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Participatory Rapid Livestock Appraisal Report



Pothwar & AJK Project Region
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The Agribusiness Project



Acronyms

ASF	Agribusiness Support Fund
FAO	Food and Agriculture Organization
FGD	Focused Group Discussion
L&DDD	Livestock and Dairy Development Department
NGO	Non-Governmental Organization
NRSP	National Rural Support Program
PRLA	Participatory Rapid Livestock Appraisal
TAP	The Agribusiness Project
USAID	United States Agency for International Development

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Executive Summary

The Agribusiness Project funded by USAID Pakistan is being implemented by Agribusiness Support Fund (ASF) in collaboration with International and national partner organizations. This five years project commenced on 10th November, 2011 and aims at increasing competitiveness and productivity of horticulture and livestock sub-sectors in Pakistan. 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. During the first year of the project, a preparatory program was undertaken to gauge the potential of the sub-sector and to prioritize value chains for various project regions including the Pothwar & AJK Project Region. Findings from the Participatory Rapid Livestock Appraisal (PRLA) will enable the project to identify and prioritize livestock value chains, opportunities, constraints and state of the business development services to provide required basis for focusing project interventions.

Within the framework of the cluster and value chain approach, a two-pronged approach was adopted, first preparation for PRLA exercise in the field and second collection of secondary data and development of appropriate tools for quantification of factors to be measured on a scale for ranking/prioritization. This report pertains to work completed based on both secondary data and primary appraisals of livestock sub-sector.

The PRLA methodology provides for probing, analysis and validation of information as they unfold during the field work. Seven factors were applied for quick analysis of the sub-sector. These include; (i) extent of employment generation; (ii) commercial worth; (iii) percentage of small farmers associated; (iv) women involvement; (v) households associated with the value chains; (vi) understanding growth potential; and (vii) vulnerability of the concerned value chains. Covering 50% of the districts, the exercise was undertaken in the randomly selected settlements/villages within each cluster/region. Each focus group consisted of 10-15 stakeholders, a representative sample of sub-sector, whereas, 2-3 FGDs were carried out in each district.

Livestock is an integral part and considered to be the backbone of Pakistan's agriculture based economy. It is one of the major sources and at times the sole source of livelihood for small marginalized and landless farmers/stock owners. 35 to 40 million rural households are engaged in livestock based activities and derive 30% to 40% of their income from this sector. Despite having huge potential, Pakistan has not been able to exploit its immensely large livestock resources for substantial and dynamic growth of the sector in the capacity of a viable and diverse agribusiness

A participatory rapid appraisal of the livestock subsectors was conducted based on the secondary data available to develop objective criteria for the prioritization of the milk, meat and dairy byproduct value chains. The indicators used for analysis included i) Growth of the subsector in past five years; ii) Pakistan's share in the world production; iii) Pothwar & AJK share in Pakistan; v) Productivity Gap; vi) Employment potential or Labor intensity; and vii) national production cost calculated (NPC) by comparing the price in national and international markets.

As per analysis on the basis of secondary data, Pakistan's share in world production is 4.82% in milk, 2.17% in beef, 3.13% in mutton meat, 17.91% in buffalo hides, 1.93% in cattle hides, 4.93% in goat skins and 1.85% in sheep skins.

Pothwar Project Region contributes 1.67% to the national milk production whereas in Punjab its share is 2.80%. In addition, Pothwar shares 1.32% beef, 17.04% mutton, 10.41% fish, 55.14% buffalo hides, 50.92% cattle hides, 64.51% goat skins and 53.26% sheep skins to the total production on national level. Buffalo hides made 22.22%, cattle hides 15.80%, goat skins 19.82% and sheep skins 86.85% on provincial level.

Among livestock value chains, meat (beef) showed highest growth of 41.5% in Pothwar & AJK during past five years (2008-2012) followed by hides with 40% growth rate. Milk production had a growth rate of 36.88% but this increase was mainly due to increase in the number of animals, not production per animal. Lamb wool showed growth rate of 32.50% while growth rate of dairy byproducts was 20%.

Primary data for Pothwar & AJK Project Region was collected through 08 FGDs in different districts, involving all groups of stakeholders within the value chains. Livestock value chain was then analyzed and prioritized using grid analysis on the basis of seven factors mentioned above.

On the basis of collected data and analysis thereof, Milk ranked highest on the priority index with 6.63 points, followed by hides at 6.4 points and meat at 5.76 points. Lamb wool and dairy byproducts remained at 5.41 and 3.39 points respectively on priority index.

Within the perspective of ASF's strategic objectives, one or all of these prioritized value chains might be selected by the project for baseline study and detailed analysis.

As a part of the PRLA exercise the analysis and ranking of potential priorities and constraints, in all value chains, was carried out during FGDs using pair ranking technique. Increasing demand in the national market along with value addition and provision of technical assistance to farmers were among the top opportunities that need to be employed in order to enhance the capacity of livestock sector and growth of the value chains. Low potential breeds, lack of technology are limited/market linkages were among the top constraints.

Further, an assessment of the market linkages and the services provided was also carried out. Strength of the market linkages was determined by share of the produce in that particular market and cost of transportation. The input suppliers, middlemen and market agents were identified as the strongest links among all stakeholders across the value chains. NGOs and farmer' associations providing technical assistance in the form of capacity building and trainings were among the medium strength linkages. Government institutions such as L&DDD and banks were found comparatively weaker in terms of linkages.



Introduction

Background

The Agribusiness Project funded by USAID, is being implemented by Agribusiness Support Fund (ASF) in collaboration with International and national partner organizations. This five years project commenced on 10th November, 2011 and aims at increasing competitiveness and productivity of horticulture and livestock sub-sectors in Pakistan. 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.

The Agribusiness Project's objective is to: i) To strengthen the capacity in horticulture and livestock value chains to increase sales to domestic and foreign markets; ii) Strengthen capacity of small holder and enterprises to operate autonomously and effectively; and ; iii) increased agriculture/livestock efficiency and productivity through adoption of new farming techniques and technological innovations among targeted beneficiaries. Project activities encompass focused technical and capacity building assistance to upgrade and strengthen capacities in the priority value chains in both livestock and horticulture sectors; and a national cost sharing grants program offering a wide range of customized assistance to key players within the priority value chains.

During the first year of the project, a preparatory program was undertaken to gauge the potential of the sub-sector and to prioritize value chains for various project regions including the Pothwar & AJK Project region. PRLA is a short cut yet efficient method for data collection. It is a methodology for action research that uses a range of techniques and plays an important role in probing, developing, analyzing and using indigenous knowledge as a foundation from which to build more productive, valid and sustainable platform for the field work. Findings of the PRLA will enable the project to identify and prioritize livestock value chains, opportunities, constraints and state of the business development services to provide required basis for focusing project interventions.

The Livestock sector is broad and covers highly diverse agro-ecological, social and economic dimensions across countries, regions and continents. In Pakistan, livestock is an integral component and considered as the backbone of the agriculture sector, as in any other agricultural economy. The livestock accounts approximately 55.1% of the agriculture value added and 11.5% to the Gross Domestic Product (GDP). Almost 35-40 million rural households are dependent on livestock for their livelihood, deriving 30-40% of their income from livestock. The primitive state of infrastructure and technology catalyzed by the limited availability and high cost of inputs has halted the growth of a polymorphic, high value livestock sub sector that, if driven in the right direction, can contribute towards food security, import substitution, export led growth and poverty alleviation through employment generation. Pakistan has immensely large livestock resources and there is need to exploit and utilize these resources for the substantial growth of the sector. There is also a need to focus on understanding productivity gaps, factors blocking development and expansion of livestock value chains, to identify hurdles causing bottlenecks, uncertainties and inefficiencies that hinder competitiveness. Interventions are required across all nodes of the livestock value chains, especially value addition, processing and marketing in order to increase the competitiveness and enhance capabilities of value chain operators to respond to domestic, regional and international markets.

The reports articulate for each region separately to enable better targeting and focusing project interventions. This report covers the project region of Pothwar & AJK. Within the framework of the cluster and value chain approach, a two-prong approach was adopted, first preparation for PRLA exercise in the field and second to collect secondary data and develop appropriate tools for quantification of factors so that it can be measured on a scale for ranking/prioritization. This report pertains to work completed based on both secondary data and primary appraisals of Livestock sub-sector.

Objectives

The objectives of PRLA exercise were to a) identify and prioritize the key livestock value chains in terms of growth potential and capability to benefit as many stakeholders across the value chains b) Identify relevant constraints impeding the realization of opportunities c) assess current state of the extension services to the livestock farmers and d) explore linkages of key livestock stakeholders with the local and national markets.

The PRLA was conducted with a view to prepare the stage for focusing project intervention as well as for the project baseline and value chains benchmark studies. The PRLA results will enable the project to prioritize value chains (validating the cluster approach), set benchmarks, and support establishment of a database to generate primary data on key indicators to be maintained and updated during the course of project implementation and afterwards supporting the planning, monitoring, evaluation and communication functions of the project.

Methodology and Approach

The consultant(s) assisted the project staff through a strategic exercise for identification and prioritization of the value chains to prepare a stage for the baseline study and in close consultation with the project management adopted the following methodology to implement the PRLA .

Desk Review and Study Matrix

The PRLA team , within the framework of the cluster and value chain approach, reviewed the existing data, including the secondary data on the livestock sector, published reports and developed objective criteria for prioritization of value chains within the livestock subsectors i-e, Dairy, Meat, Livestock by products value chains. Following sources were used to collect secondary livestock data for Pothwar & AJK region;

- i) Pakistan Livestock census 2006 database
- ii) FAO Database
- iii) Livestock and Dairy Development Board
- iv) Economic Survey of Pakistan.
- iv) Information from past research papers and reports from various sources.

The PRLA team, prior to inception of the field work, developed approach and methodology for the study based on international best practices. The methodology focused on quantification of factors, by assigning appropriate weights and scales, so as to contribute to ranking and selection of the priority value chains based on a seven factored grid analysis that included (i) extent of employment generation; (ii) commercial worth; (iii) percentage of small farmers associated; (iv) women involvement; (v) households associated with the value chains; (vi) understanding growth potential; and (vii) vulnerability of the concerned value chains.

Data Collection Tools and Techniques

The PRLA team developed and pre-tested tools for undertaking the rapid appraisal exercise in project regions. These tools included;

- i) A five factored grid analysis matrix
- ii) Paired ranking matrix for opportunities and constraints
- iii) Venn-diagrams for mapping market linkages and service providers:

These tools were pre-tested in the field before being applied to collect primary data by holding Focus Group Discussions (FGDs) with selected groups of relevant stakeholders such as livestock farmers, inputs suppliers, processors, traders, retailers and service providers. Later the data collected through FGDs was verified through validation workshops.

Sample Size

The PRLA exercise was undertaken in all project regions to validate production clusters and establish priority value chains on a regional level. 2-3 FGDs were facilitated and conducted in randomly selected settlements/villages within each cluster/region, covering approximately 50% of the districts in each region. A group of 10-15 stakeholders related to the livestock value chains participated in each FGD.

Staff Orientation and Pre-Testing of Tools

The PRLA team designed and co-facilitated a two-step training workshop comprising the orientation of the project staff regarding the use of pre designed tools, FGD facilitation & data collection techniques to be used in the field; and a real pre-testing field exercise followed by a debriefing session to help understand and discuss the constraints faced during the exercise in order to revise and improve the tools and techniques.

Primary Data Collection

8 FGDs were organized and facilitated by trained project staff in randomly selected clusters from within 07 districts of Pothwar & AJK Project Region. The participants of FGDs that represented stakeholders from each node across the livestock value chains selected and prioritized value chains through mutual consensus during group discussions that were held and facilitated by the project teams.

Backstopping and Monitoring

The consultants provided a continued coaching and backstopping support to the project staff during orientation, pre-testing and PRLA exercise in project target regions.

Data analysis and Reporting

The primary data gathered via the field investigations through observations and FGDs was recorded using pre designed tools and later reproduced in tabulated form using MS Excel sheets. The final analysis was done by applying statistical tools to the primary data and shown in the form of bar graphs and tables to provide a highlighted outlook on the weaknesses and strengths of the livestock value chains.



Appraisal of Livestock Value Chain based on Secondary Data

Data collection and mining

The secondary data for the livestock sector was collected from various sources mentioned in the desk review and study matrix. The USAID's Pakistan livestock database 2006 and Pakistan livestock Census 2006 data were used as prime source (since these were the only two providing livestock data on district level for all four provinces) and using projections a timeline data was obtained.

Overall analysis of value chains

The analysis on the basis of secondary data gave a broader and comparative outlook of the livestock value chains at regional and national levels and helped understand the glitches and potential within these value chains. The analysis showed growth of livestock products and byproducts in Pothwar Region and Pakistan over the past five years, Pakistan's share in world production, Punjab share in national production and Pothwar Project region's share in province.

Table 1: Overall analysis of value chains

Indicators	Milk	Beef Meat	Mutton Meat	Fish	Buffalo Hides	Cattle Hides	Goat Skins	Sheep Skins
Percentage Growth	3.23%	3.33%	2.13%	4.45%	2.99%	3.70%	2.67%	1.18%
Pakistan Share in World	4.82%	2.17%	3.13%	0.24%	17.91%	1.93%	4.93%	1.85%
Punjab share in Pakistan	63.01 %	49.17 %	59.31%	38.19 %	55.14%	50.92%	64.51%	53.26%
Pothwar Region share in Punjab	2.80%	1.32%	17.04%	10.41 %	22.22%	15.80%	19.82%	86.85%
Productivity Gap	60.92 %	80%	89%	99.98 %	69.61%	85.30%	83.00%	92.09%

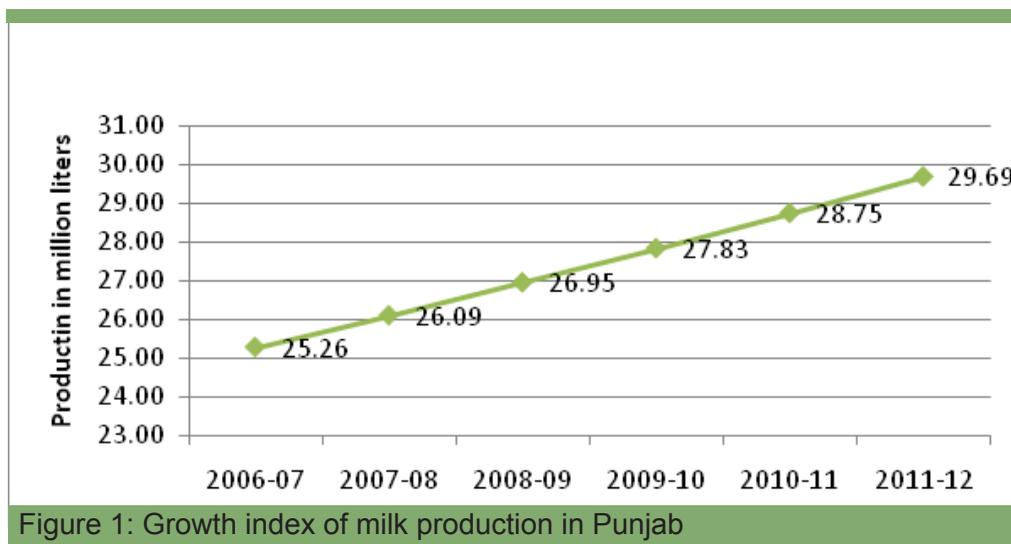
Source: Pakistan Livestock census 2006-2012 database

Four livestock value chains that were analyzed on the basis of secondary data include:

- i) Milk
- ii) Hide
- iii) Meat (Beef & Mutton)
- iv) Wool (Lamb wool)
- v) Dairy byproducts

Analysis of Milk value chain

Milk is the single most important livestock product. According to FAO statistics production in Punjab showed a steady growth over the past few years, but this increase is attributed to the increase in number of milking animals and not due to increase in yield per animal. There was an actual decrease in the milk production during the year 2010 because of the losses in livestock population due to natural calamities but it is not shown on the index due to unavailability of the data from disaster management sources. Growth index of milk production in Punjab can be seen in Figure 1 below.



Punjab contributes 63.01% to the national milk production. The share of Pothwar & AJK Project Region in Punjab stands at 2.80%. Among Pothwar Project region districts, Chakwal is the highest milk producing area with an average annual milk production of 1,652,401 liters, followed by Rawalpindi and Attock adding 1,587,379 and 1,418,076 liters to the region's annual milk production. Jehlum contributes 769,323 liters on the average over the last five years.

Analysis of Meat value chain

Meat industry in Pakistan is developing these days. The export of meat (beef, mutton, and camel) has increased from \$ 108.54 million (2010-11) to \$123.61 million in 2011-12 showing an increase of 13.9 per cent. Dairy animals are also being used as beef animals after completion of its productive years. Male calves of dairy animals and dairy bulls when no further required for breeding purposes are also utilized for beef purposes.

Meat sector hasn't achieved its potential amongst the livestock value chains in Pakistan primarily due to nonexistence of breeds specific to meat production. Further, there is no trend of fattening animals for meat purpose. However, analysis on the basis of secondary data showed that over the past few years there had been an increase in the meat production due to the ever increasing demand in the regional and national markets for the protein from animal origin.

Punjab contributes 49.17% to Pakistan's annual beef production and 1.32% to total mutton production. Pothwar Project Region holds a share of 1.32% in beef and 17.04% in mutton production in Punjab. Within Pothwar Project Region, Rawalpindi ranks as the highest meat producing district with an annual production of 2,544.378 thousand tons of beef and 7,303.102 thousand tons of mutton. Pothwar & AJK stands second highest in terms of meat production with 13905 thousand tons of beef and 910.227 thousand tons of mutton every year.

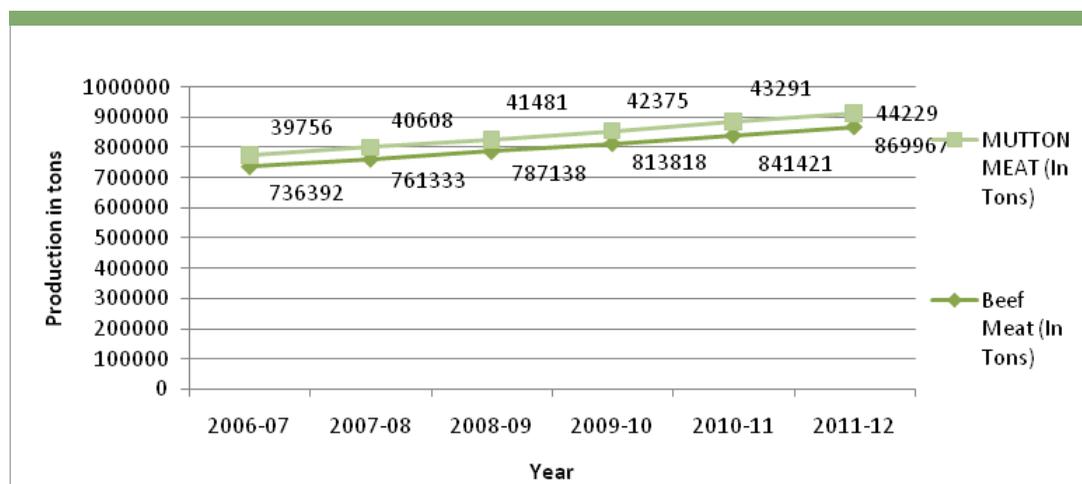


Figure 2: Growth index of beef and mutton production in Punjab

Analysis of Livestock byproducts value chain

Livestock byproducts, especially hides and skins, had always been ignored despite their importance in the international market. Lack of awareness and absolute absence of proper handling equipment and techniques result in high losses every year. There is huge potential for livestock byproducts in domestic and international markets. Due to limited availability of relevant data on district level, the number of hides and skins were calculated against the number of animals slaughtered every year, hence the actual losses during handling are not evident in this analysis.

An overview of the growth of livestock byproducts is shown in Figure 3 below.

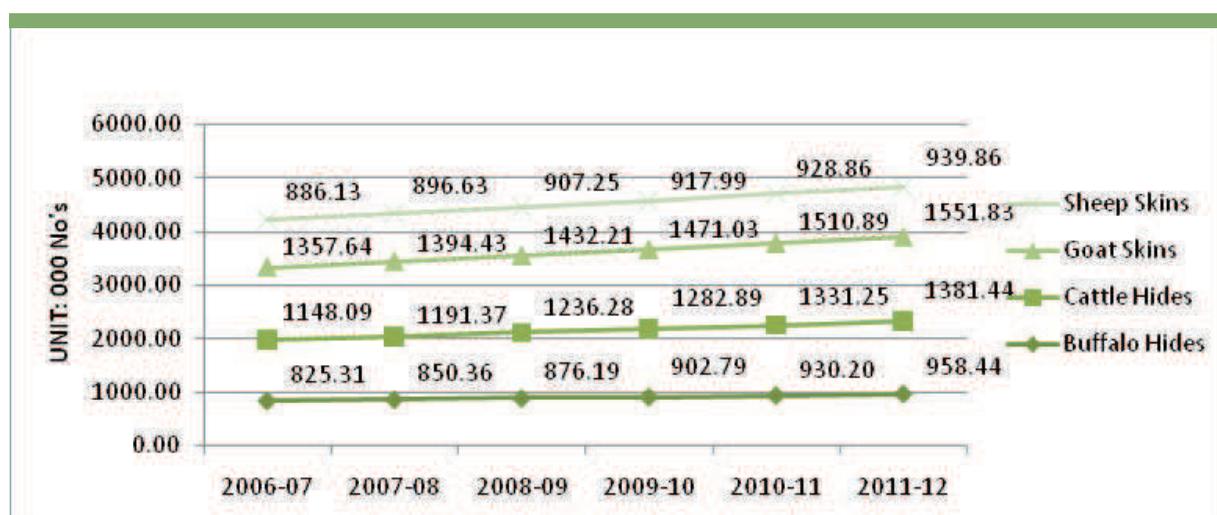
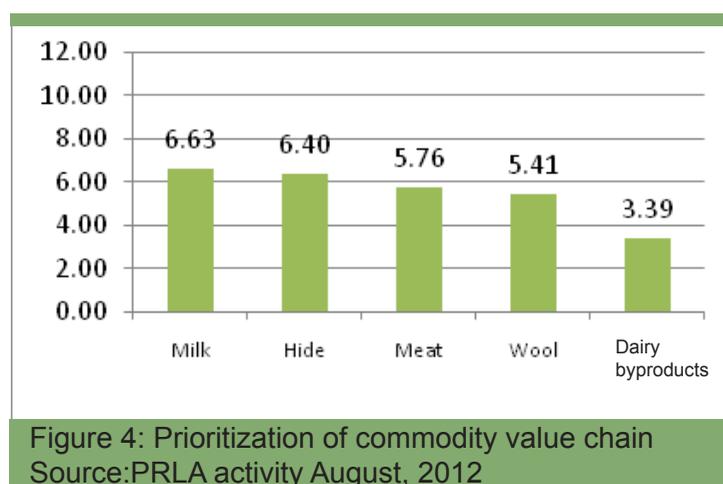


Figure 3: Livestock byproducts growth index in Punjab

Appraisal of Livestock Value Chain based on Primary data

Selection and prioritization of the value chains

This process was carried out to identify the value chains that offer most promising prospect for economic growth and poverty alleviation through employment generation. It was based on the review of the key issues that have an impact on the development of livestock value chains and the capacity of a given region to produce and market livestock products and byproducts in the domestic and international markets. Choice of the value chains was further refined by applying priority criteria, weighting their relative importance and ranking on score sheet based on the composite index that was calculated on the basis of seven factors used in the grid analysis. A graphical overview of prioritization is shown in Figure 4.



As is evident from the prioritization index, Milk with the highest priority index of 6.63 points scored to the top, followed by hide with a priority index of 6.40 points, meat at 5.76 points and wool and dairy byproducts scored 5.41 and 3.39 points, respectively.

The FGDs conducted within Pothwar & AJK Project Region showed that Milk had the highest commercialization at Rawalakot, (95%), providing employment opportunities to 70% people in Bagh, peak percentage of small farmers involved in dairy was in Rawalakot, 98% women involvement was observed at Bagh, 80% growth rate was observed in Rawalakot whereas post production figure was highest at Jhelum being 20%.

The highest growth in meat value chain was also observed in Rawalakot where the growth rate for past five years (2008-2012) was 80%, ranking it as the high potential zone. Chakwal, Jehlum and Bagh showed 50% growth during the past five years, Muzaffarabad, Pothwar & AJK showed 40% growth rate while Rawalpindi and Attock showed 17% and 5% growth respectively. Livestock meat value chain provides 20% employment opportunities and involves 47% of the households in the region.

As regard to the livestock byproducts, the data collected through FGDs showed 30% growth in Bagh and 5% growth in Chakwal. Involvement of small farmers in dairy byproducts remained 90% in Chakwal and 95% in Bagh, households involved in dairy byproducts were 50% in Chakwal and 5% in Bagh.

Factor wise prioritization of the value chains

Ranking of the livestock value chain was carried out on the basis of following seven factors used in the grid analysis matrix.

Prioritization on the basis of percentage employment potential

Among all livestock value chains, milk has the highest potential of 37.25% for employment generation. Meat value chain has the ability to create 20% employment, followed by dairy byproducts and hide value chains that have a potential to create 5% employments respectively. It is important to note that milk value chain involves more labor force due to the efforts required for feeding, management and milking of the animals and post production handling of the milk as compared to any other livestock value chain.

Prioritization of different livestock value chains with regard to their ability to create employment is shown in Figure 5 below.

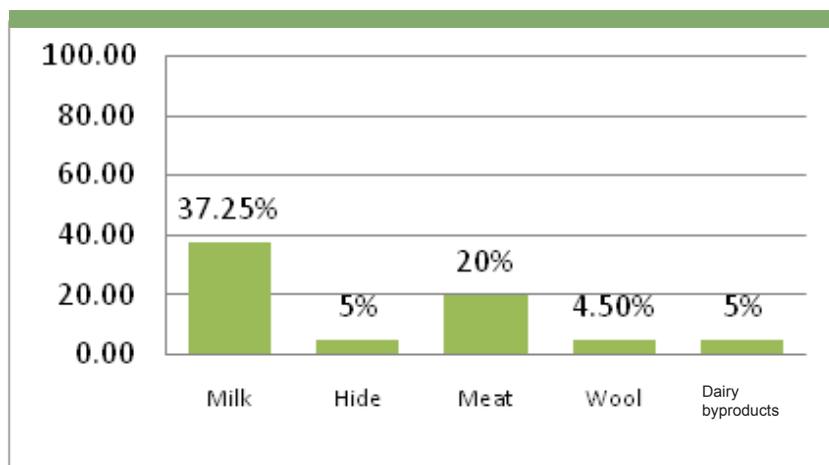


Figure 5: Prioritization on the basis of % employment potential
Source: PRLA activity August, 2012

Prioritization on the basis of percentage commercialization

Commercialization can be described as percentage of the product that is marketed. The data collected from FGDs is shown in Figure 6 below:

Commercialization of hide and lamb wool is 100%, meat is 95.88% and out of the milk produced, 79.38% is marketed. Commercialization of dairy byproduct is 27.50%. Milk, due to its perishable nature and traditional use in different hot and cold beverages, is used for domestic consumption and therefore showed a lower percentage as regard to commercialization in comparison to other livestock value chain. The highest commercialization rate for milk was observed at Rawalakot being 95% followed by Attock being 90% and Muzaffarabad, Bagh and Rawalpindi being 80%. Similarly, in meat, commercialization remained 100% at Jehlum and Bagh followed by 99% in Pothwar & AJK, Rawalpindi and Rawalakot remained at 95%, and Chakwal and Attock at 90%.

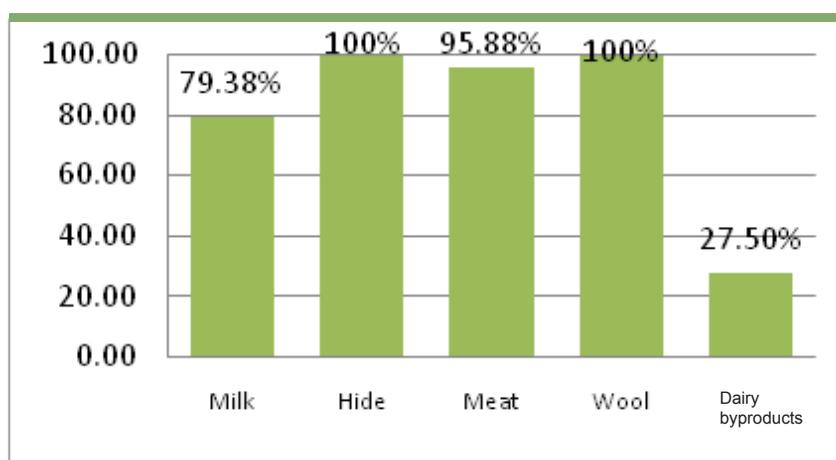


Figure 6: Prioritization on the basis of % commercialization
Source: PRLA activity August, 2012

Prioritization on the basis of percentage small farmer's involvement

As exhibited, small farmer's involvement remained the highest in wool and dairy by products i.e. 92.50%, followed by hides at 90%, in meat involvement of small farmers observed was 87.25% and milk was 86.63%.

District wise analysis of the data collected through FGDs showed that in Rawalakot 98% of the farmers involved in livestock are small farmers, Baghand Rawalpindi followed with 95%, Chakwal and Muzaffarabad are 90%.

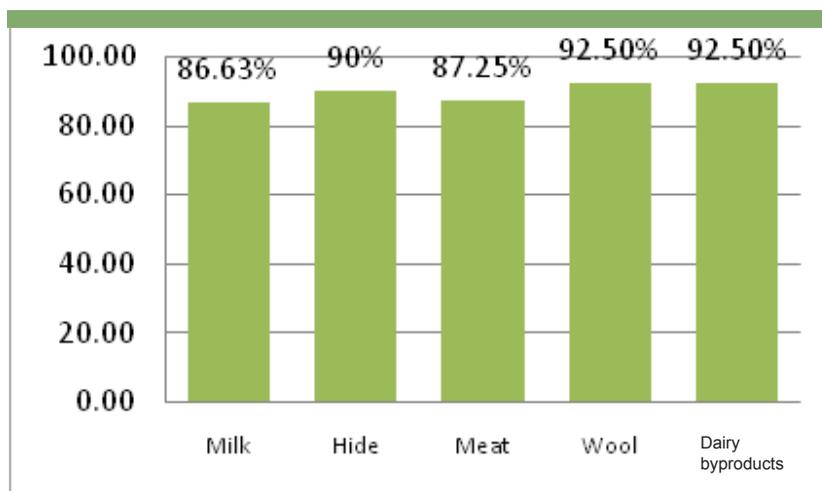


Figure 7: Prioritization on the basis of % small farmers involvement

Source: PRLA activity August, 2012

Prioritization on the basis percentage women involvement

Women involvement is considered to be an important factor for prioritization of the value chains. As per conclusion from the FGDs data, it was found that hides/skins value chain has the highest percentage of women involvement i.e. 95%, and then comes milk meat with 78.5% and 53.13% respectively. Lamb wool and dairy byproducts remained 67.50 and 52.50% respectively.

A closer look at the data collected through FGDs revealed involvement of women remained 100% in dairy byproducts at Bagh. 98% women involvement was recorded at Bagh, At Muzaffarabad women involvement remained 95% in all value chains of the sub-sector. This can be seen in the Figure 8 below:

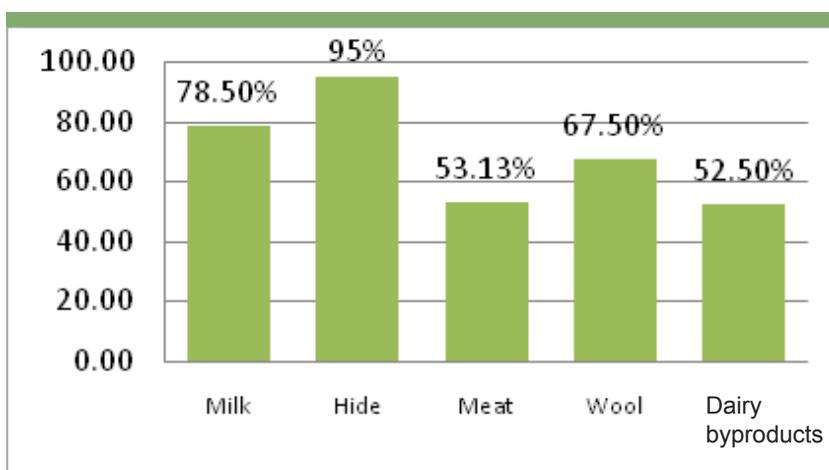


Figure 8: Prioritization on the basis % women involvement

Source: PRLA activity August, 2012

Prioritization on the basis of percentage growth over five years

Growth is the most important factor for prioritization of a value chain as it gives a clear idea of the potential subsector in a particular region. The livestock value chains were assessed on the basis of their growth observed during the past five years in Pothwar & AJK Project Region. Figure 10 reflects 41.5%, 40%, 36.88%, 32.50%, and 20% growth rates for meat, hide, milk, wool and byproducts respectively.

On the basis of FGDs conducted, Rawalakot (Poonch) district showed the highest rank on the growth index for milk and meat value chains (80%) followed by Muzaffarabad and Chakwal for wool at 60% and Milk at 55% respectively. Jehlum showed 50% growth rate at both milk and meat value chains.

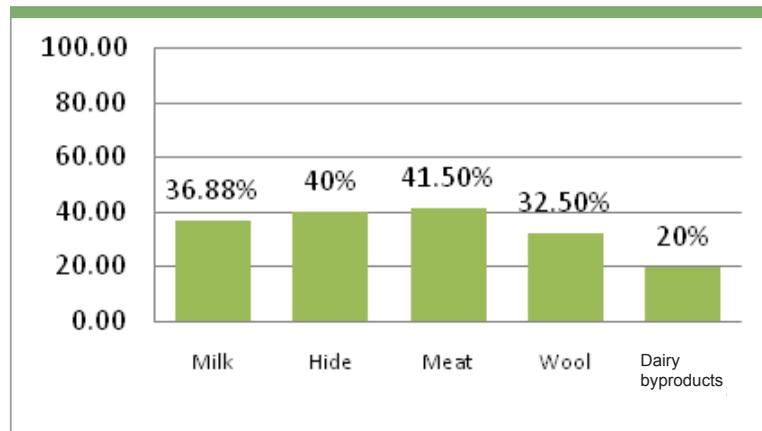


Figure 9: Prioritization on the basis of % growth over five years
Source: PRLA activity August, 2012

Prioritization on the basis of percentage losses

The losses in milk, meat and byproducts include both pre and post production losses. Pre-production losses mean mortality or inability of animals to produce due to various reasons whereas post production losses occur usually during handling and transportation and are highest in milk value chain due to spillage. Losses in meat value chain usually attribute to pre-production losses. Losses in livestock byproducts value chain are far higher than depicted in the percentage losses index as they usually go un-noticed.

Pre and post production losses have a high impact on the selection and prioritization of a particular commodity or value chain. Milk value chain showed highest percentage of losses (9.63%) among all livestock value chains. Meat value chain had 1% losses and dairy byproducts had losses at 4%. An illustration of prioritization of value chains on the basis of % losses is portrayed below in Figure 10 below.

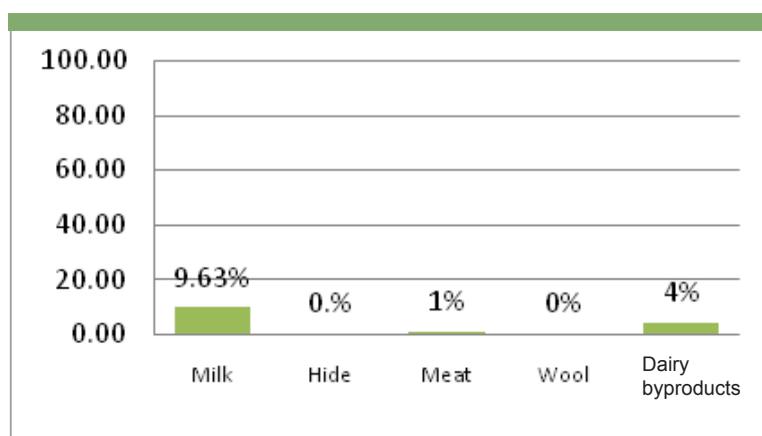


Figure 10: Prioritization on the basis of % losses
Source: PRLA activity August, 2012

Prioritization on the basis of percentage household involvement

Percentage of households involved is another important factor in the process of prioritization a particular value chain. The data collected through FGDs and analyzed for the percentage household involvement in livestock value chains showed results that are interpreted in graphical presentation.

As illustrated below, milk value chain had the highest index of 65.13% household involvement since majority of the rural population is engaged either directly or indirectly in milk value chain. Second on the priority index was the hide value chain involving 65% household followed by meat value chain i.e. 47% respectively. Lamb wool scored fourth on the list with 35% and dairy byproducts were at 27.5%.

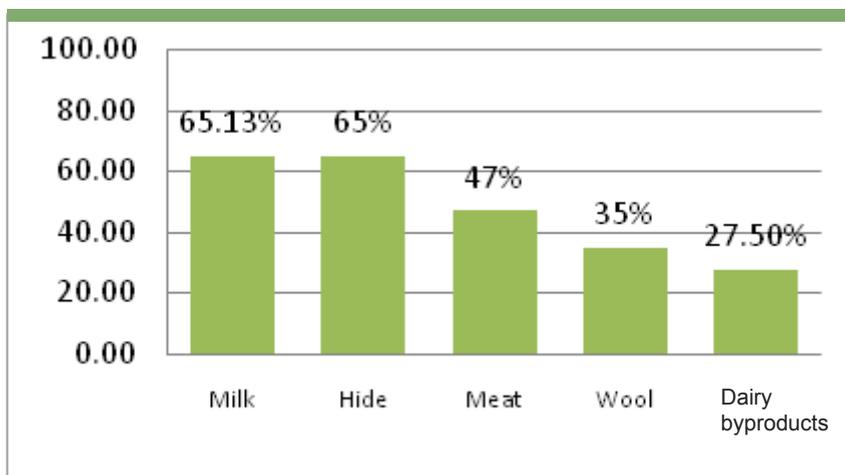


Figure 11: Prioritization of the basis of % household involvement
Source: PRLA activity August, 2012

Prioritized Opportunities and Constraints in Livestock Value Chain

Prioritized opportunities and constraints in milk and meat

Paired ranking tool was used for prioritization of the opportunities. The participants of FGDs ranked the list of opportunities as explained in the following Table 2 below. On the basis of FGDs data analysis for milk, meat, the increasing demand for fresh milk in market had highest potential followed by value added products, provision of technical assistance to farmers, availability of improved milk and meat breed animals and provision of access to finance.

Priority opportunities	Score	Rank
Increasing demand for fresh milk and meat	20	1
Value addition	9	2
Provision of technical assistance to farmers	8	3
Breed improvement	6	4
Access to finance	4	5

Source: PRLA activity August, 2012

Lack of improved breed animals, lack of technical knowhow and improved technology were identified as high intensity constraints by the members of the FGDs. Inefficient supply chain, weak market linkages and lack of awareness to modern practices were ranked medium. Similarly, less efficient transport facilities and limited access to financial resources were identified as low intensity constraints.

These constraints can be addressed through breed improvement (either by introducing high yielding animals or cross breeding with high producing breeds), introducing modern technology and exposure to best practices. The packaging and packing may be addressed through introduction of improved packing technology and practices. Inefficiency of the supply chain may be addressed by involving improved vehicles (preferably with chillers/air conditioners). Farmers may be linked to high end markets to boost up their sales.

The constraints in livestock sector were identified and prioritized by the participants in FGDs. The list of the prioritized constraints can be seen in Table 3 below:

Priority constraints	Intensity
Lack of improved breed animals	High
Lack of technology and technical know-how	High
Poor packing/packaging	High
Inefficient supply chain	Medium
Limited/weak market linkages	Medium
Lack of awareness to modern practices	Medium
Less efficient transportation	Low
Limited access to financial assistance	Low

Source: PRLA activity August, 2012

State of the Service Providers

Service providers are of prime importance in all value chains. These include Government bodies, private sector, NGOs and associations, middlemen, buyers, market agents and exporters. A detailed assessment of the service providers, services offered and their strength was carried out using the information shared by participants of FGDs during PRLA exercise. The role of Government organizations such as agriculture extension and Livestock and Dairy Development Department is to provide technical information and assistance, on farm and off farm trainings and creating awareness about technological innovations relevant to a particular sub sector where as the local administration defines and regulate prices. Although the services provided by Government agencies were free, their ranking was weak in all districts of Pothwar & AJK Project region. NGOs and fellow enterprises had strong linkages in almost all districts of the region. The participants of FGDs provided information about the service providers which is shown in Table 4 below.

Service Providers	District	Strength of Linkages	Mode of Payment	Services Provided
NRSP	Rawalpindi	Strong Linkages	Free	Technical Assistance, Awareness, Financial Assistance
NRSP	Pothwar & AJK	Strong Linkages	Free	Technical Assistance, Awareness, Financial Assistance
NRSP	Chakwal	Strong Linkages	Free	Technical Support, Financial Assistance, Awareness, Trainings
NRSP	Attock	Strong Linkages	Free	Technical Assistance, Awareness, Financial Assistance
Extension Service	Attock	Weak Linkages	Free	Technical Assistance, Awareness
NRSP	Poonch	Medium Linkages	Free	Technical Assistance, Awareness, Linkages
WWO	Poonch	Strong Linkages	Free	Technical Assistance, Awareness, Linkages
Muslim Hands	Poonch	Weak Linkages	Free	Technical Assistance, Awareness, Linkages
Save the future	Bagh	Strong Linkages	Free	Awareness, Technical Assistance
NRSP	Bagh	Strong Linkages	Free	Awareness, Technical Assistance
Action Aid	Bagh	Strong Linkages	Free	Awareness, Technical Assistance
GPN	Muzaffarabad	Strong Linkages	Free	Awareness, Technical Assistance
ICRC	Muzaffarabad	Medium Linkages	Free	Awareness, Technical Assistance
NRSP	Jhelum	Strong Linkages	Free	Technical Assistance, Awareness
CADS	Jhelum	Strong Linkages	Free	Technical Assistance, Awareness

Source: PRLA activity August, 2012

State of the Market Linkages

Market linkage plays an important role in prioritizing value chains in a particular region. It also helps determine the price of a particular produce and profitability. Market linkages were assessed and ranked as strong, medium or weak depending on the basis of share of the produce in that particular market, distance from the production site and the cost of transportation. With regard to dairy and meat value chains, local markets had the strongest links in almost all districts of Pothwar & AJK Project Region due to easy access, less cost of transportation and less losses except for Rawalpindi and Muzaffarabad where the link to local market is medium and weak respectively.

To understand the marketing of livestock and products an assessment with regard to the strength of market linkages was also done through data that was collected during FGDs in Pothwar & AJK Project Region and is depicted in the Table 5 below:

Table 5: State of market linkages

Sub Sector	Markets	District	Linkages Strength
Milk, Meat	Jehlum	Jehlum	Strong Linkages
Milk, Meat	Dina		Strong Linkages
Milk, Meat	Islamabad	Attock	Strong Linkages
Milk, Meat	Attock		Strong Linkages
Milk, Meat	Rawalakot	Poonch	Strong Linkages
Milk, Meat	Bagh	Bagh	Strong Linkages
Milk, Meat	Islamabad	Islamabad	Strong Linkages
Milk, Meat	Rawalpindi		Strong Linkages
Milk, Meat	Rawat	Rawalpindi	Strong Linkages
Milk, Meat	Rawalpindi		Medium Linkages
Milk, Meat	Taxila		Medium Linkages
Milk	Chakwal City	Chakwal	Strong Linkages
Milk	Local Market		Weak Linkages
Meat	Chakwal City		Strong Linkages
Meat	Talagang		Weak Linkages
Milk, Meat	Rawalpindi	Muzaffarabad	Weak Linkages
Milk, Meat	Mansehra		Weak Linkages

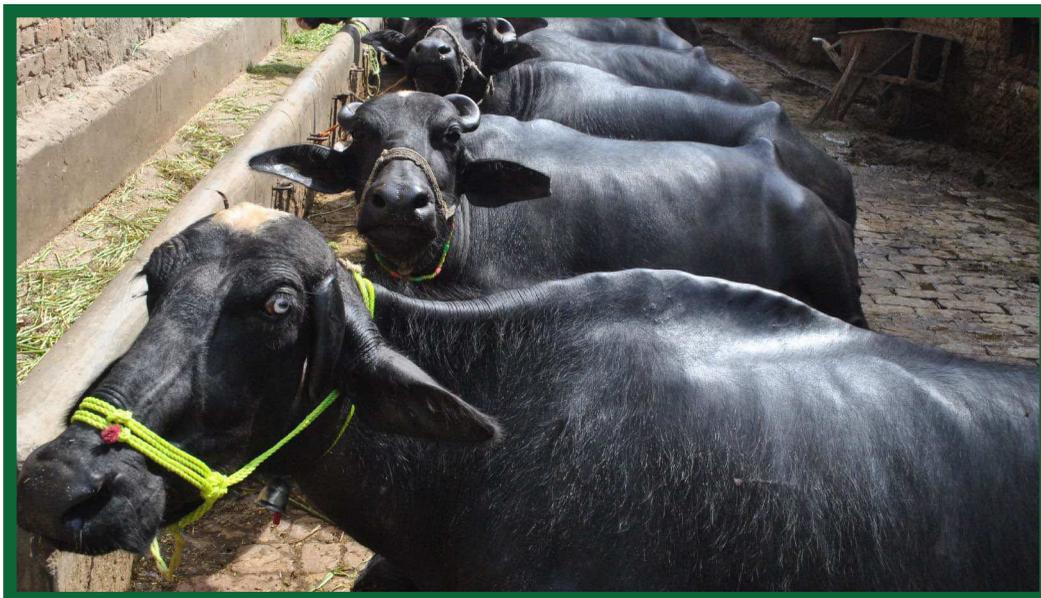
Source: PRLA activity August, 2012

Conclusion

Pothwar & AJK Project region has the potential and capacity of not only meeting the local market demand but can also address national markets for dairy and meat. The key constraints which are hampering the abilities of the sector include are the low productivity of dairy and meat animals due to breed, insufficient feeding and poor veterinary health services, low input supplies due to inflation and poor market linkages and lack of business development environment in livestock value chain. Moreover, quality of the produce often fail to meet market standards; perishability of produce, no value addition and processing and marketing require interventions focusing on cool chain development, processing and associated activities. On the other hand Pothwar and AJK Project region offers varied climatic zones, close proximity to growing markets (national and international), lower production cost due to cheap labor provide good opportunities to grow and capture larger share of niche markets.

Based on the PRLA, the following related interventions can be designed;

- Establishment of Milk Collection Centers and installation of Milk Chillers (Training of producers/collectors in hygienic handling of milk) / establishing partnership with larger buyers/ companies (based on analysis of merits and demerits)
- Facilitation of producers through Kissan Field Schools in milk and meat producing areas
- Establishment of a network of linkages with Livestock Department, Market Traders, Fodder Seed and Medicine Dealers.
- Introduction of feedlot fattening among farmer community to maximize bio economic and sustainable meat production and its value addition through meat processing and quality control.
- Introduction of milk and meat processing technology and training of farmers.
- Improvement of breed through Artificial Insemination (AI), training of AI technicians and attracting semen producing companies for supply of the liquid nitrogen and semen of improved genetic animals.







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