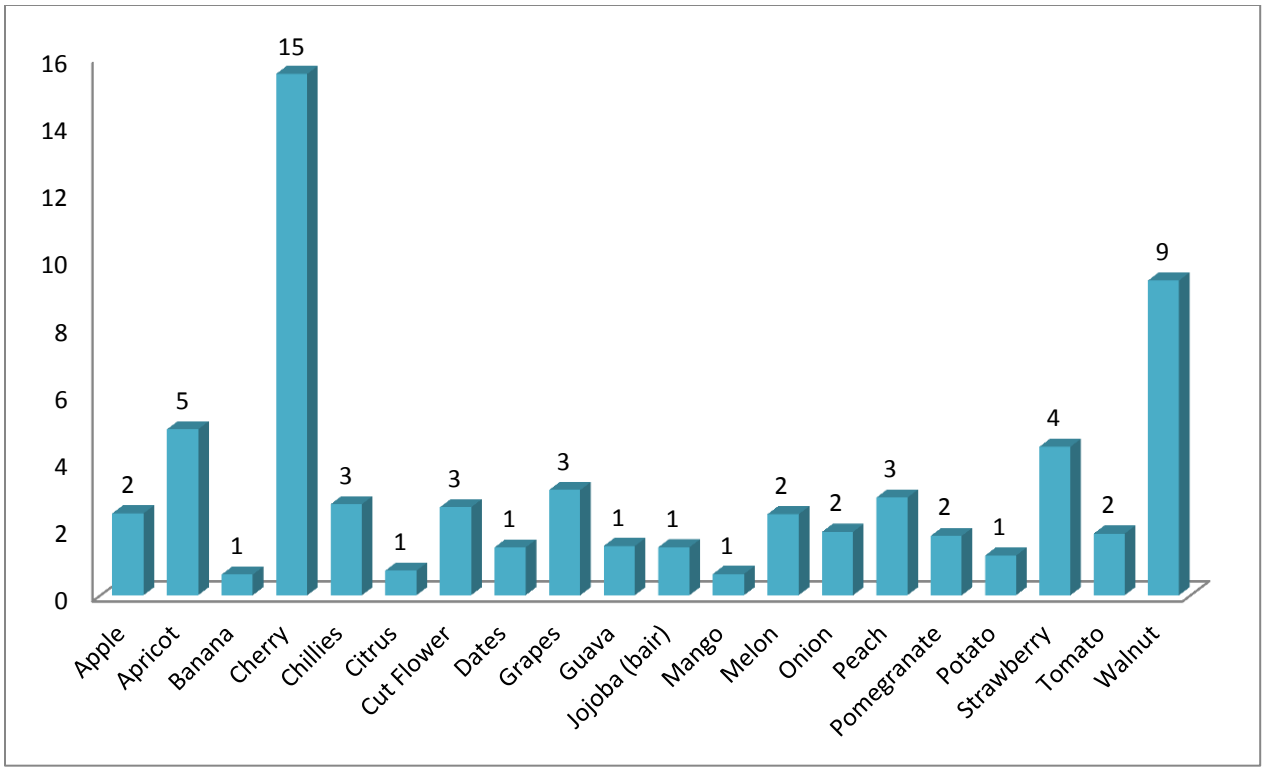
Similarly, majority of the market agents interviewed were retailers and commission agents. This shows the nexus of commission agents and retailers is strong and established.

5.2. INCOME GENERATING OPPORTUNITIES

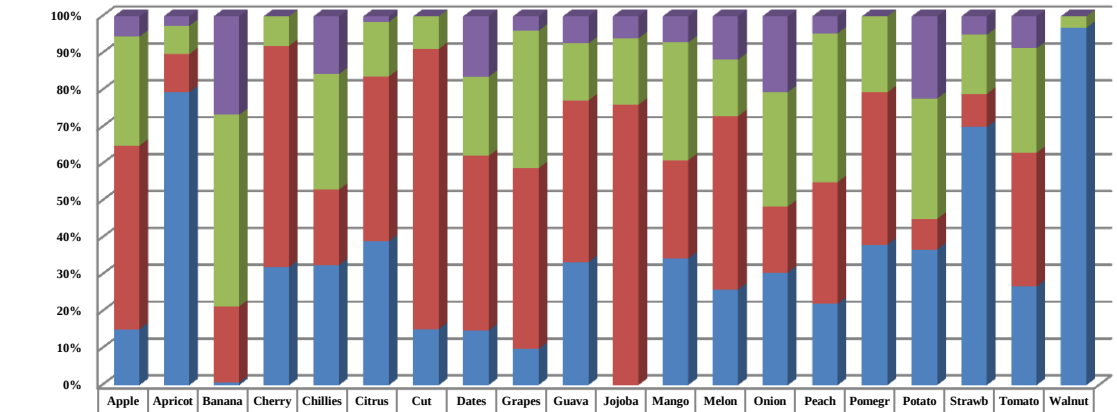
In the baseline study, data has been gathered for all livestock and horticulture value chains on which assistance will be provided through USAID Agribusiness Project. This data gathered during the first year of the project will serve as a benchmark for determining the impact on the income and employment of beneficiaries.

5.2.1. Value Chain Wise Full-time Equivalent Jobs

To get the baseline information regarding full time equivalent jobs, the interviewed farmers were asked about the number of persons working in the farms directly as full-time labor. It was found that potato and chilies value chain involve more full time labor than the others. It is worth mentioning that most of the farmers involve women and children in these value chains for the purpose of picking, grading and storing.

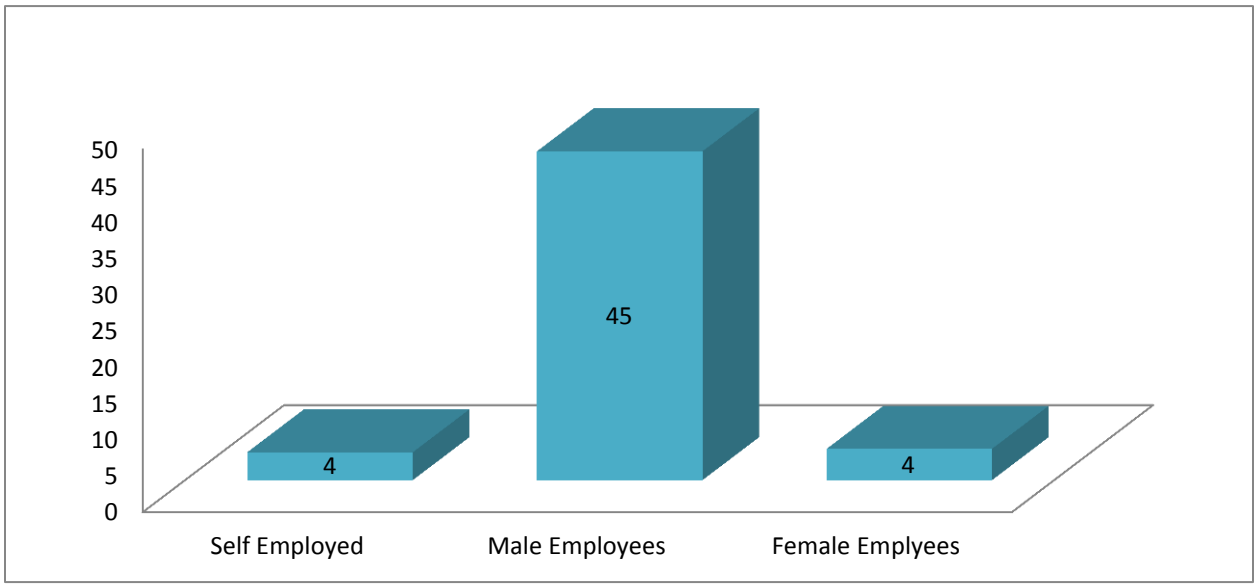


Graph 19: Producers - Value Chain Wise per Acre Employment



	Apple	Apricot	Banana	Cherry	Chillies	Citrus	Cut Flower	Dates	Grapes	Guava	Jojoba (bair)	Mango	Melon	Onion	Peach	Pomegranate	Potato	Strawberry	Tomato	Walnut
50 and above	6%	3%	27%	0%	16%	2%	0%	16%	4%	7%	6%	7%	12%	21%	5%	0%	22%	5%	9%	0%
21-50	30%	8%	52%	8%	31%	15%	9%	21%	37%	15%	18%	32%	15%	31%	40%	21%	33%	16%	28%	3%
6-20	50%	10%	21%	60%	20%	45%	76%	47%	49%	44%	76%	27%	47%	18%	33%	41%	8%	9%	36%	0%
1-5	15%	79%	1%	32%	33%	39%	15%	15%	10%	33%	0%	34%	26%	31%	22%	38%	37%	70%	27%	97%

Graph 20: Value Chain Wise Employment Ranges in Percentage



Graph 21: Processors - Average Number of Labor Employed Per Processor

With processors interviewed, the average full time male employees are 45 compared to only 4 female employees. Average self-employed is 4 per processor. Here the involvement of women was also found limited due to the lack of exposure and income generating opportunities, both of which could be addressed by the project.

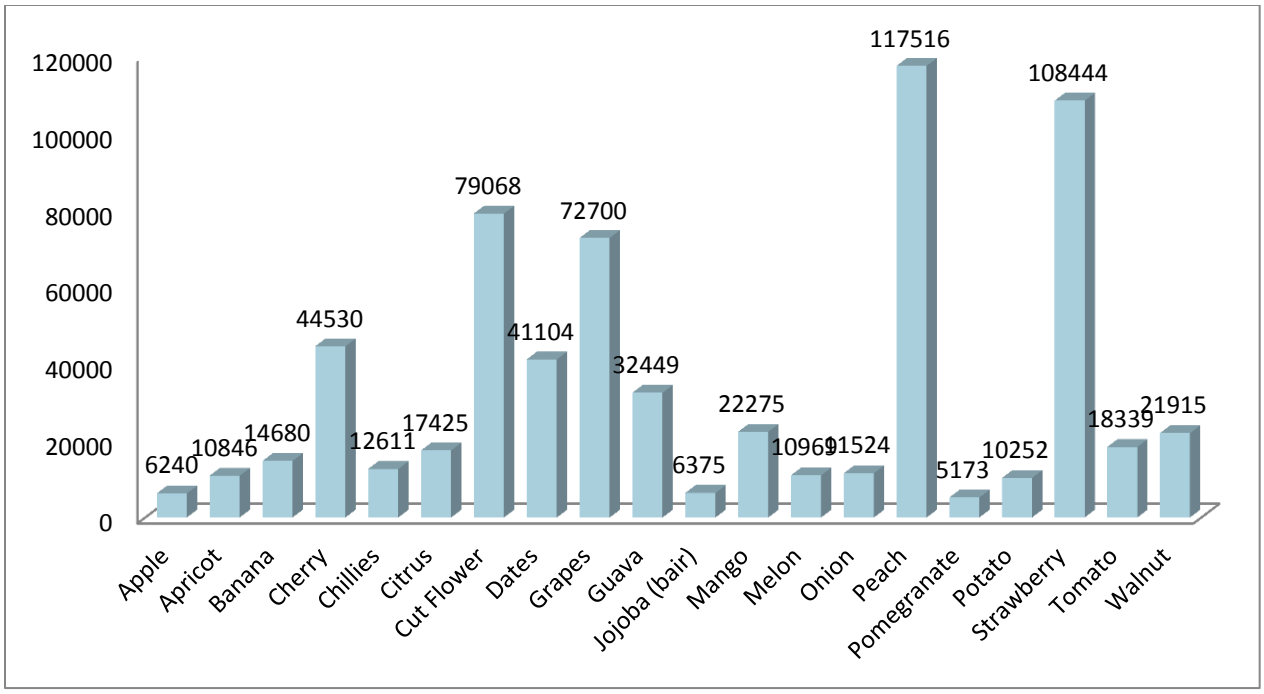
Graph 22: Market Agent - Avg. Labor Employed

Market agents also employ direct and indirect labor in dispensing their role in the value chain. Baseline finding shows that market agents interviewed have generated an average of eight (8) direct employments and six (6) indirect employments. The limited response for indirect employment might be due to limited knowledge/ information of the market agents about the overall situation of indirect employment in the area. However, involvement of women as employees of market agents both directly and indirectly was reported nominal.

5.2.2. Value Chain Wise Income

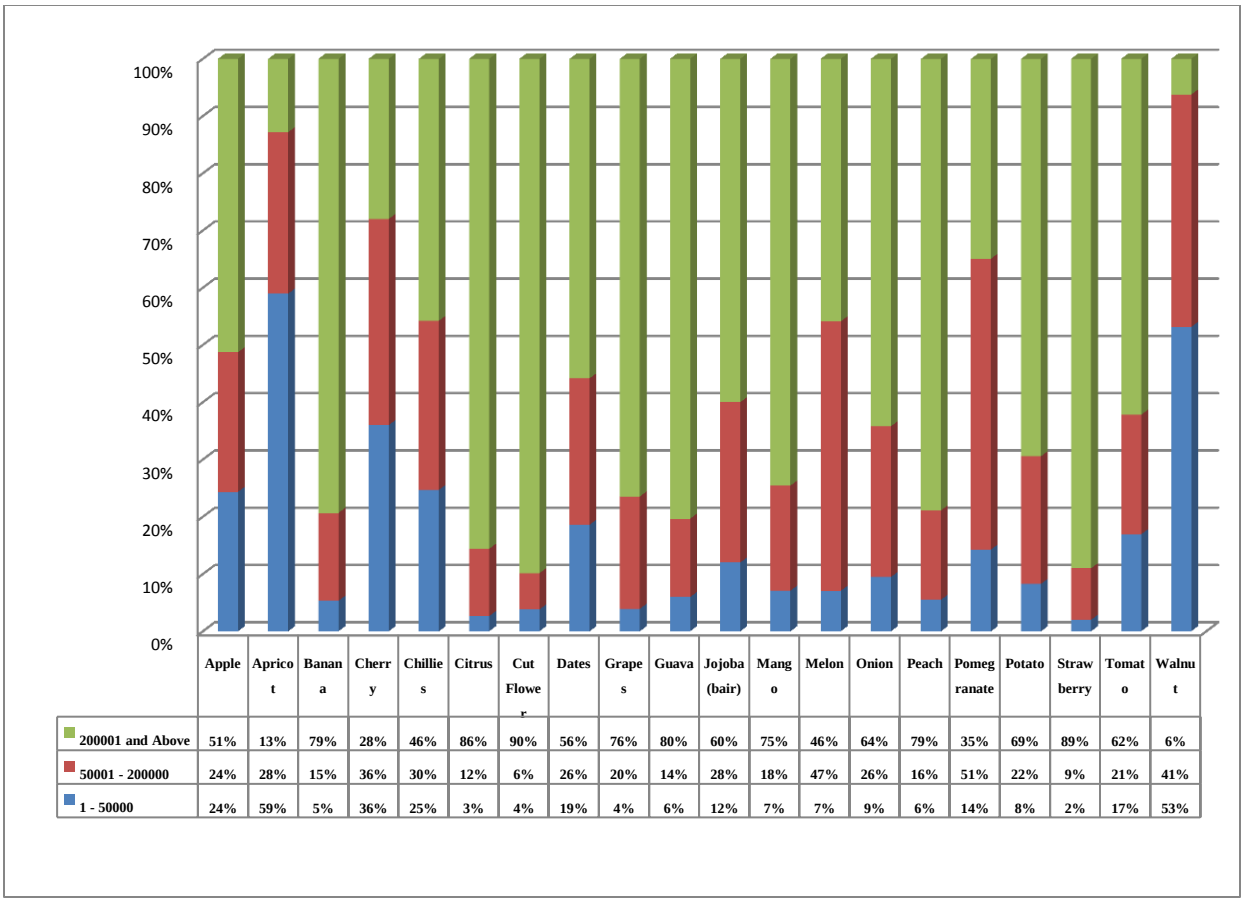
Increasing gross income of agribusiness is one of the objectives of the Agribusiness project. The percentage increase will be used against the baseline for this indicator instead of absolute income.

In the baseline study, respondents were asked to share their quantity produced, percentage of quantity sold from total production and per unit price of produce. This collected data has been analyzed to calculate value chain wise average income of the respondents.



Graph 23: Value Chain wise Per Acre Average Income during Last Production Cycle

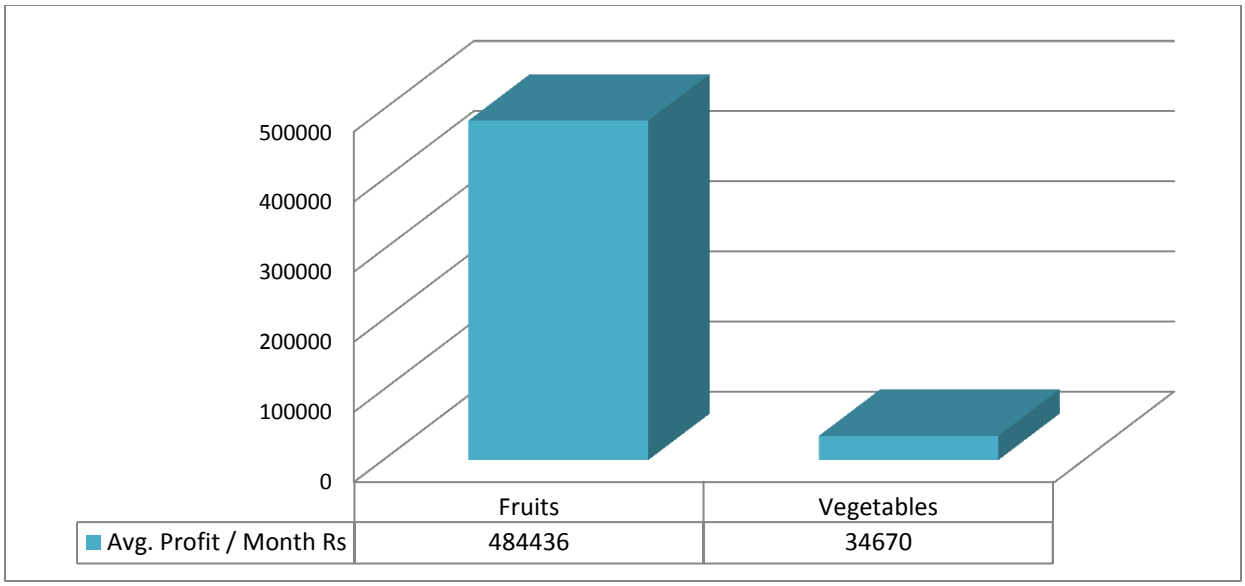
The baseline finding shows that peach, tomato, cut flower and graphs are the most promising sectors in-terms of average income earned.



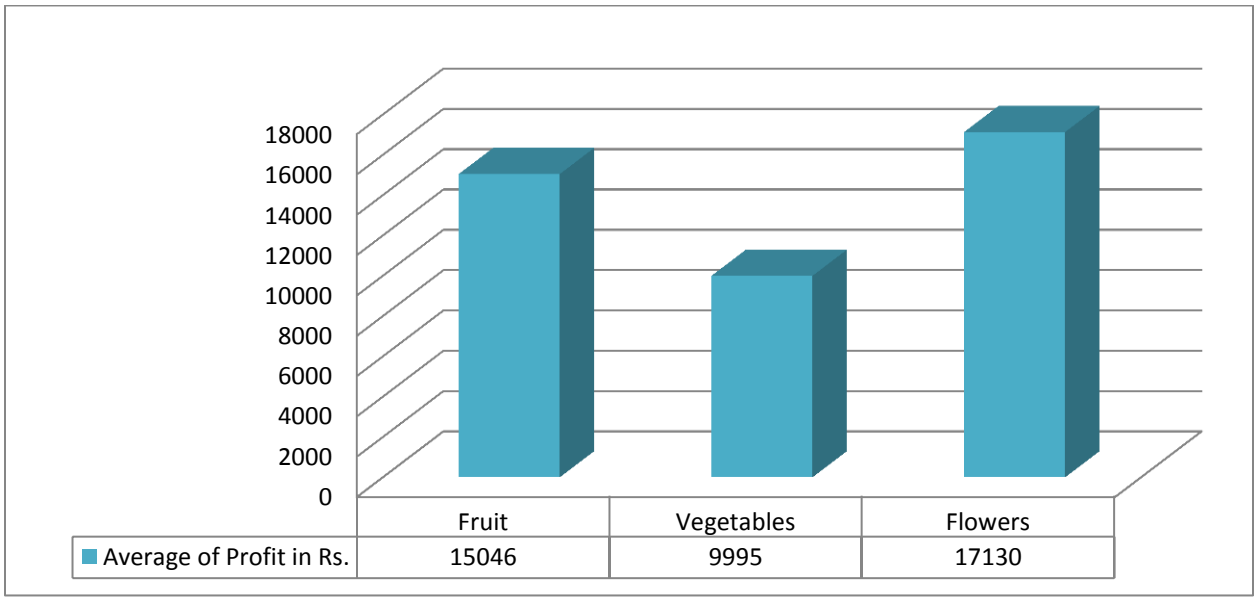
	Apple	Apricot	Banana	Cherry	Chillies	Citrus	Cut Flower	Dates	Grapes	Guava	Jojoba (bair)	Mango	Melon	Onion	Peach	Pomegranate	Potato	Strawberry	Tomato	Walnut
200001 and Above	51%	13%	79%	28%	46%	86%	90%	56%	76%	80%	60%	75%	46%	64%	79%	35%	69%	89%	62%	6%
50001 - 200000	24%	28%	15%	36%	30%	12%	6%	26%	20%	14%	28%	18%	47%	26%	16%	51%	22%	9%	21%	41%
1 - 50000	24%	59%	5%	36%	25%	3%	4%	19%	4%	6%	12%	7%	7%	9%	6%	14%	8%	2%	17%	53%

Graph 24: Value Chain wise Producers' Income Ranges

The above mentioned table shows that most of the respondents earn more than Rs. 200,000 in a production cycle. The expenditure might vary for different crops.



Graph 25: Processors - Sub-sector Wise Average Income Per Month (Rs.)

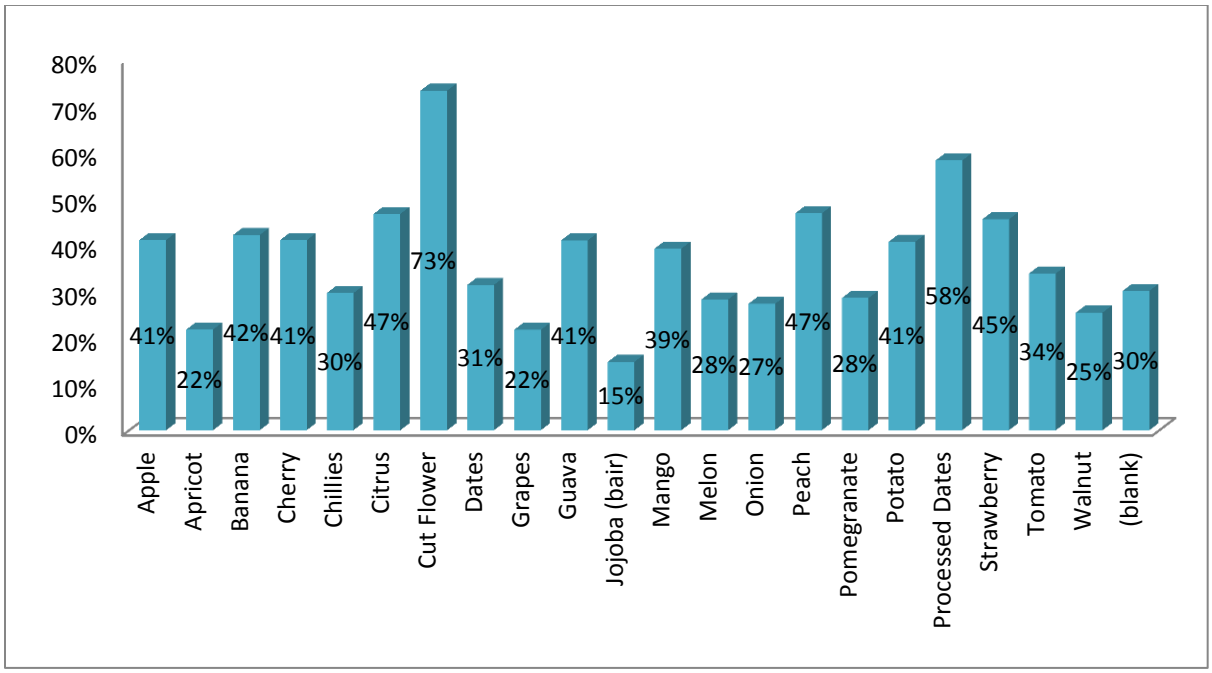


Graph 26: Market Agent - Average Income Per Month in Rs

The above mentioned table shows that fruit and flowers processors compared to vegetables in horticulture sector are earning higher average monthly income.

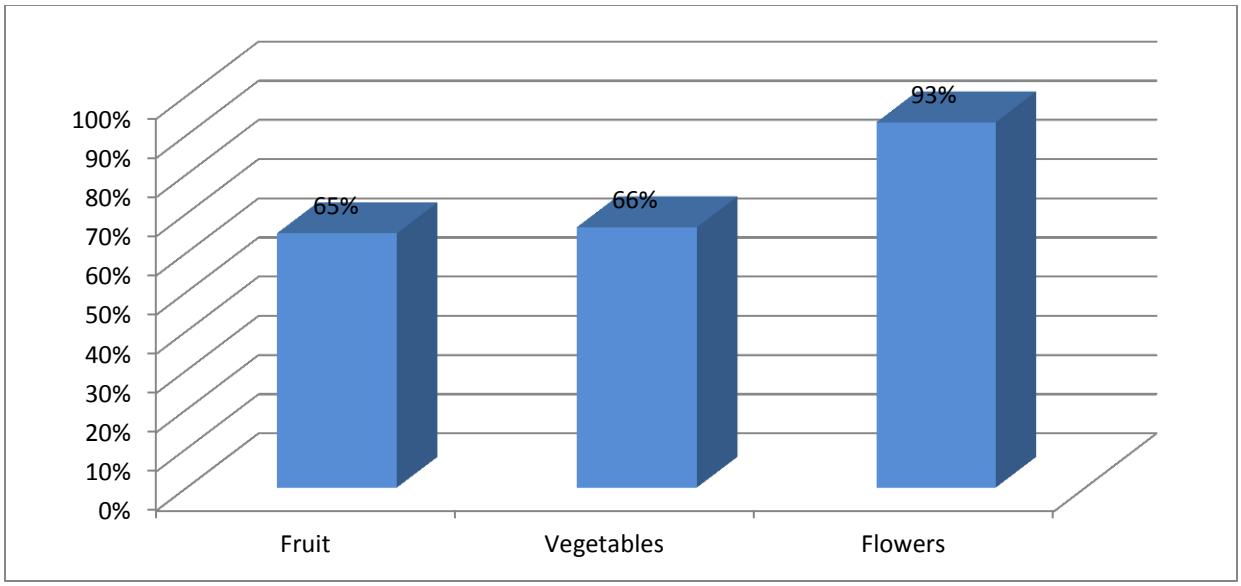
5.2.3. Percentage Share of Prioritized VCs in the HH Income

The percentage share of prioritized value chain in the household income shows the significance of that value chain in the household in-terms of contribution to household income. The more the contribution in household income is the more reliable and significant is the source of income.



Graph 27: Percentage Share of Prioritized VCs in the HH Income

The finding shows that farmers cultivating cut flowers reported the highest percentage share in household income at 73%, with dates are at 58%. The higher the percentage share in household income; the more likely that farmer have invested in the VC, have treated this as a primary business and relies on higher profits.



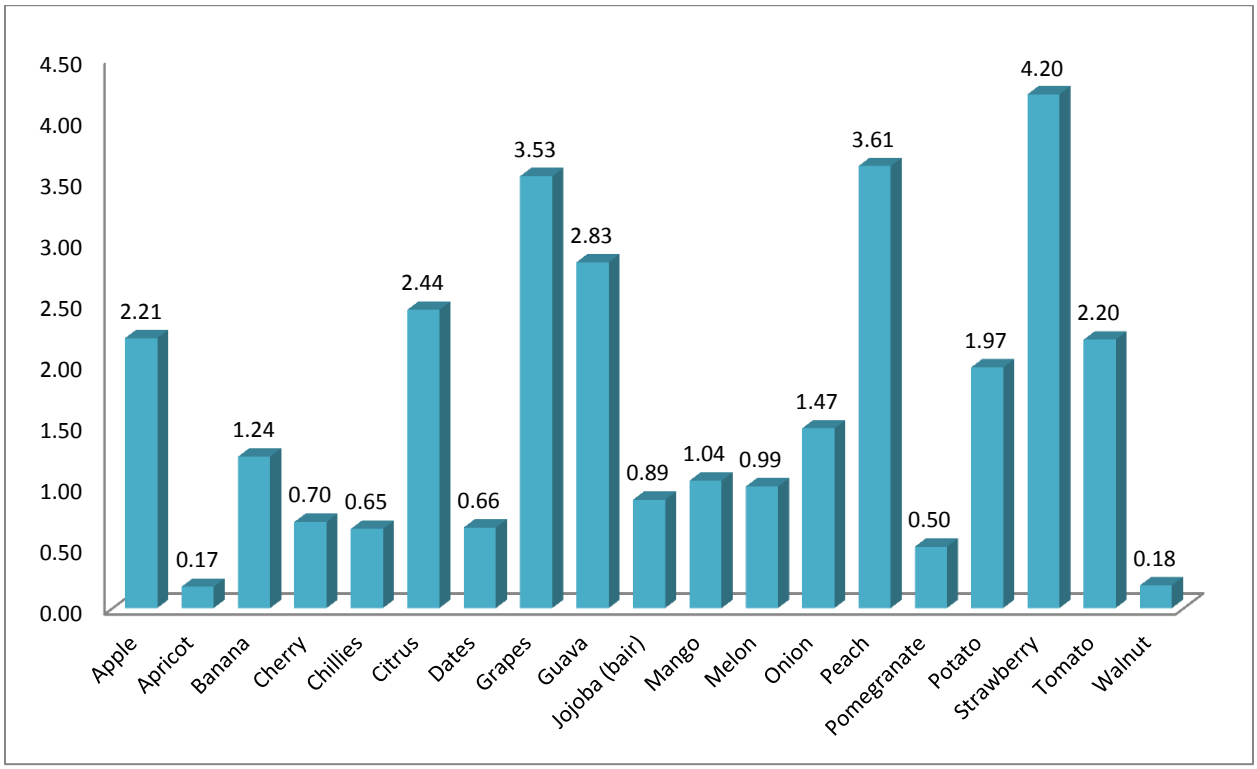
Graph 28: Market Agents - Percentage of HH Income from Selected Sub-sector/ VC

Market agents dealing in flowers basically consider this as their only source of livelihood while those dealing in fruits and vegetables consider their business as their major source. Marketing must be a lucrative activity then, and flowers bring in good income for both farmers and market agents.

5.3. SIR-1.1: COMPETITIVENESS OF HORTICULTURE & LIVESTOCK VALUE CHAINS

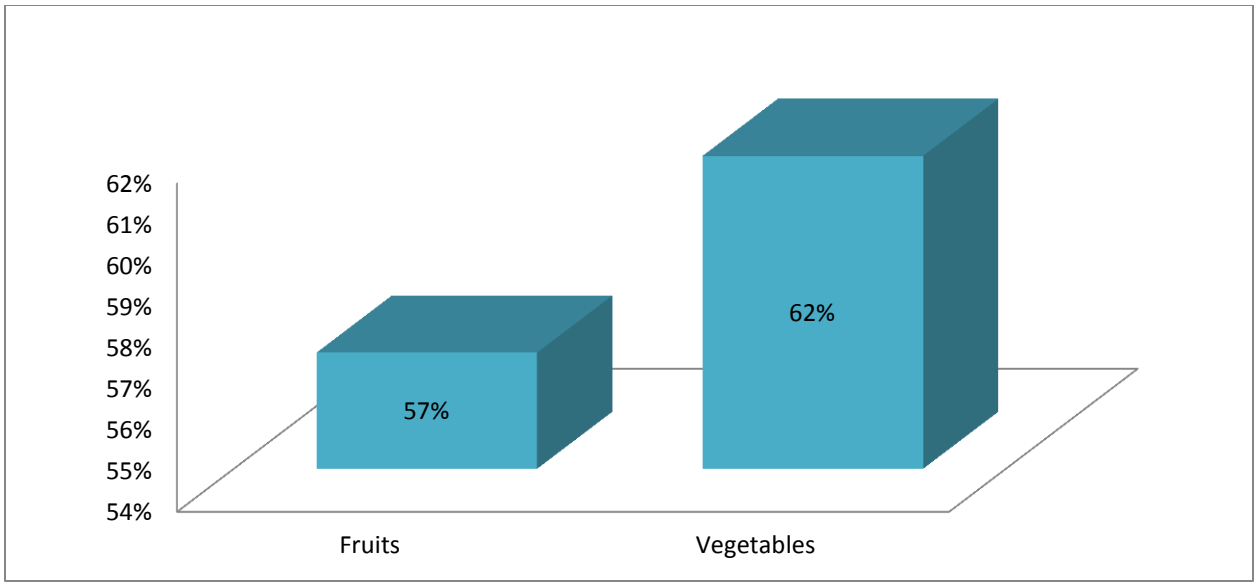
5.3.1. VC Wise Quantity Produced (Tons)

During the baseline survey, value chain wise data on per acre production was gathered that will serve as a benchmark for determining any changes in production during the project life.



Graph 29: Value Chain Wise Avg. Quantity Produced per Acre

The baseline finding shows that per acre production of strawberry, grapes and guava is more as compare to the rest of the value chains. The walnut and apricot per acre production is on the lower side.

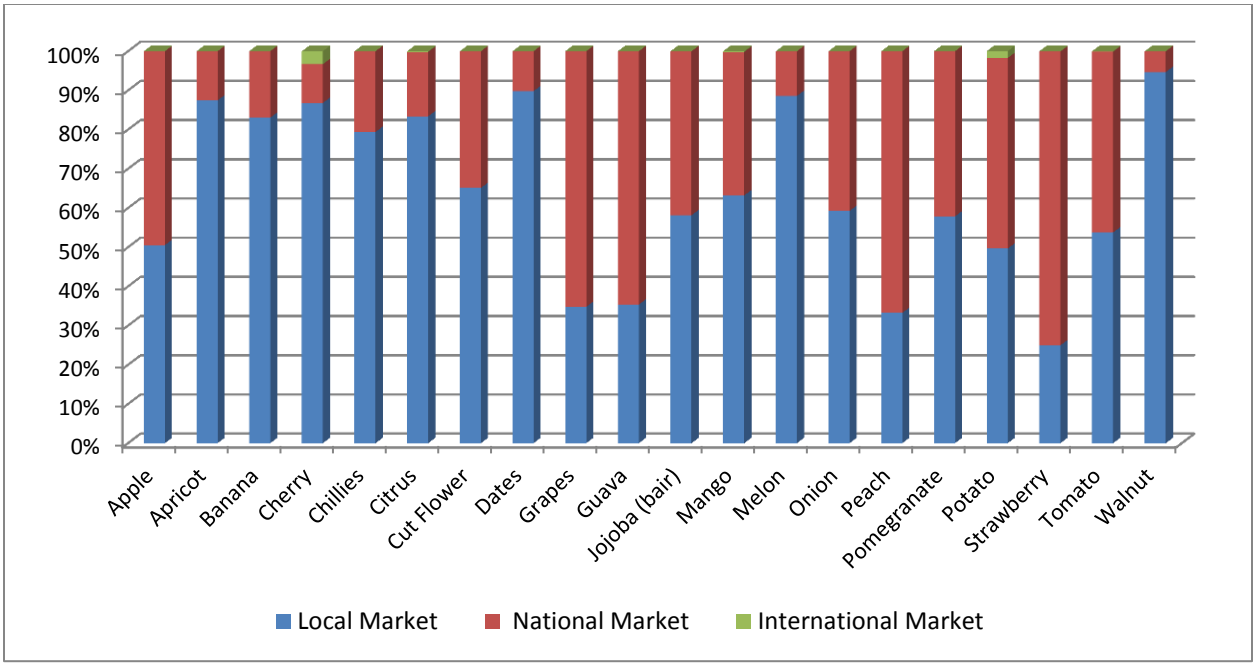


Graph 30: Processor - Percentage of Processing Capacity Utilized

The existing processors of fruits interviewed said that on the average, 57% of their processing capacity is currently being utilized, with a slightly higher 62% for existing vegetable processors. This provides an opportunity for project to link farmers with the processors to increase their input for processing.

5.3.2. Value Chain Wise Sale to Domestic, National and International Markets

The purpose of tracking the increased sale of prioritized VCs is to assess increase in the income of beneficiaries. It is calculated based upon the market value of either goods or services sold in the market.

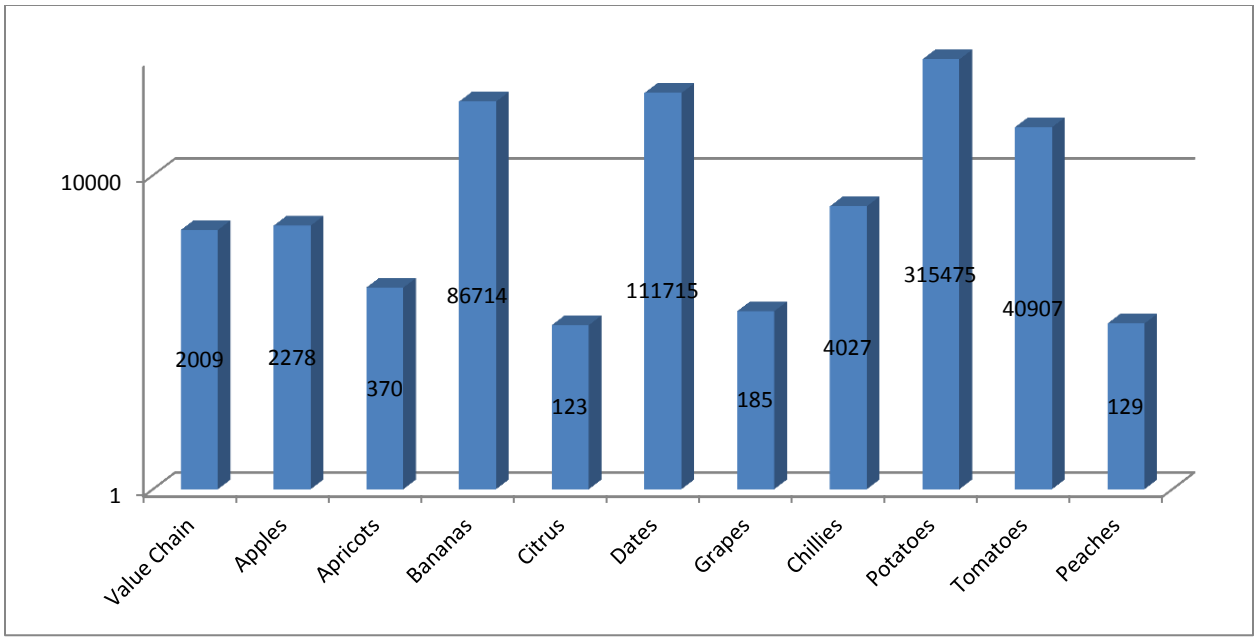


Graph 31: Value Chain Wise Sale to Domestic, National and International Markets

The baseline finding shows that majority of respondents are selling produce to local and national market, where only few cherry producers are selling international market.

5.3.3. Value Chain Wise Sale to International Markets (Nationally)

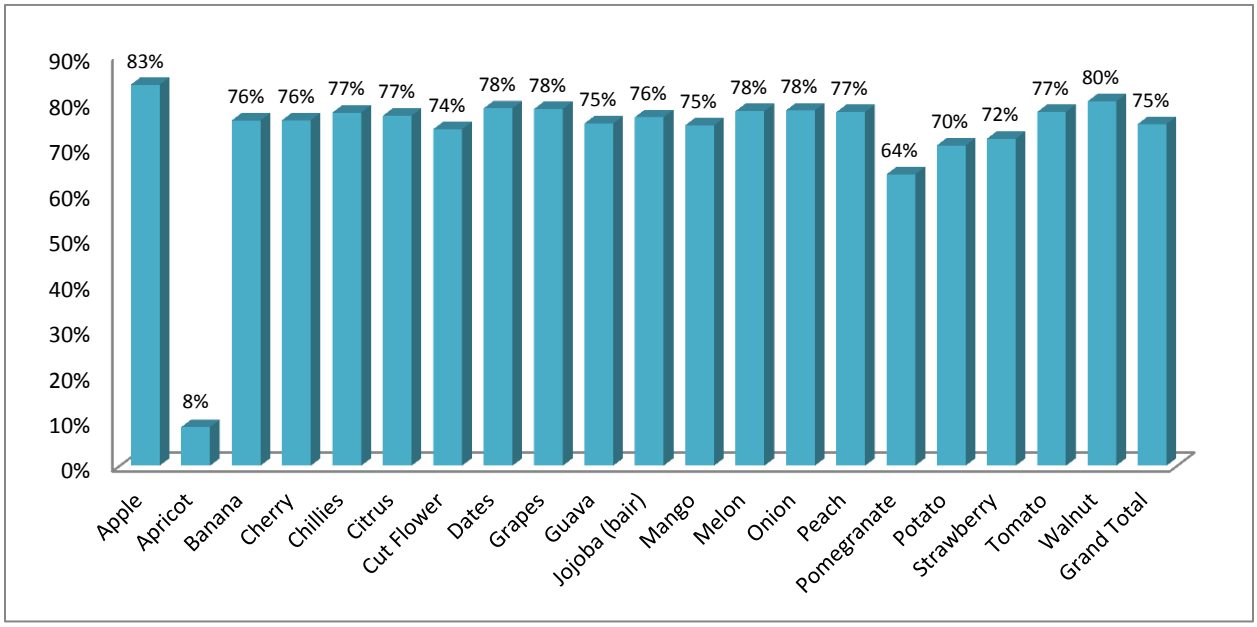
The purpose of tracking the export of VCs is to assess the increase in income of the VCs' direct and indirect beneficiaries. Increase in exports means increasing the demand and supply of VC assisted goods and services to international market. The increase in export/ sale of selected VCs will benefit project's direct and indirect beneficiaries. This will be measured against the baseline.



Graph 32: Value Chain Wise Export to International Markets (in thousands) - For 2009 (Ref: Economic Survey of Pakistan)

5.3.4. Value Chain Wise Average Percentage Sale

Higher sales and profitability directly affects the economic conditions of the beneficiaries. The sales amount of USG assisted enterprises will increase with the increase in quantity, quality and, effective marketing of produce.



Graph 33: Value Chain Wise Avg. Percentage Sold

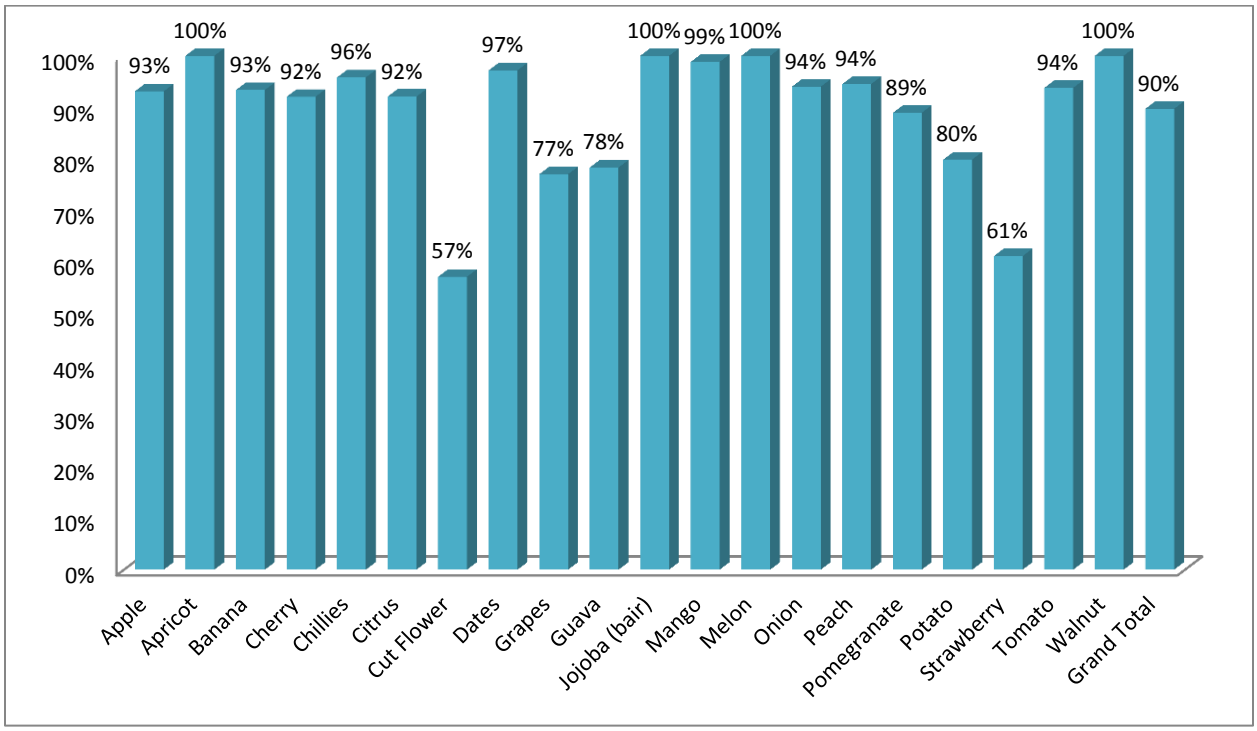
The baseline finding shows that producers are selling their produce to an average of 75%, except apricot where 8% of the quantity produced is sold in the market.

5.4. SIR-1.1.1: STRENGTHENED MARKET LINKAGE IN SELECTED VALUE CHAINS

This objective focuses on strengthening the capacity within the prioritized value chains in horticulture and livestock sub-sectors to increase sale in domestic and foreign markets. Special efforts were made during the baseline study to assess the issues and challenges faced by USAID assisted value chains and strengthen the capacity of the entrepreneurs in developing linkages with potential markets.

5.4.1. Value Chain Wise Sale to Local Markets

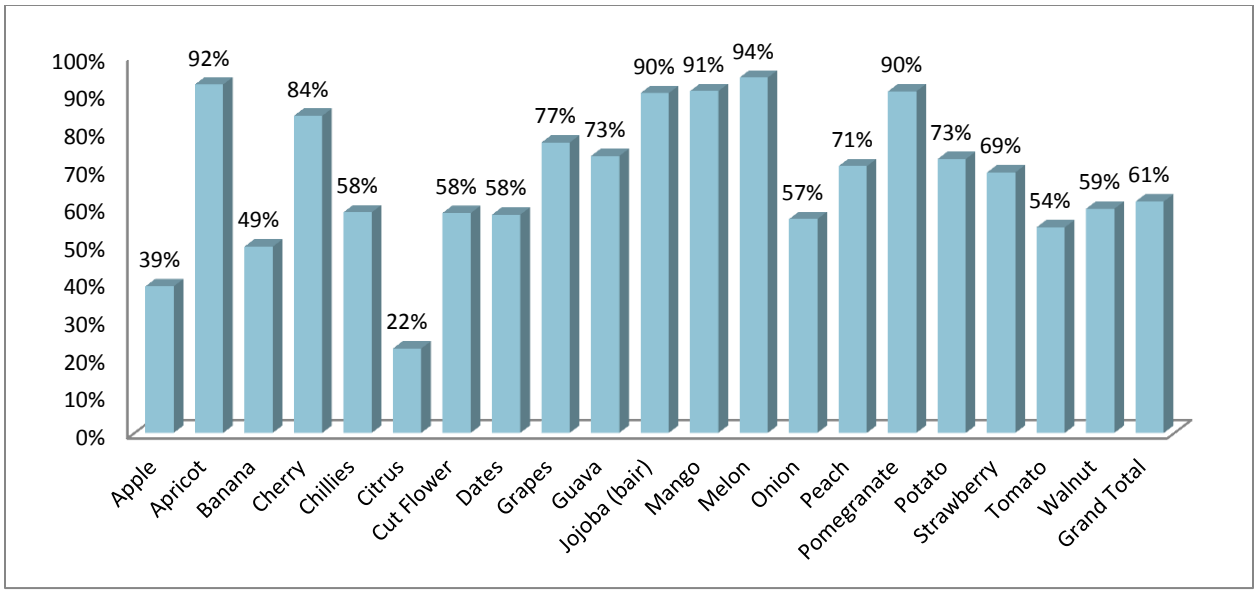
During the baseline study, data was collected on sale in domestic and international market of the prioritized value chain during the project startup. According to the baseline findings it has been revealed that the majority of the farmers sell their products to the local markets due to the easy accessibility to the markets and limited resources required for the transportation and selling in to the local markets.



Graph 34: Farmers - Value Chain Wise Percentage of Respondents Selling to Local Market

5.4.2. Value Chain Wise Sale to Domestic/National Markets

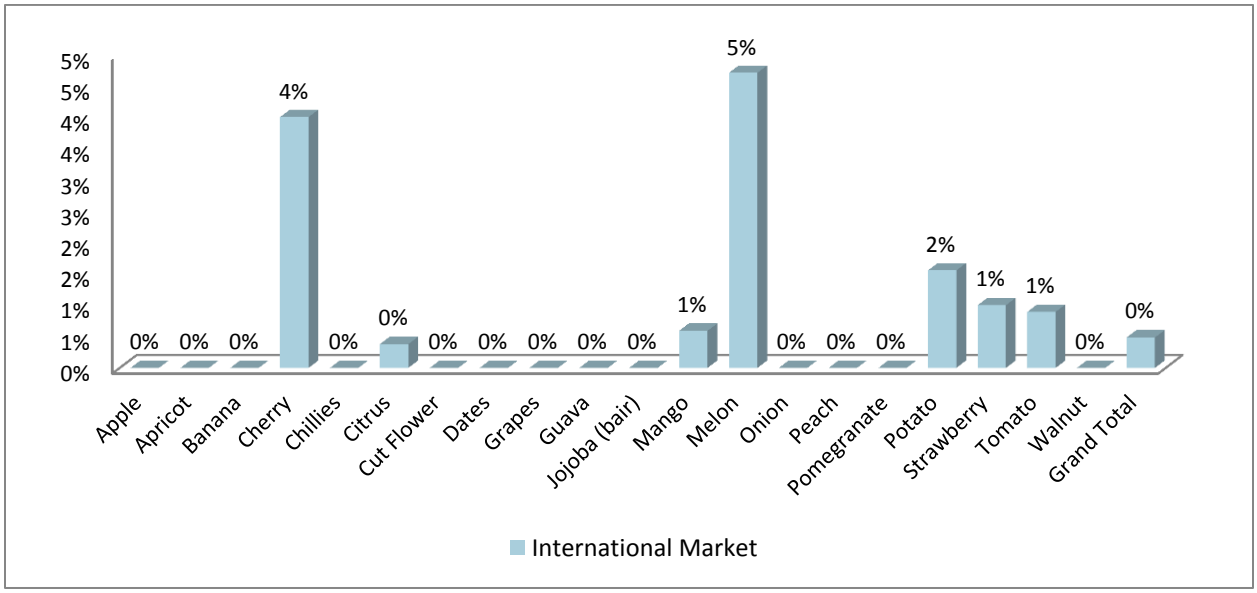
According to the interviewed farmers, fruits when in season are also sold to national markets. The graph below show the percentage of respondents selling to national markets. It is worth to mention that the majority of the farmers need middle man to access the National markets due to the lack of exposure, resources including transportation, market linkages and financial constraints.



Graph 35: Farmers- Value Chain Wise Percentage of Respondents Selling to National Market

5.4.3. Value Chain Wise Sale to International Markets

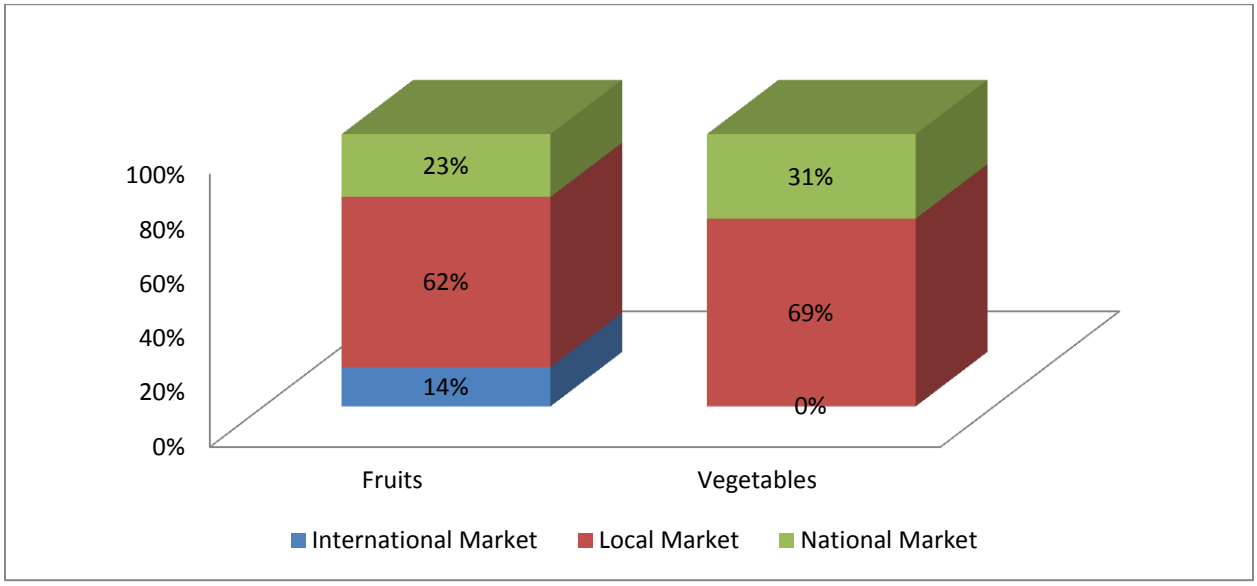
The respondent farmers were asked to share if they are selling to international markets. This data is to collect the information about how many percentage of responding farmers are selling their produce to international market.



Graph 36: Farmers - Percentage of Respondents Selling to International Market

The baseline findings reveal that a few farmers have access to the International markets. Only 4% of cherry farmers, and 2% of potato farmers interviewed are able to penetrate in international

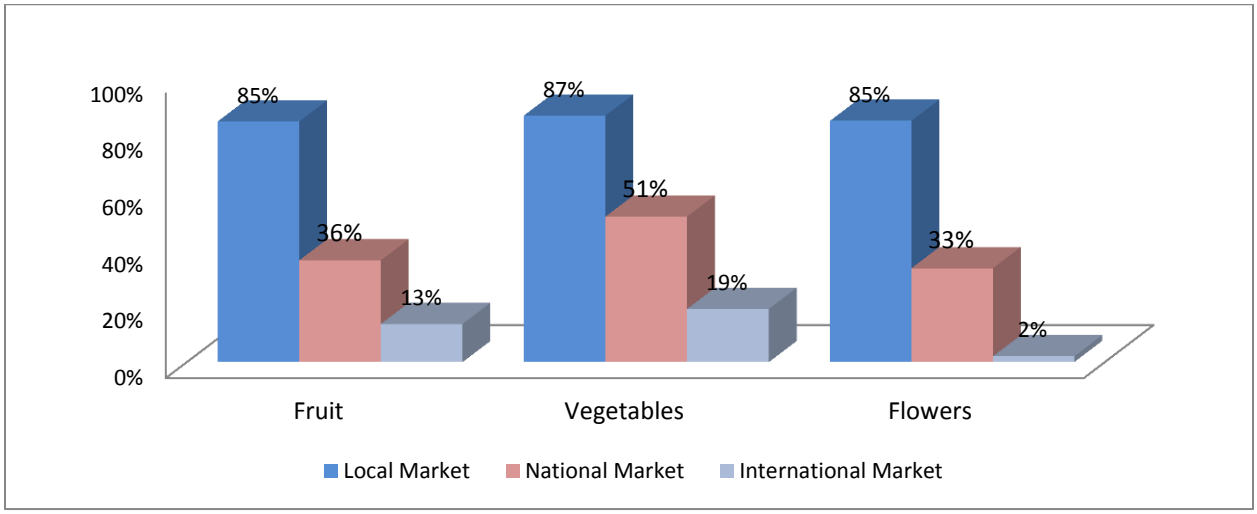
markets. Only 1% of strawberries, tomato, mango and less than 1% of citrus farmers accessed export markets. The reasons for the difficulty as mentioned during the survey are lack of proper quality standard, lack of financial resources, lack of exposure and absence of market linkages.



Graph 37: Processors - Percentage of Respondents Selling to Local, National and International Markets

When processors were asked about the local, national and international markets, majority or 62% of the fruit processors said they sell their processed fruits to local markets. 23% were selling to the national markets and 14% to international markets.

None of the vegetable processors interviewed are selling to international market with 69% selling to local market and the remaining 31% selling to national market.



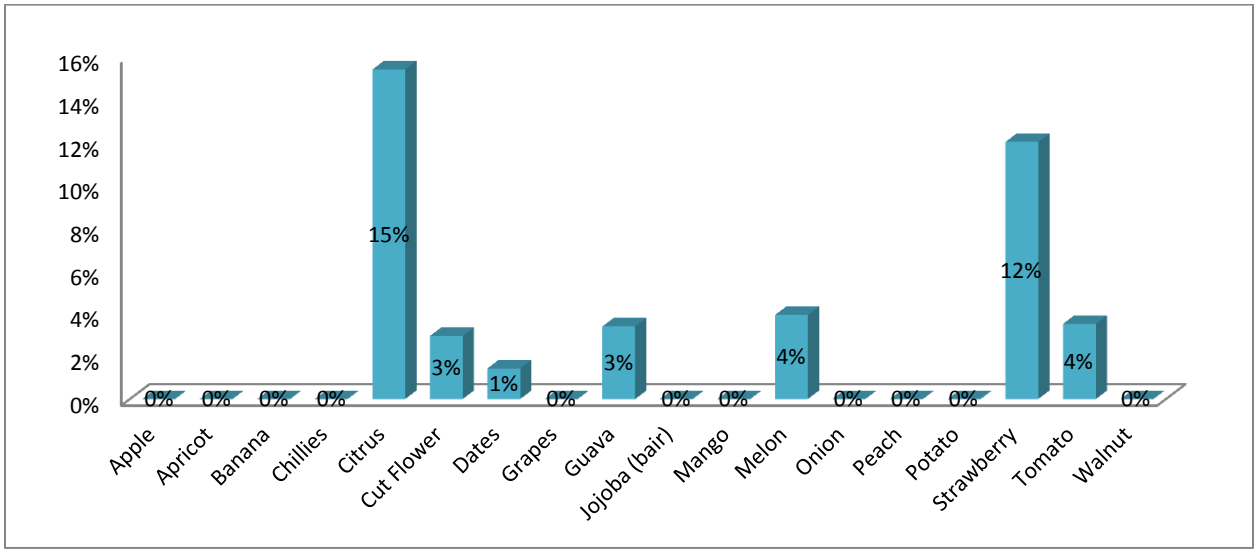
Graph 38: Market Agents - Percentage of Respondents Selling to Local, National and International Markets

The majority of market agents interviewed i.e. 85% for fruits, 87% for vegetables and 85% for flowers are selling to local market. Selling to national markets is done by one-half of the vegetables agents and one-third of the fruits and flowers agents. 13% and 19% of the market agents for fruits and vegetables interviewed were able to sell to international markets whereas only 2% of market agents selling flowers were able to export.

These findings show that improving standards to match the needs of the national and the international markets should be a priority for the project. There is also a need to provide assistance in market linkages to national and international markets as well as exposure to technology and resources to help producers, processors and market agents.

5.4.4. Value Chain Wise Buyers and Sellers Contracts

The formal contracts of famers with the buyers are indicative of sustainable market linkages and reliable source of income.



Graph 39: Farmers - Value Chain Wise Percentage of Farmers having Contracts with Buyers

The table explains that percentage of responding farmers having formal contract with buyers. The result shows that only few producers have formal contract with buyers. The formal contract has been observed in citrus and strawberry value chains only.

5.5. SIR-1.1.2: STRENGTHENED CAPACITY OF SMALLHOLDERS/ FARMER ENTERPRISES

The inclusive value chain development can only be made by increasing the capacity of small holders/farmer enterprises to profitably participate in marketing, processing and value addition function. Through focused interventions capacity of smallholders and farmer enterprises will be strengthened to operate in a commercially viable manner and effectively undertake value addition, processing and marketing.

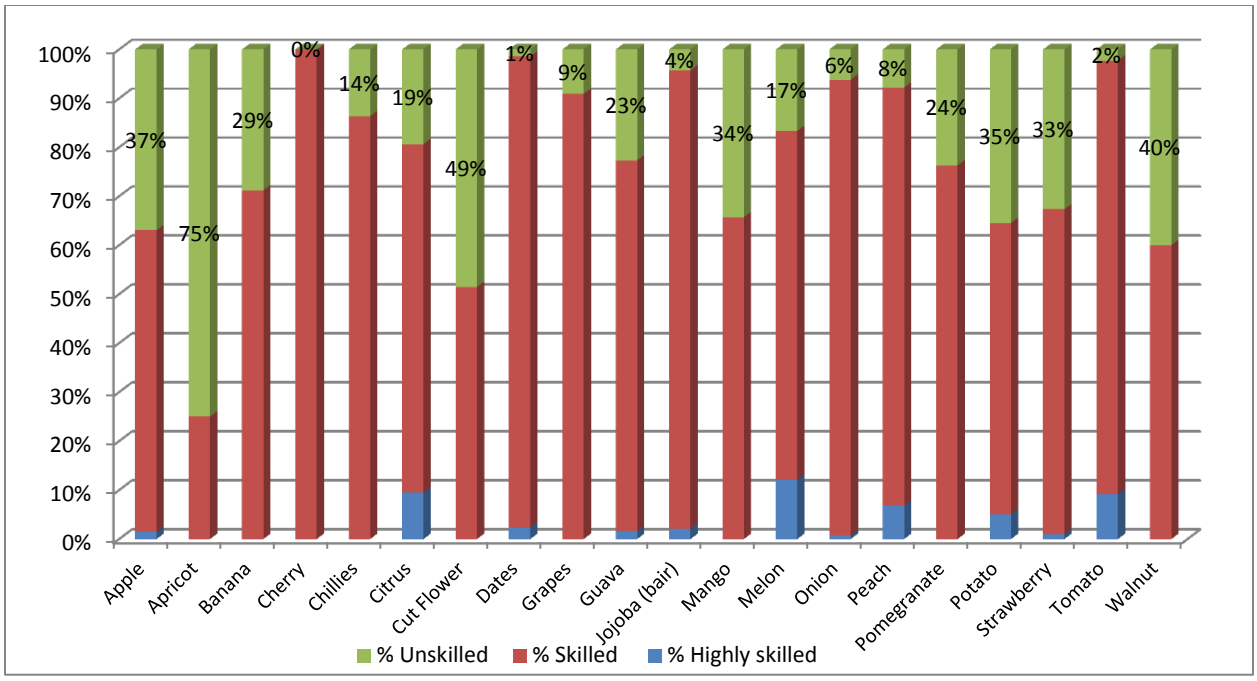
5.5.1. Value Chain Wise Membership of Farmers in Groups/ Association

This section describes the number of farmers that are organized in groups and collectively managing their input purchase, sharing production practices, involved in collective post-harvest management including storage, processing, marketing and transportation.

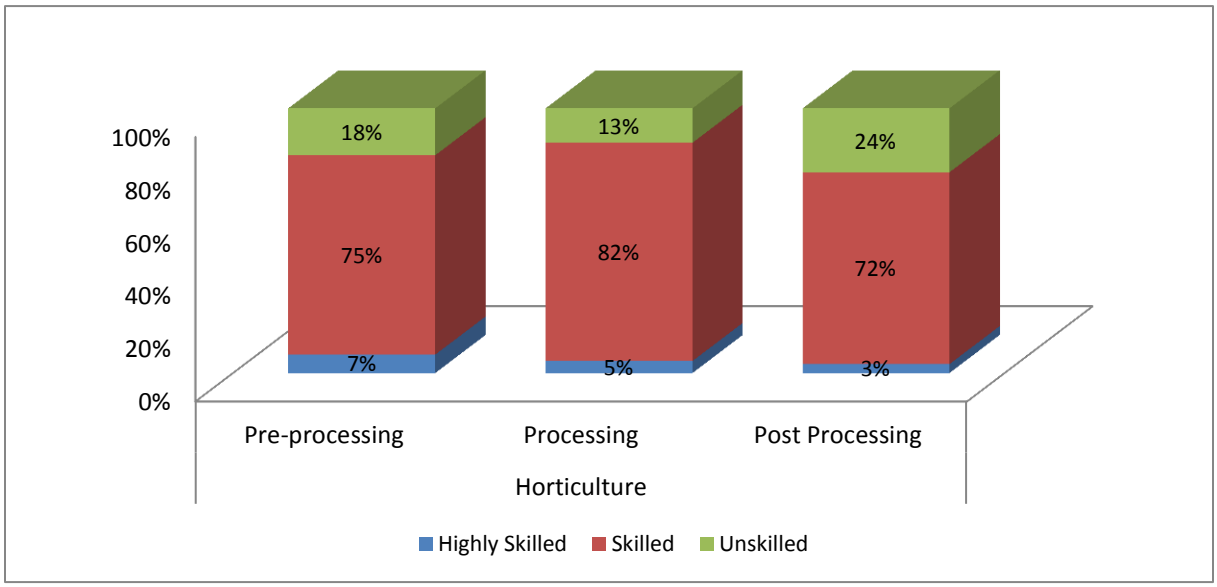
The data collected on this indicates that very farmers are collectively managing their businesses collective where most of the farmers are managing their agribusiness independently. The respondents have also been asked about their willingness to work collective. Most of the responding farmers are interested and willing in working together to achieve economies of scale.

5.5.2. Value Chain Wise Capacity and Availability of Labor

The baseline findings revealed that highly skilled and technically skilled labor is not involved in almost all the value chains. In some value chains like apricot, increasing the percentage of skilled labor can bring about improvement in the production and overall income. Increasing labor capacity is also very low on the list of priorities of farmers so the project will have to work on marketing their intervention in this regard.

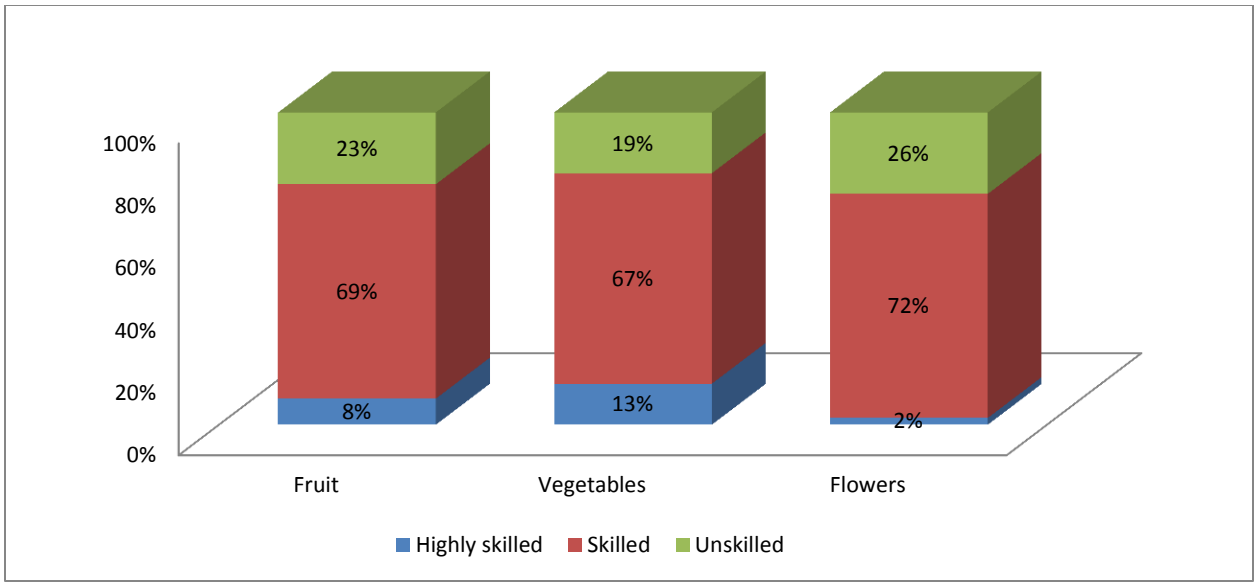


Graph 40: Farmers - Value Chain Wise Capacity of Labors/ Employees



Graph 41: Processors - Capacity of Labor Employed

The processors responses during the baseline survey shows that during the processing, skilled labor is involved to a high degree of 82%, with a slight decrease during pre and post processing. Even with processors though, highly skilled labor is very seldom present in all three stages.



Graph 42: Market Agents - Capacity of Labor Employed

This trend is almost same in Market Agents with only slightly more highly skilled labor in vegetables at 13% and fruits at 8%.

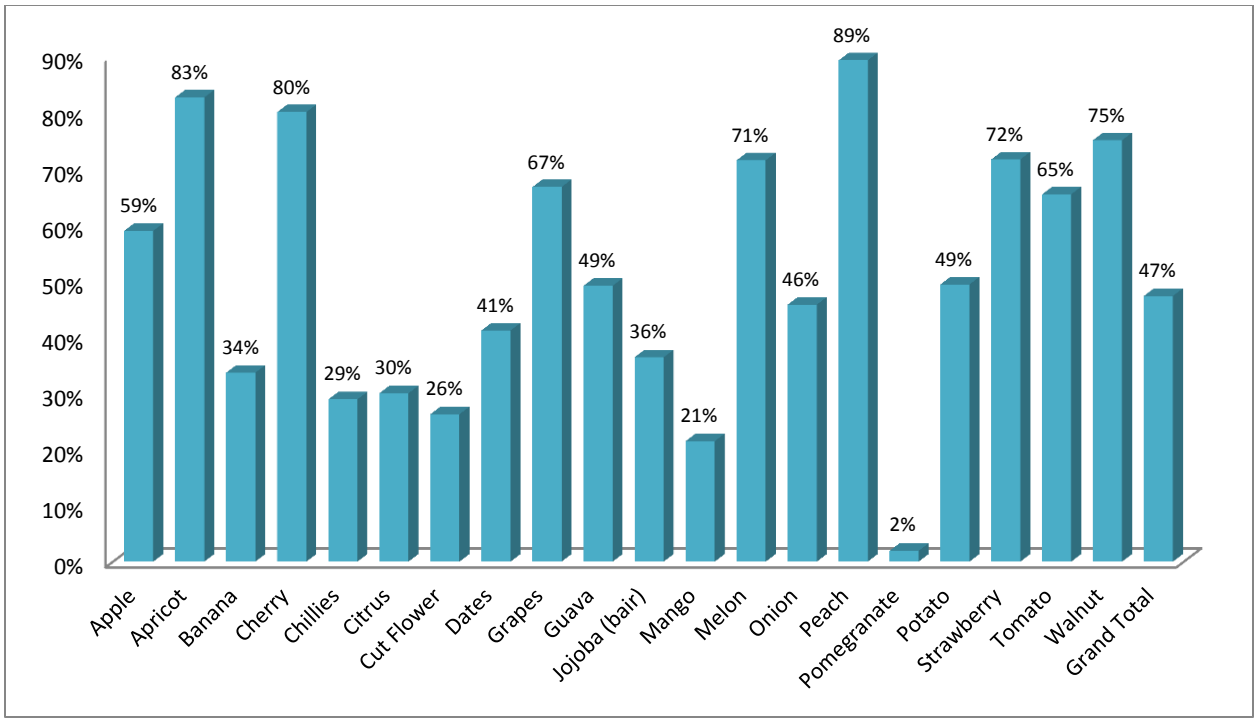
5.6. S-IR 1.1.3: IMPROVED TECHNOLOGICAL INNOVATION

Producers tend to use traditional technology with unimproved or old plant material. Equipment being used on farms and in agribusinesses is often outdated or inefficient. Low quality seed, the lack of variety improvements, insufficient pest control, low use of micronutrients and poor farm management is widespread. Whether it is cultivators for horticulture or livestock breeds for dairy, the majority of Pakistani farmers are having to make-do with poor genetic stock. Under Agribusiness project special consideration is being given to improve the farmers' capacity through technological innovation.

This section focuses on strategy to increase agricultural efficiency and productivity through adoption of new on-farm and off-farm techniques and technological innovations among targeted beneficiaries. Baseline study identifies the type and intensity of issues faced by Entrepreneurs (in USAID Assisted VCs) in following improved production practices and in accessing technology.

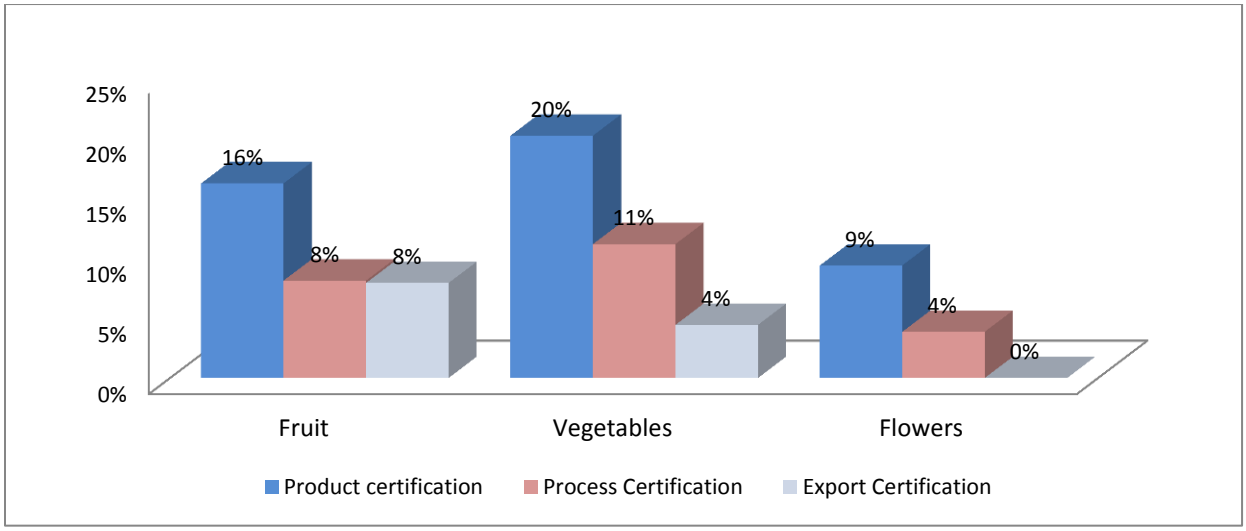
5.6.1. Respondents Following Improved Production Practices

The baseline study assessed the percentage of beneficiaries using improved technology and practices during the startup of the project. There were further questions asked from the respondents about the level of awareness of entrepreneurs on improved production practices and technology, type and intensity of issues faced by producers in following improved production practices and in accessing technology, level of awareness and access of entrepreneurs in USAID Assisted VCs to BDS related to improved production practices and technology.



Graph 43: Farmers - Value Chain Wise Respondents Following Improved Production Practices

The use of improved production practices average 47% of the farmers interviewed for the baseline survey. Opportunities for the project to advocate the use of improved production practices lie in the value chain including pomegranate, mango, cut flower, citrus, chilies, banana, jojoba, dates, guava, onion and potato. All other priority VCs, though showing above average use of improved production practices still need to be trained and coached. Raw data from the survey should be helpful in identifying target farmers for the intervention.

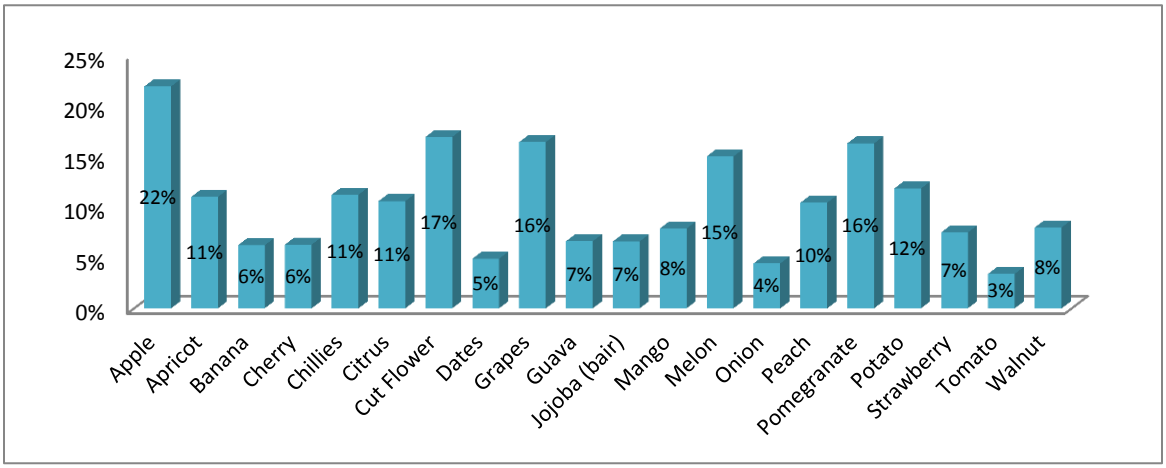


Graph 44: Market Agents - Percentage of Respondents with Certification

The baseline study involves collection of data from market agents on product, process and export certification. The result shows that very few market agents have process and export certification. This is also reflected in the quantity exported to international markets and percentage of respondents selling their produce in international markets.

5.6.2. VC Wise Post-harvest Losses

This section focuses on the percentage of produced lost during pre and post-harvest management. During the baseline study information was collected about the quantity and price of goods lost during harvesting, processing, storage and transportation.



Graph 45: Value Chain Wise Post-harvest losses (reported by Farmers)

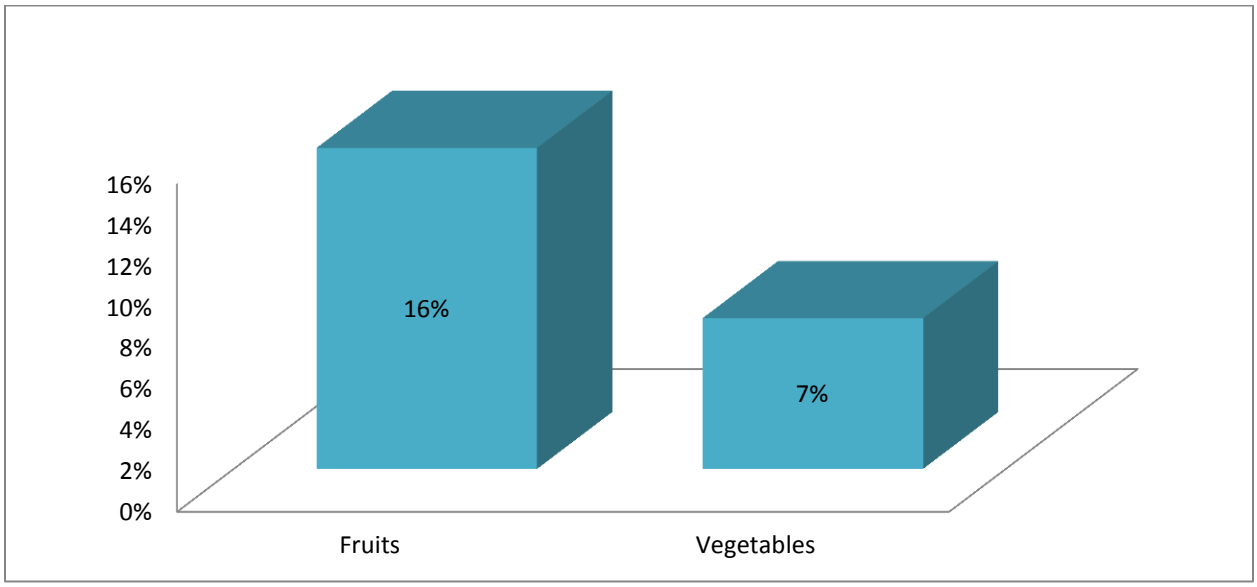
The baseline data shows that on-average 10% of the produced is lost at the farmers end. The losses of produce during processing and marketing are in addition to this loss.

Table 7 Value Chain wise Percentage of Respondents

Prioritized VCs	Value Chain Wise Percentage of Respondents Facing Post-Harvest Problems				
	Lack of market information	Low prices in market	Products remain unsold	Lack entrepreneurial competencies	Lack of packaging materials
Apple	53%	82%	43%	56%	71%
Apricot	82%	79%	62%	21%	26%
Banana	46%	78%	13%	22%	15%
Cherry	48%	68%	12%	16%	12%
Chilies	50%	82%	18%	24%	24%
Citrus	41%	52%	3%	42%	19%
Cut Flower	41%	85%	51%	42%	29%
Dates	45%	77%	26%	31%	38%
Grapes	54%	62%	15%	31%	46%

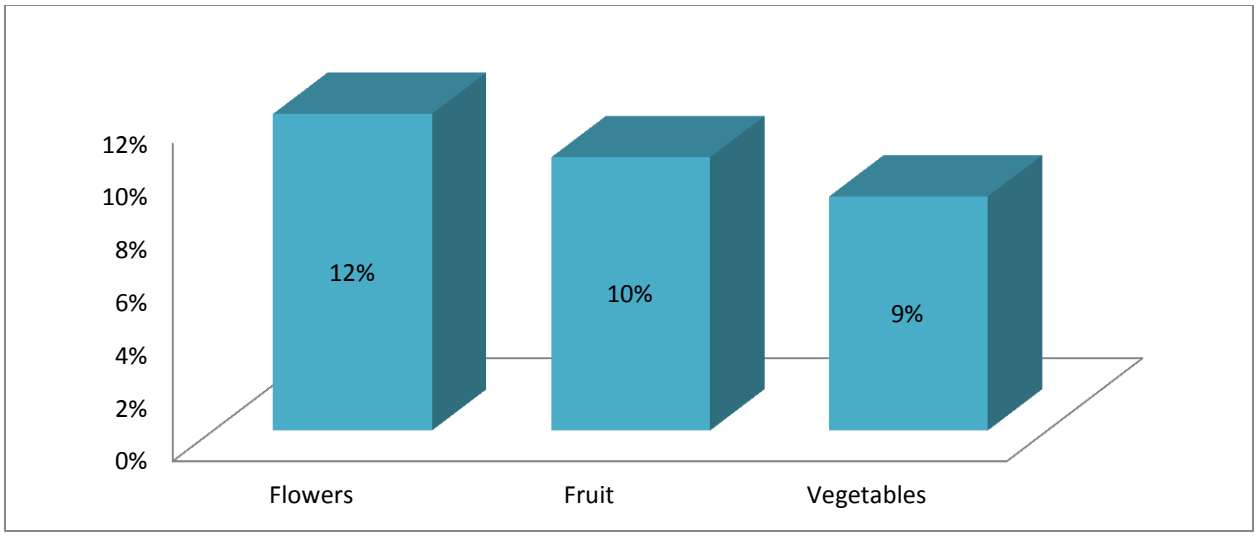
Guava	50%	66%	27%	32%	40%
Jojoba (bair)	70%	74%	10%	20%	24%
Mango	32%	69%	15%	21%	27%
Melon	46%	96%	52%	69%	42%
Onion	48%	83%	21%	11%	14%
Peach	70%	79%	17%	55%	67%
Pomegranate	43%	78%	5%	11%	38%
Potato	68%	77%	21%	42%	28%
Strawberry	27%	28%	31%	20%	28%
Tomato	53%	82%	34%	39%	45%
Walnut	97%	41%	19%	69%	41%
Grand Total	50%	73%	24%	34%	34%

The above mentioned table explains the factors that are the main causes of losses faced by the farmer. These areas can help the project to design activities that can minimize these causes to help farmers in reducing their losses.



Graph 46: Processors – Percentage Losses Faced during processing

Processors reported losses during processing of 16% for fruits, a big potential income that should be looked into and reversed as part of project intervention. Vegetable processing losses of 7% is still substantial and have room for reduction.

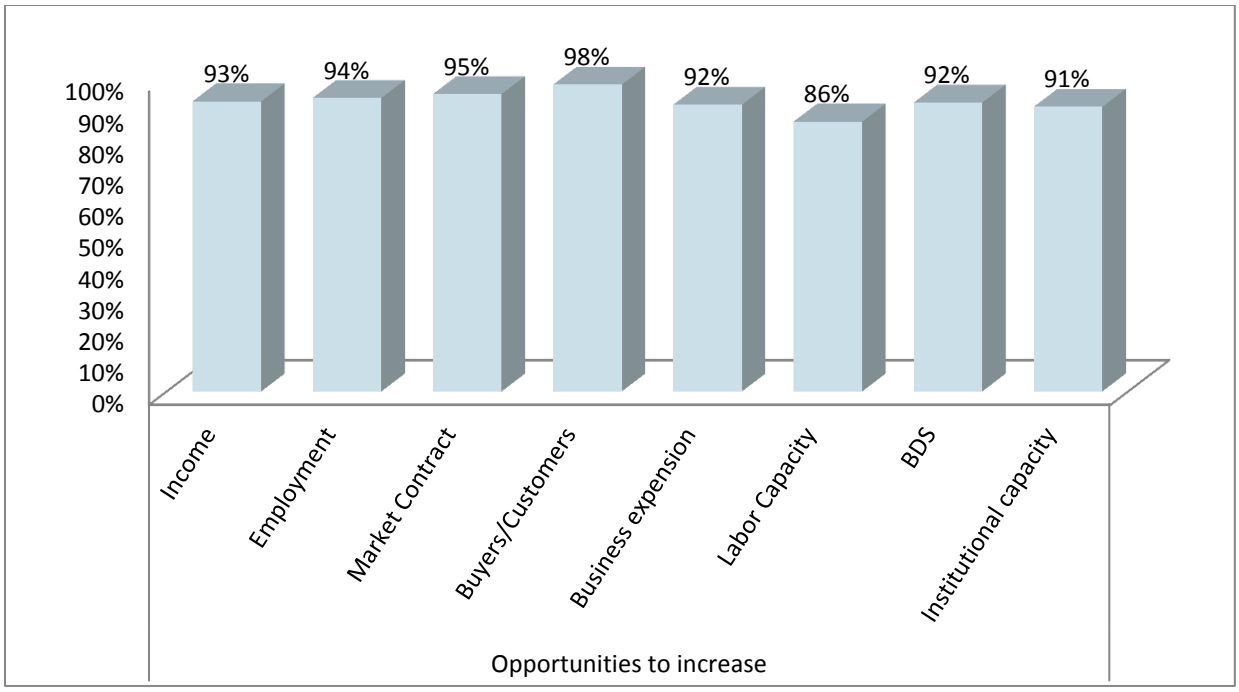


Graph 47: Market Agents - Percentage of Produce Lost While Marketing

Market agents reported an average of 12% losses while marketing flowers, 10% for fruits and 9% for vegetables. The reasons for this should be looked into and addressed as well.

5.7. RESPONDENTS PERCEPTION:

The respondent's perception for horticulture value chain as a whole showed that majority of respondents see potential to improve in their business. This also reflects their openness to project intervention.



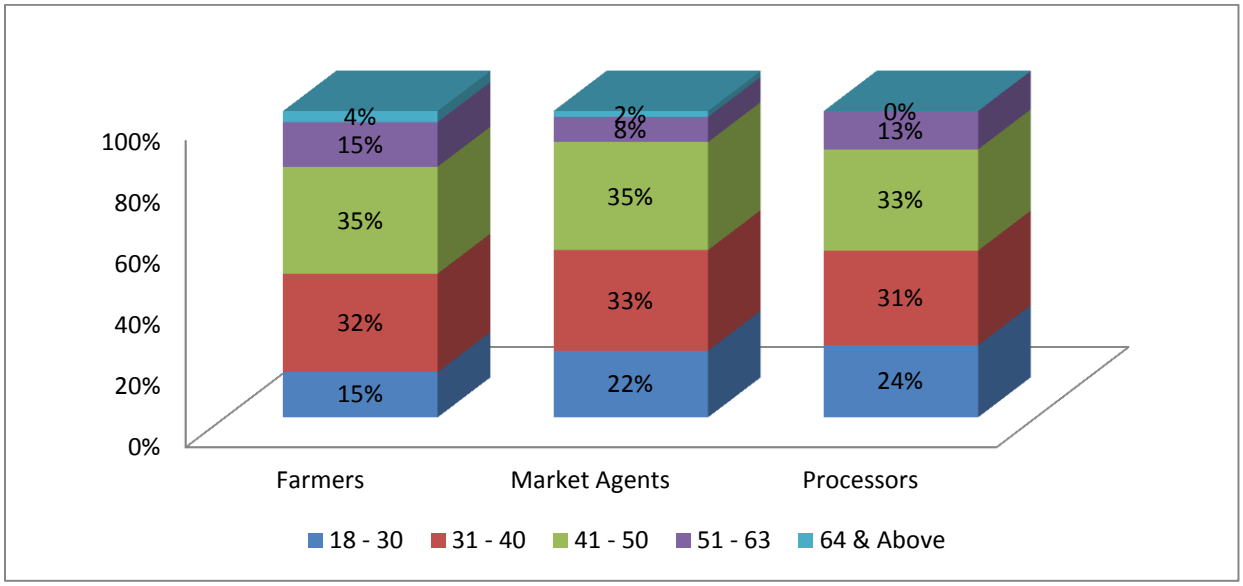
Graph 48: Farmers - Percentage of Respondents Expressing Opportunities to Improve Businesses

6. RESULTS & FINDINGS – LIVESTOCK SECTOR

6.1. RESPONDENT PROFILE

6.1.1. Respondents Age

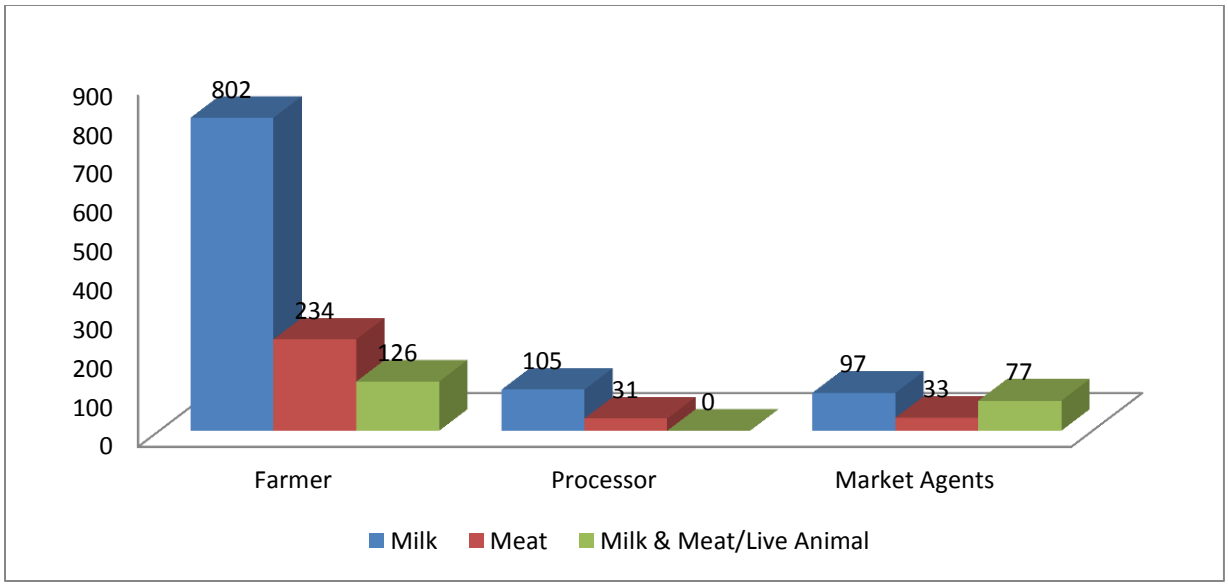
Baseline interviews have been conducted for a total of 1162 farmers, 207 market agents and 136 processors who are working with the dealing with the different livestock value chains. Out of the interviewed farmers, majority or approximately 60% of the farmers, market agents and Processors belong to the age of 31-50 years old.



Graph 49: Age Wise Value Chain Actors

6.1.2. Value Chains and VC Actor Wise Respondents

Sample size was derived by keeping in view of the existence of the value chains and the number of the farmers associated with such, as well as the spread of the value chain in different geographical areas in Pakistan. In this regard it was founded that the majority of the respondents from the Producers, Processors and Market agents are associated with the Milk Value Chain. The association of the market agent with the milk and Meat of the live and dead animals seems greater than the Producer and Market agent.



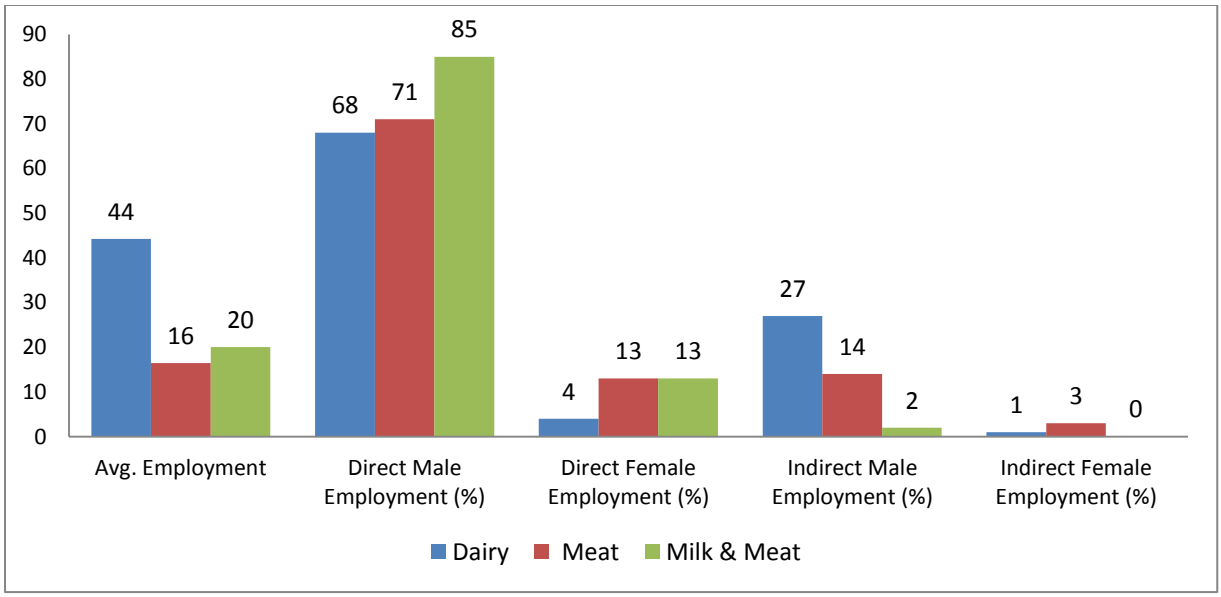
Graph 50: Value Chain Actor Wise Respondents

6.2. IR-1: INCOME GENERATING OPPORTUNITIES

In the baseline study, data has been gathered for all livestock value chains on which assistance will be provided through USAID Agribusiness Project. This data gathered during the first year of the project will serve as a benchmark for determining the impact on the income and employment of beneficiaries.

6.2.1. Value Chain Wise Full-time Equivalent Jobs:

To get the baseline information regarding full time equivalent jobs, the interviewed farmers were asked about the number of persons working in the farms directly as full-time labor. It was found that potato and chilies value chain involve more full time labor than the others. It is worth mentioning that most of the farmers involve women and children in these value chains for the purpose of picking, grading and storing.

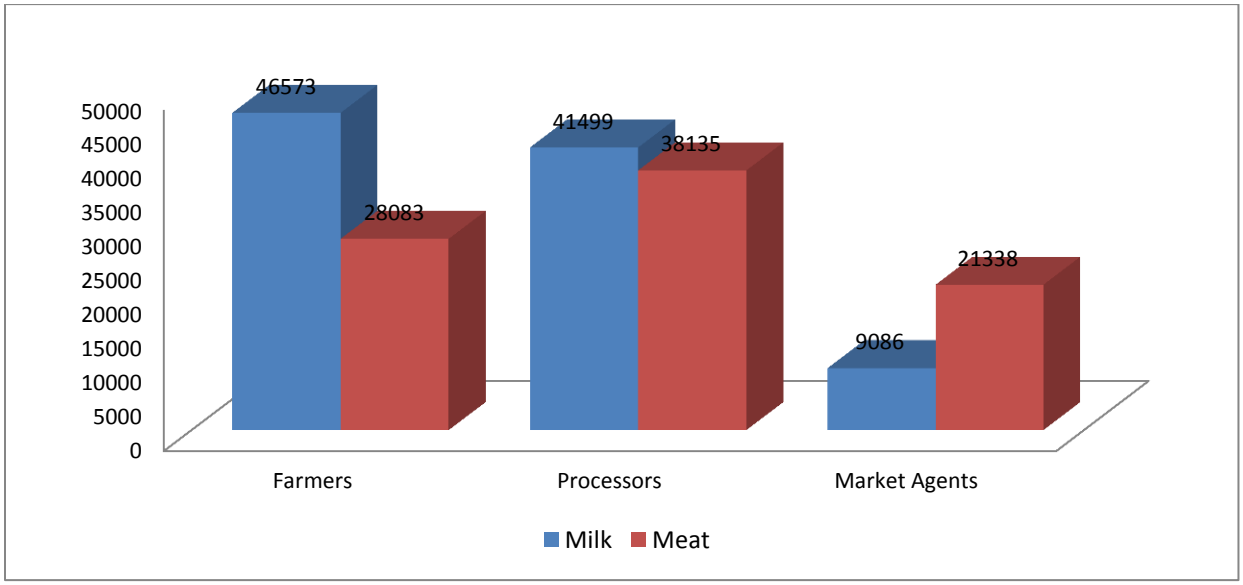


Graph 51: Farmer - Sector and Gender Wise Employment

6.2.2. Value chain wise income:

Increasing gross income of agribusiness is one of the objectives of the Agribusiness project. The percentage increase will be used against the baseline for this indicator instead of absolute income.

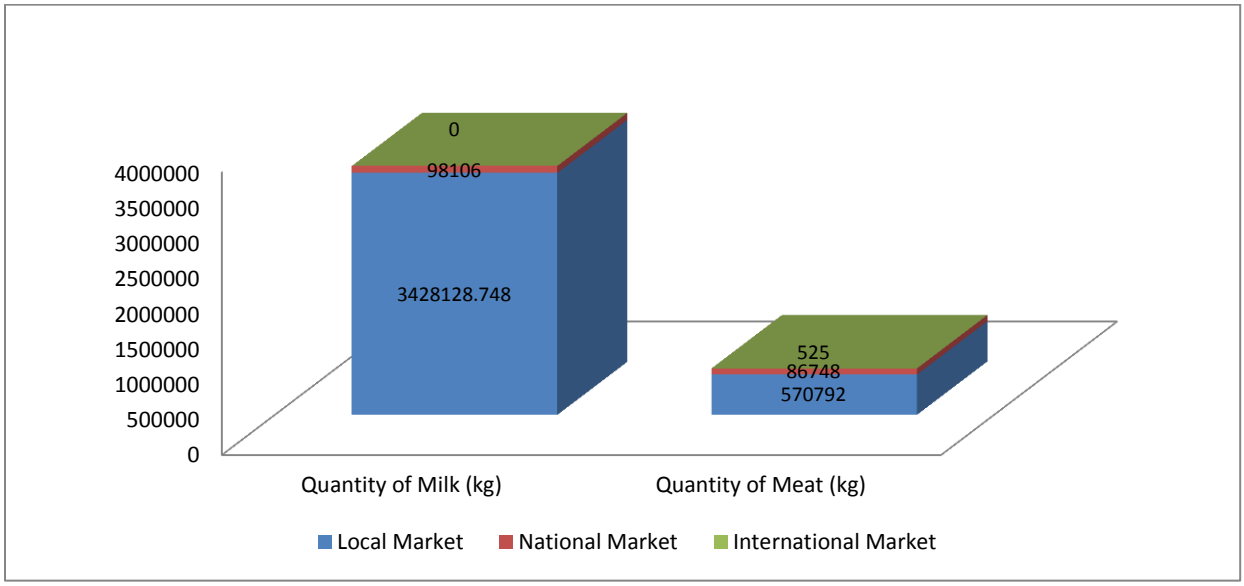
In the baseline study, respondents were asked to share their quantity produced, percentage of quantity sold from total production and per unit price of produce. This collected data has been analyzed to calculate value chain wise average income of the respondents.



Graph 52: Value Chain Actor Wise - Average Monthly Income

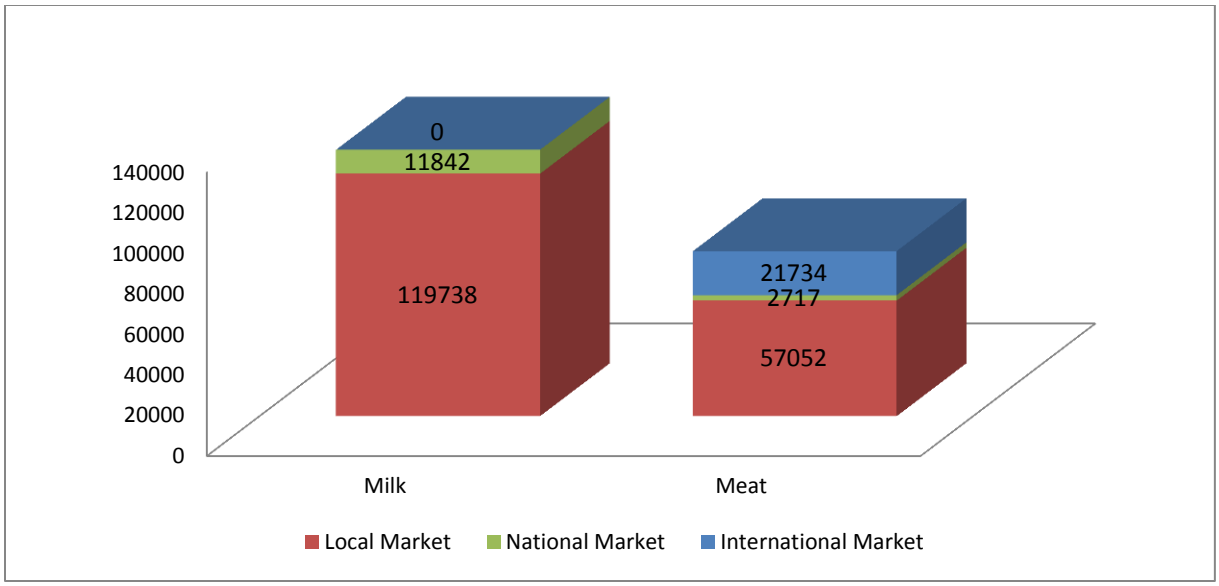
6.3. SIR-1.1: COMPETITIVENESS OF LIVESTOCK VALUE CHAINS

6.3.1. Value Chain Wise Sale to Various Markets



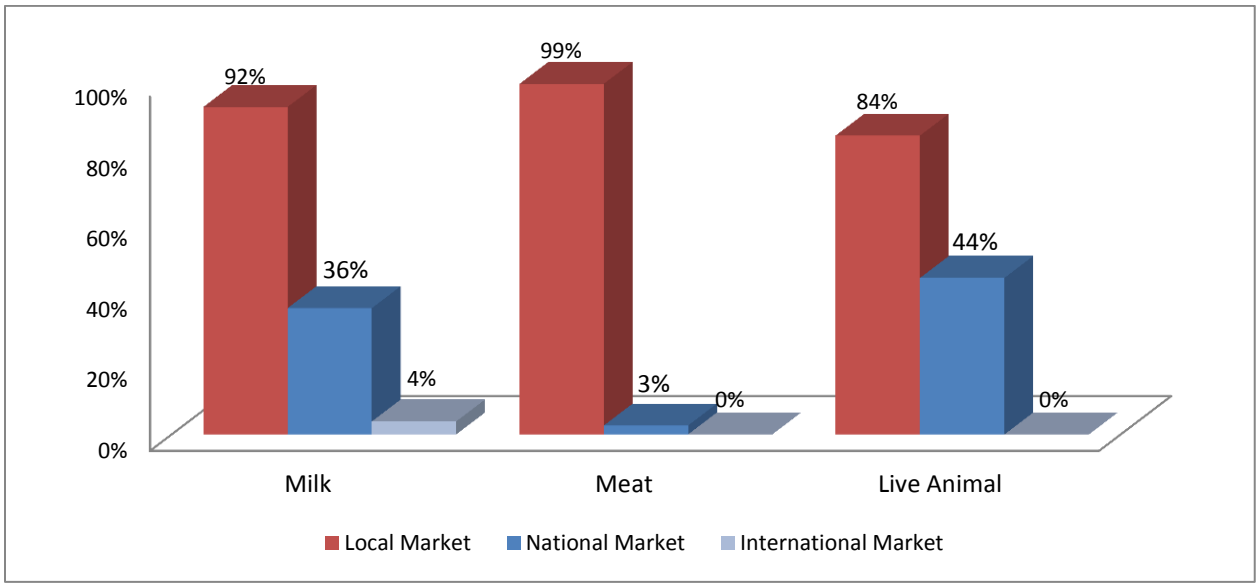
Graph 53: Farmers - Sale to Various Markets

The baseline findings revealed that the majority of the farmers sell their products to the local markets due to the lack of the proper transportation facilities, storage facilities, unavailability of the financial resources etc. As a result of the massive sale by the farmers to the local market, the sale of the milk and meat to the national and international market is very less. If we compare the sale of the milk and meat to the international markets, it is very astonishing that no milk sale to the international market, whereas, 525 kg of the meat is sold to the international markets. Overall, situation shows that the accessibility of the primary producers to the national and international market is very limited and Project really need to work these primary producers at the grass root level to the national and international markets.



Graph 54: Processor - Sale to Various Markets

Processors also mentioned that mostly the milk and meat is consumed by the local markets. The milk is processed to the national markets and meat.



Graph 55: Market Agents - Percentage of Respondents Selling to Markets

The baseline finding shows that more than 80% of the responding market agents are selling to local market, whereas few are selling to national market.

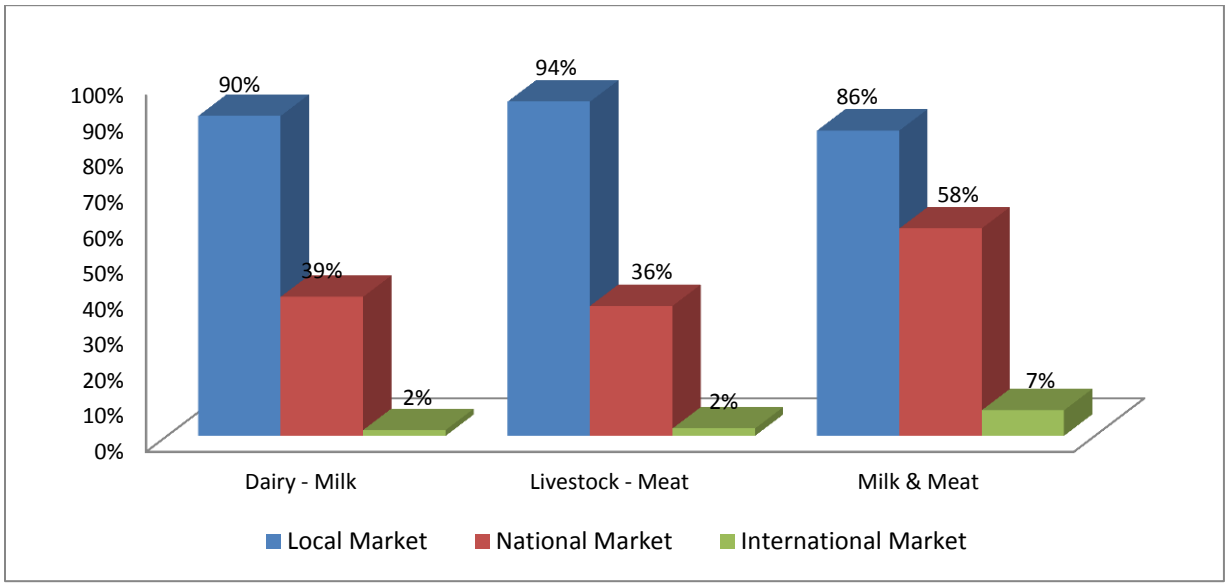
6.4. SIR-1.1.1: STRENGTHENED MARKET LINKAGE IN SELECTED VALUE CHAINS

This objective focuses on strengthening the capacity within the prioritized value chains in horticulture and livestock sub-sectors to increase sale in domestic and foreign markets. Special efforts were made during the baseline study to assess the issues and challenges faced by USAID assisted value chains and strengthen the capacity of the entrepreneurs in developing linkages with potential markets.

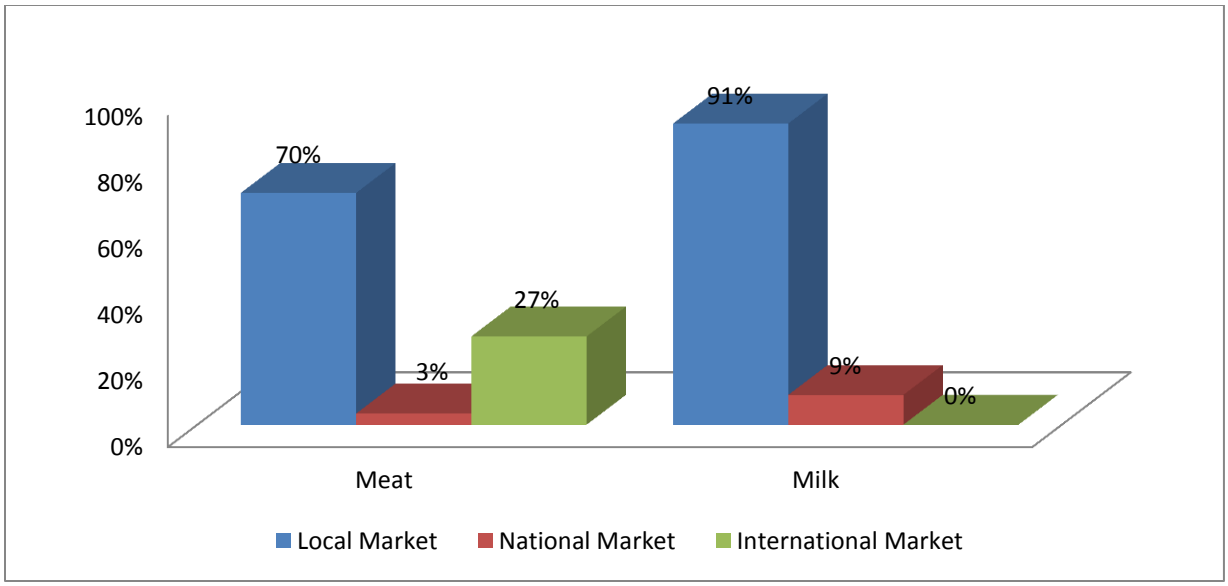
6.4.1. Value Chain Wise Sale to Various Markets – Percentage of Farmers/ Producers

The purpose of tracking the increased sale of USAID assisted VCs/enterprises is to assess increase in the income of beneficiaries. It is calculated based upon the market value of either goods or services sold in the market. Increase in sale means increasing the demand and supply of VC assisted goods and services. The increase in sale of selected VCs will benefit project's direct and indirect beneficiaries. The percentage increase in sale of the UAP assisted VC will be measured against the baseline.

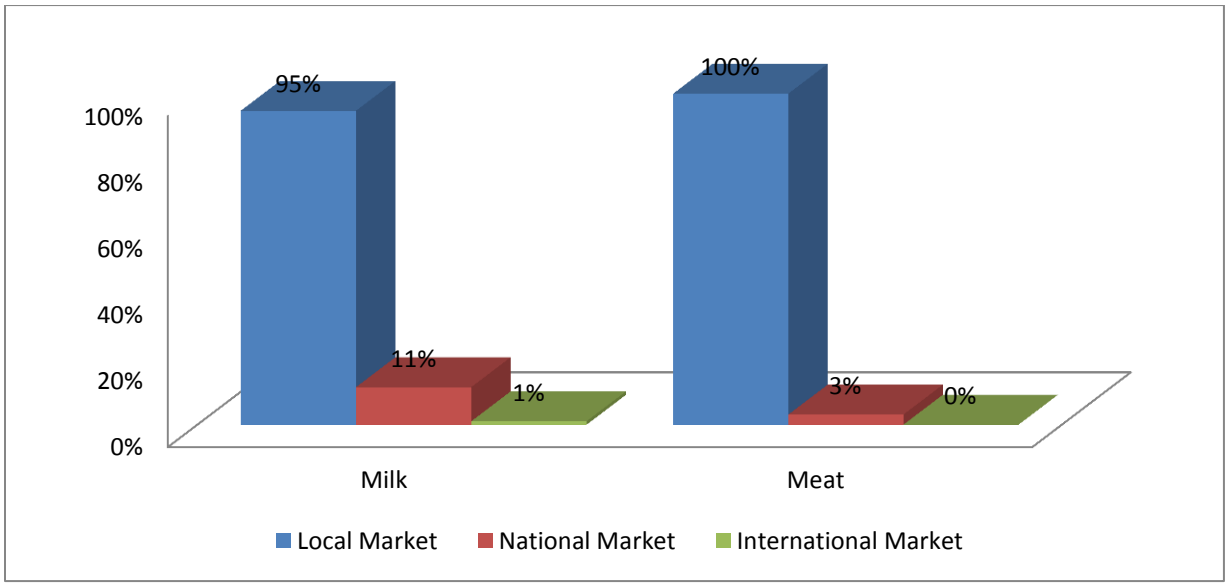
According to the interviewed farmers, majority of the farmers mentioned that they sell their products to the local markets, nearly half of the farmers said that they sell their products to the national markets and very few sell their milk and meat to the international markets.



Graph 56: Farmers - Respondents Selling to Various Markets



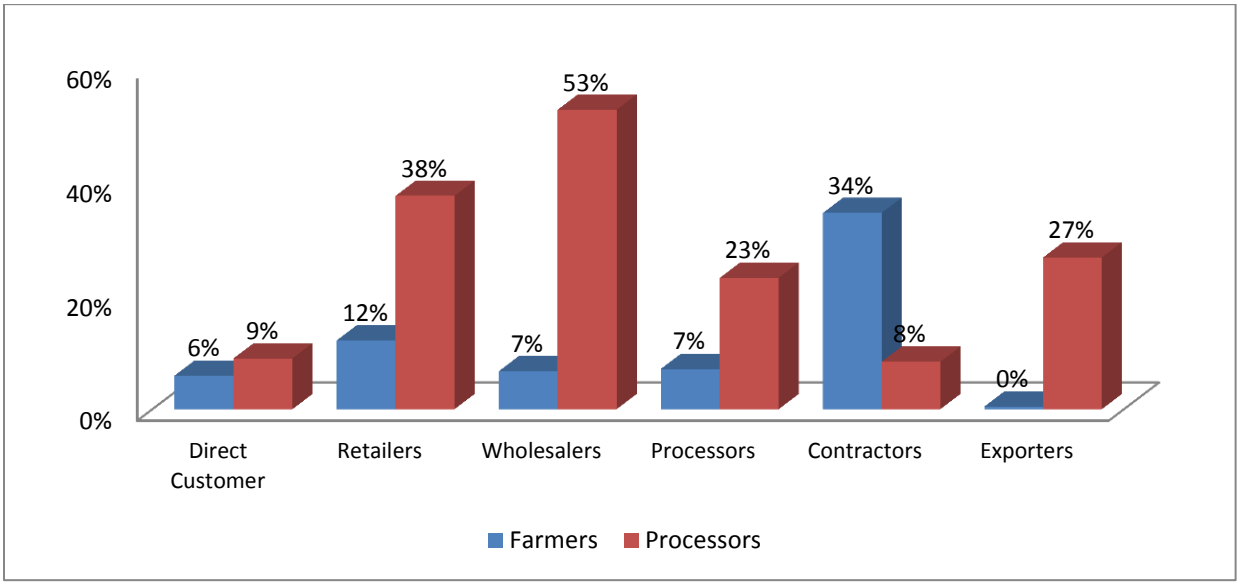
Graph 57: Processors - Respondents Selling to Various Markets



Graph 58: Market Agents - Respondents Selling to Various Markets

6.4.2. Value Chain Wise Buyers and Sellers Contracts

Farmers and Processors were asked about the existence of the contracts in the value chain actors during the baseline Survey. Farmers mentioned that most of their contracts were with the contractors who act as a middle man in selling and marketing their products to the national and international markets. None of the farmer respondents mentioned that they have contracts with the exporters. Whereas, processors mentioned that they have a good contracts with all the valuable actors of the value chain. It was worth discovering that processors have very few contracts with the direct customers.



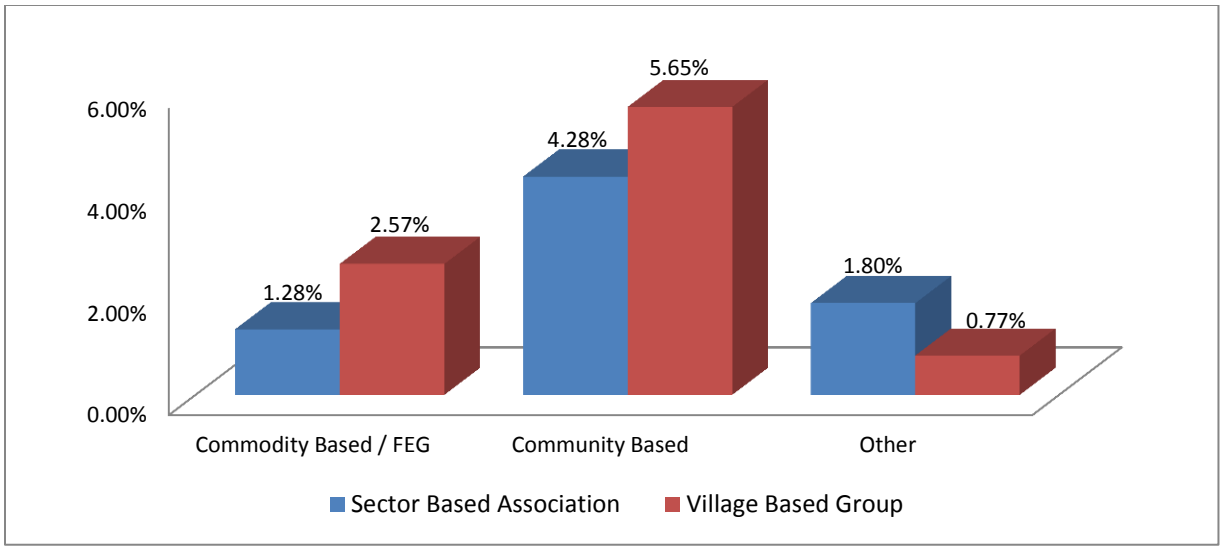
Graph 59: Farmers & Processors - Formal Contracts with Other Value Chain Actors

6.5. SIR-1.1.2: STRENGTHENED CAPACITY OF SMALLHOLDERS/ FARMER ENTERPRISES

The inclusive value chain development can only be made by increasing the capacity of small holders/farmer enterprises to profitably participate in marketing, processing and value addition function. Through focused interventions capacity of smallholders and farmer enterprises will be strengthened to operate in a commercially viable manner and effectively undertake value addition, processing and marketing.

6.5.1. Value Chain Wise Membership of Farmers in Groups/ Association

This section describes the percentage of farmers that are organized in groups and collectively managing their input purchase, sharing production practices, involved in collective post-harvest management including storage, processing, marketing and transportation.

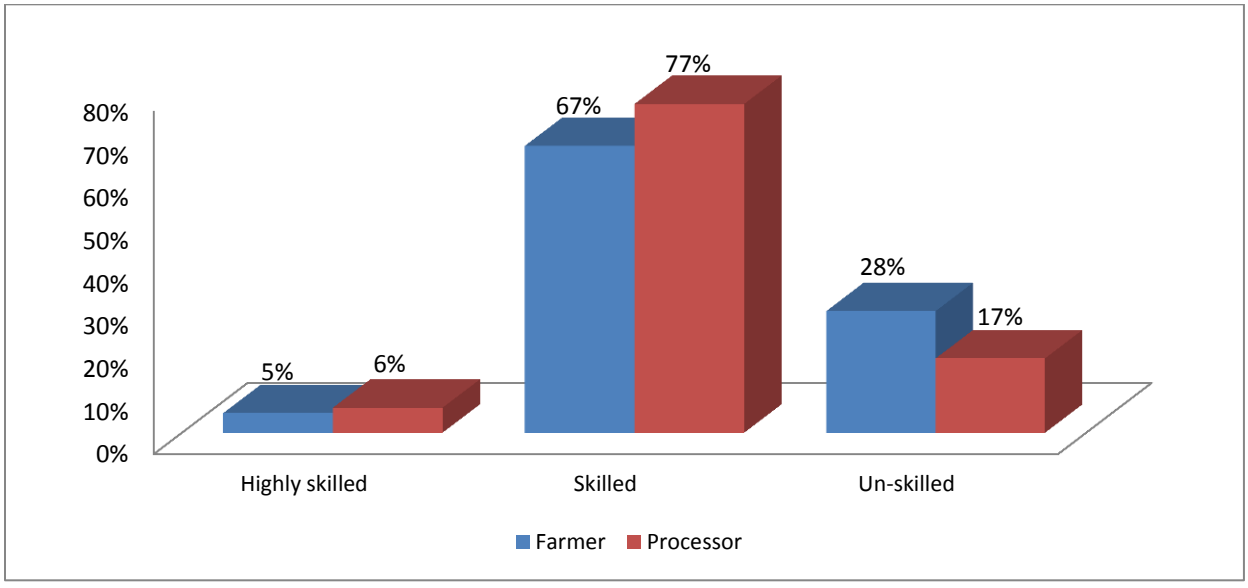


Graph 60: Farmers - Registration with Group / Association

The baseline finding shows that very few farmers i.e. less than 5% are collectively managing their businesses where most of the farmers are managing their agribusiness independently. The respondents have also been asked about their willingness to work collective. Most of the responding farmers are interested and willing in working together to achieve economies of scale.

6.5.2. Value Chain Wise Capacity of Labor

The capacity of labor employed in production is very important for increasing the profit margins. The increased capacity will enable farmers to increase their



Graph 61: Value Chain Actors - Capacity of Labor Employed

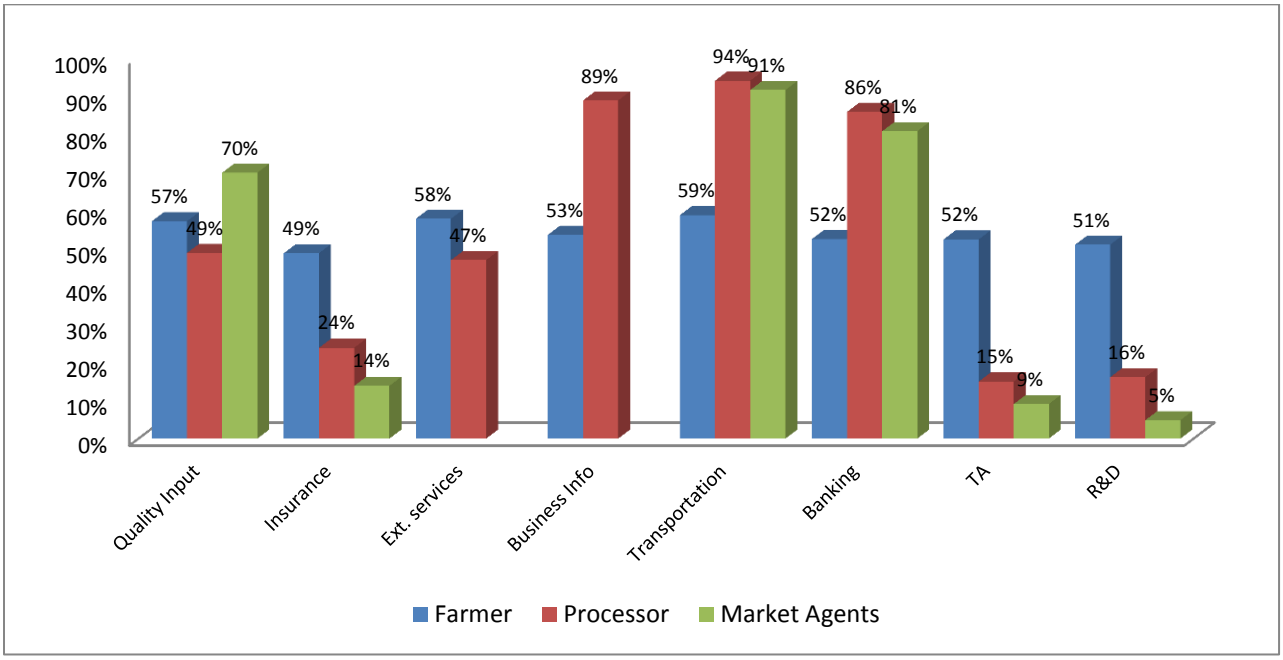
The baseline findings revealed that highly skilled and technically skilled labor is not involved in milk and meat value chain.

6.5.3. VC Wise Access to Business Development Service Providers

Access to the Business Development Services in the value chain is very important for the Increment of the support for the value addition and turning in to the good Profits. Baseline findings shows that they farmers had a contact with all the BDS, but the effectiveness with the BDS needs to look in to more detail as they seems skeptical against the Production which could have improved a lot if these services has been functioning Properly.

Whereas, majority of the Processors also mentioned that they have access to these services, Market agents did not responded for the Extension Services and business Information.

i) Value Chain Wise Access to BDS – Percentage of Farmers/ Producers



Graph 62: VC Actors - Access to BDS

6.5.4. Formal Contract With Other Value Chain Actors

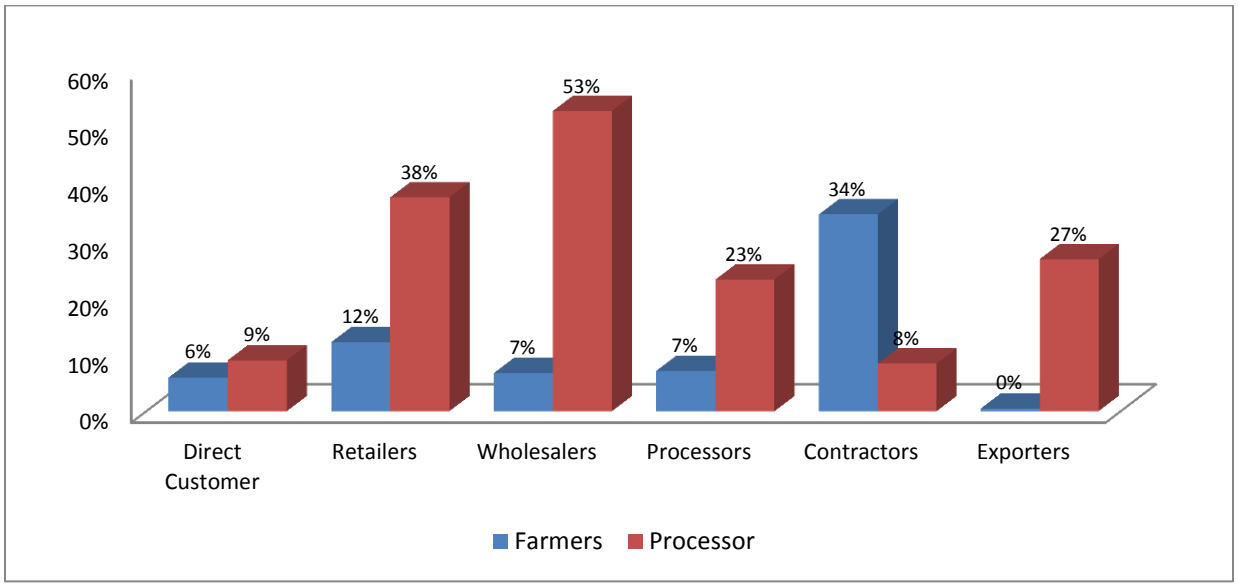
The number of FEGs associations having formal contract for input/output transactions will help in assessing the effect of UAP in improving the capacity of smallholders and farmer enterprises to have greater access to:

- Quality inputs,
- Needed BDSs and,
- Sell their products to competitive markets to earn higher profits

The FEGs association input/output contract indicates the established backward and forward linkages of FEGs. The UAP will facilitate FEGs associations to establish contracts with other

stakeholders so that they have greater access to quality inputs, needed BDSs and sell their products to competitive markets to earn higher profits. The project will encourage and empower farmers and enterprises to get organized in groups, receive training, qualify for graduation and form associations. All these steps will help farmers and enterprises to improve their capacities to operate their enterprises.

This section describes the number and percentage of FEGs and FEGs associations having formal contract for input/output transactions over during the baseline study.



Graph 63: Formal Contract with Other Value Chain Actors

According to the Baseline findings, majority of the farmers had a formal contract with the Contractors whereas; Processors have a good contact with the Exporters. The contracts of the farmers with the exporters were not found during the baseline survey due to the lack of the needed skills and technologies. On the other hand the Processors mentioned the major contracts with the wholesalers.

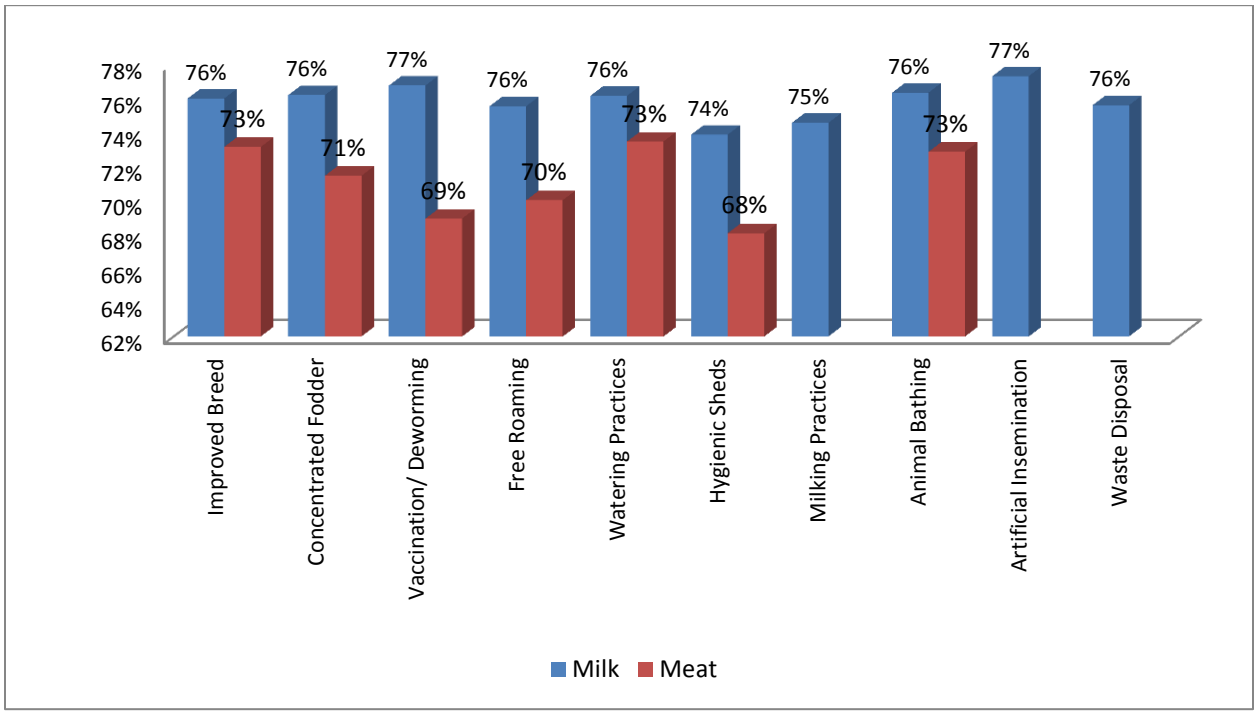
6.6. S-IR 1.1.3: IMPROVED TECHNOLOGICAL INNOVATION

Producers tend to use traditional technology with unimproved or old plant material. Equipment being used on farms and in agribusinesses is often outdated or inefficient. Low quality seed, the lack of variety improvements, insufficient pest control, low use of micronutrients and poor farm management is widespread. Whether it is cultivators for horticulture or livestock breeds for dairy, the majority of Pakistani farmers are having to make-do with poor genetic stock. Under UAP special consideration is being given to improve the farmers' capacity through technological innovation.

This section focuses on strategy to increase agricultural efficiency and productivity through adoption of new on-farm and off-farm techniques and technological innovations among targeted beneficiaries. Baseline study identifies the type and intensity of issues faced by Entrepreneurs (in USAID Assisted VCs) in following improved production practices and in accessing technology.

6.6.1. Respondents Following Improved Production Practices

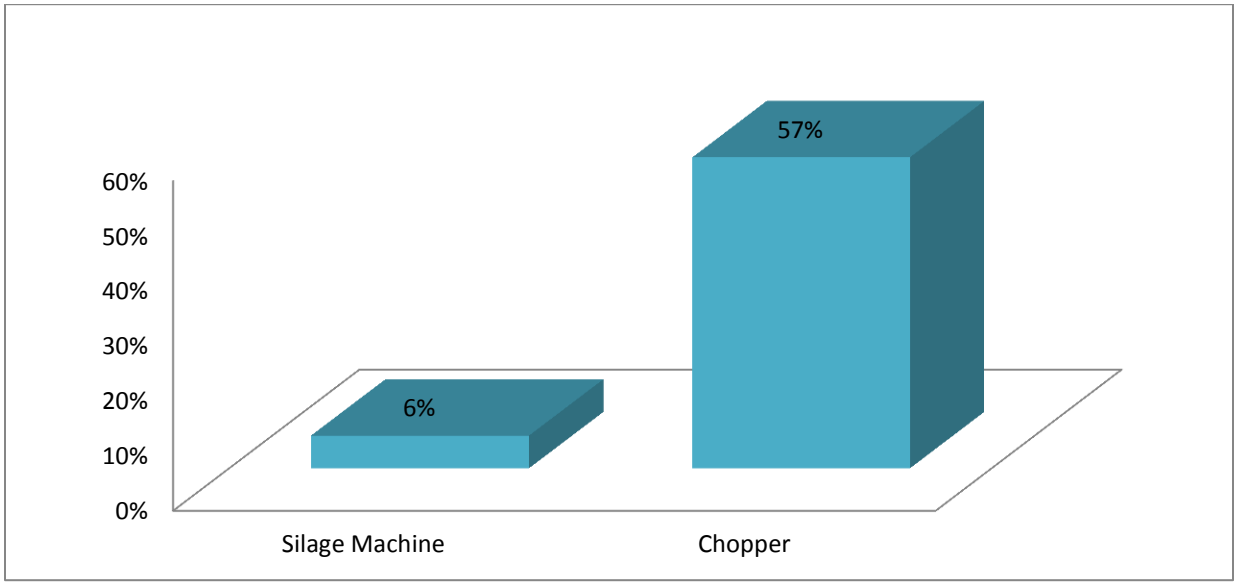
Baseline study assessed the percentage of beneficiaries using improved technology and practices during the startup of the project. There were further questions asked from the respondents about the level of awareness of entrepreneurs on improved production practices and technology, type and intensity of issues faced by producers in following improved production practices and in accessing technology, level of awareness and access of entrepreneurs in USAID Assisted VCs to BDS related to improved production practices and technology.



Graph 64: Farmers Dairy & Meat- Respondents following Improved Production Practices

6.6.2. Respondents Using Improved Technology

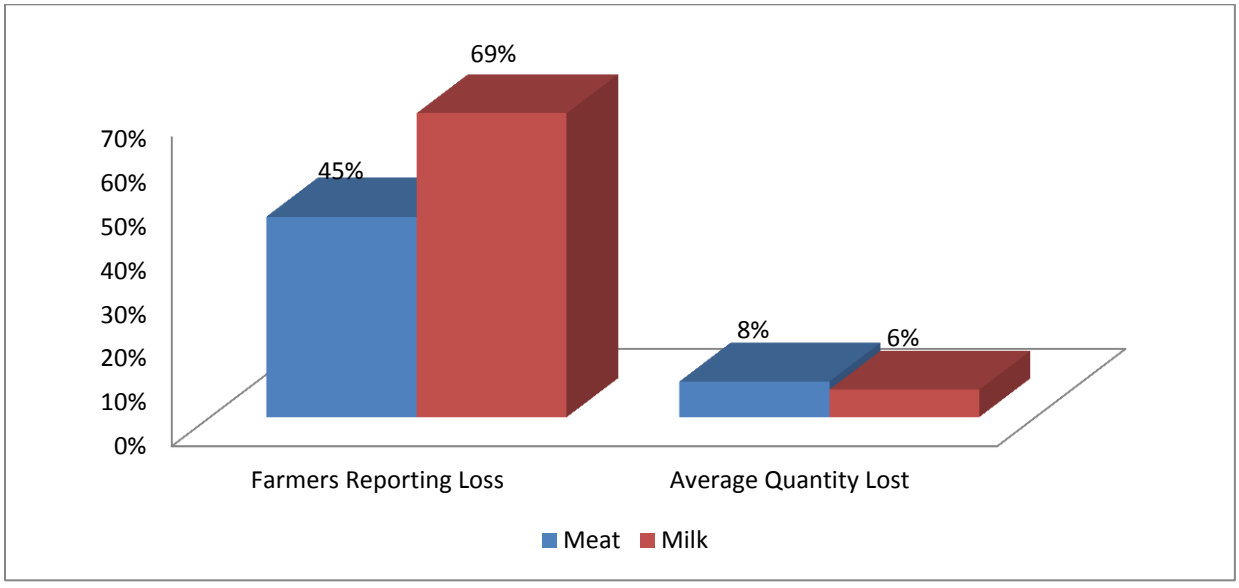
While responding on the use of the improved technology by the farmers, 57% of the farmers mentioned that they use choppers, whereas only 6% of them reported use of silage machine.



Graph 65: Farmers - Respondents Using Improved Technology

6.6.3. VC Wise Post-harvest Losses

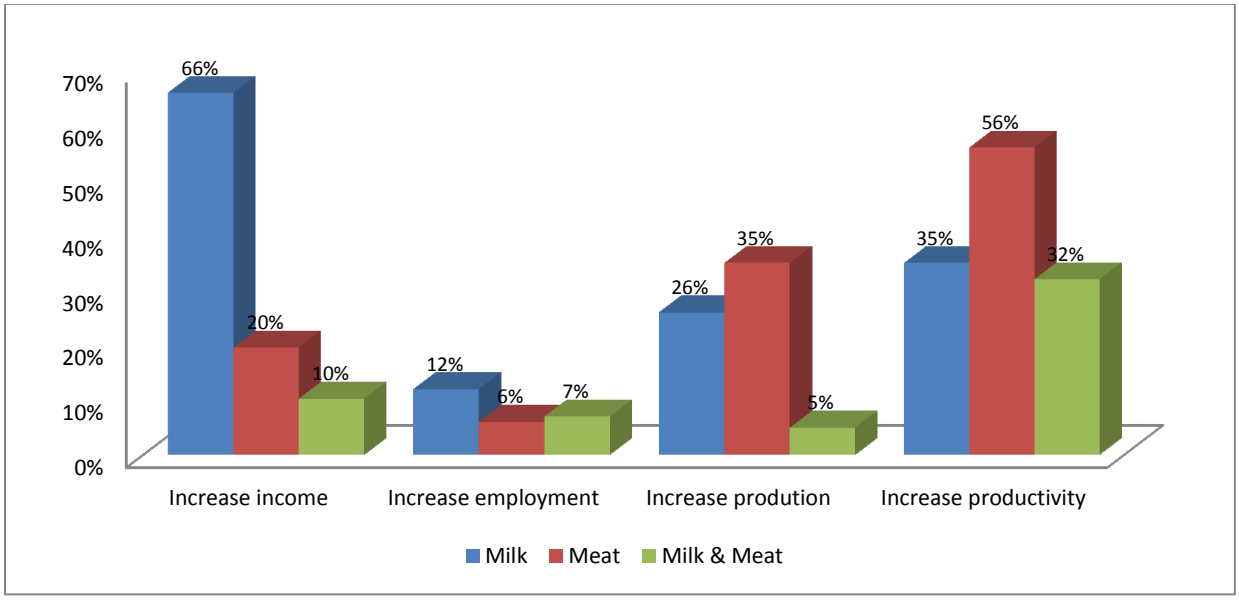
This section focuses on the percentage reduction in post-harvest loses. During the baseline study information was collected about the quantity of goods lost faced by the farmers.



Graph 66: Percentage of Farmers Reporting Loss

6.7. PERCEPTION SURVEY:

The respondent's perception for livestock value chain as a whole showed that majority of respondents see potential to improve their businesses. This also reflect their openness to project interventions.



Graph 67: Percentage of Respondent Saying Increase Opportunity

ANNEXES:

i) Baseline questionnaires for horticulture farmers, livestock farmers, processors, market agents and service providers;
ii) Value chain wise sample size; and,
iii) Respondents profile.