Participatory Rapid Horticulture Appraisal Report

Pothwar and AJK Project Region

August 2012

The Agribusiness Project

Abbreviations

ASF	Agribusiness Support Fund
FGD	Focused Group Discussion
ME&C	Monitoring, Evaluation and Communication
PRHA/LA	Participatory Rapid Horticulture Appraisal/Livestock Appraisal
USAID	United States Agency for International Development

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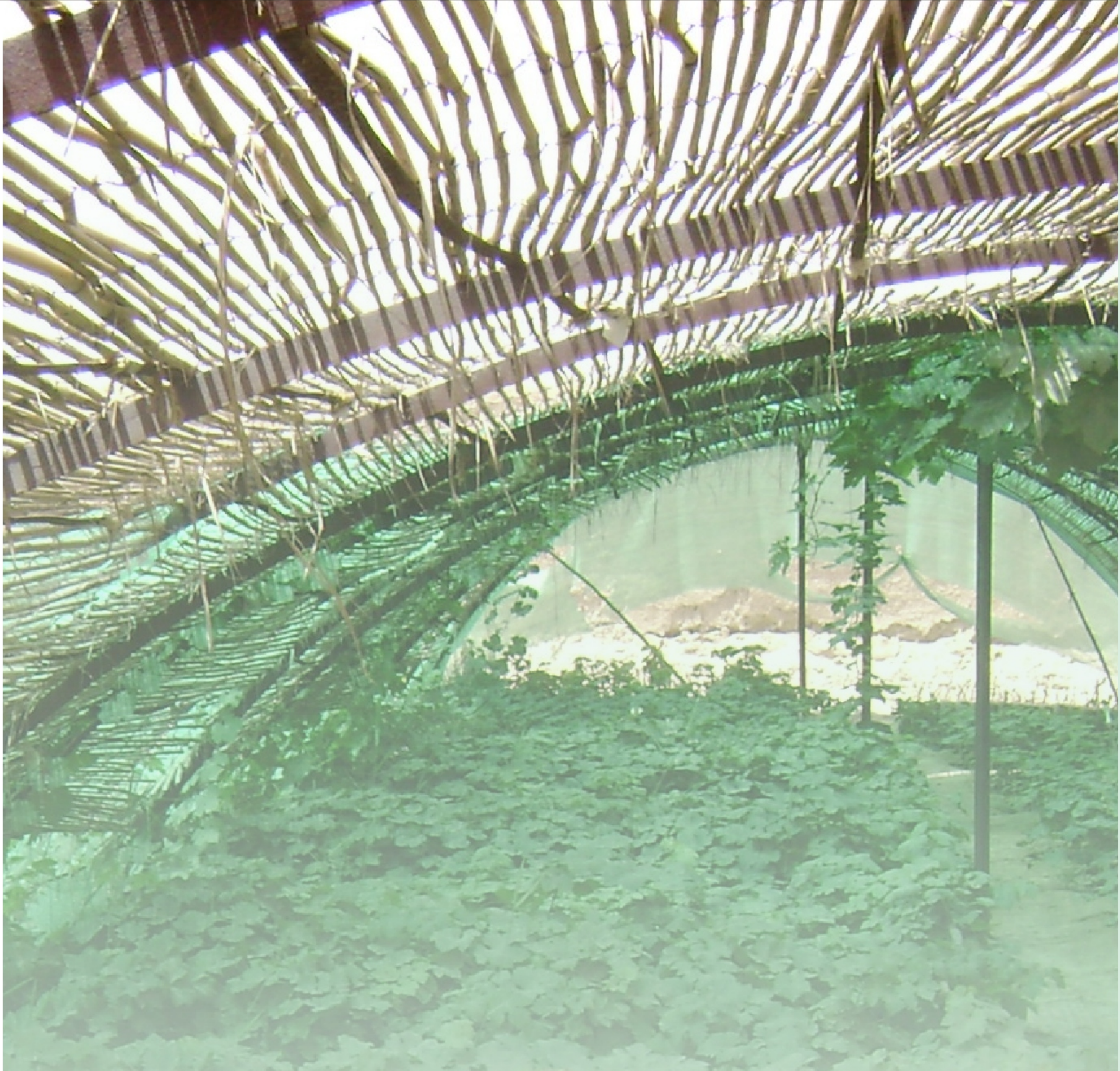

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Executive Summary

The Agribusiness Project an initiative funded by United States Agency for International Development (USAID) and is being implemented by Agribusiness Support Fund (ASF) in collaboration with international and national organization. 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 this five-year (2011-16) project, a preparatory program was undertaken to gauge the potential of the sub-sector and to prioritize value chains in the context of various project regions including Pothwar and AJK Project Region. Findings from PRHA will enable the project to identify and prioritize; horticulture and livestock value chains, opportunities, constraints; and state of the business development services to provide required basis for focusing project interventions. Pothwar and AJK Project Region comprises of 5 districts and the entire state of Azad Jammu and Kashmir (AJK).

Within the framework of the cluster and value chain approach, a two-prong approach was adopted, first preparation for PRHA 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 horticulture sub-sector.

The PRHA methodology provides for probing, analysis, and validation of information as they unfold during the field work. Seven factors were applied in the prioritization of value chain. 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 100% of the districts, the exercise was undertaken in the randomly selected settlement/villages within each cluster/region. Each focus group consisted of 10-15 stakeholders, a representative sample of sub-sector. In each district, 2 FGDs were carried out. The analysis of secondary data is based on the district-wise data on area and production for last ten years which was collected and tabulated as time series data.

Based on the analysis of both secondary and primary information, it can be concluded that grapes, cut flower, apple, chillies and peach are the priority value chains in of Pothwar and AJK Project Region. Grape is the top most priority value chain of the region with a growth rate of about 400%. Apple the third priority value chain of a the region is present in different areas of AJK has above 50% women involvement and provides livelihood to 90% small farmers. Growth rate of peach has been estimated to be above 150%, which is third highest percentage among the top ranking fruit value chains of Pothwar & AJK region. It involves more than 53% women.

A number of opportunities exist, in the region, which can catalyze the development of the sub-sector. Of them the most important are:

- Provision of technical assistance
- Increasing demand for fresh product
- Marketing of processed product and
- Provision of financial assistance in the form of soft loans

These opportunities can be further reinforced through the project interventions leveraged by primary-sector investments provided that a holistic and integrated approach is applied. Some of the constraints hampering the development of fruit sub-sector are:

- Limited finances
- In-efficient input supply
- Low productivity
- Poor packaging and packing
- Little awareness
- Hard policies for trade
- Limited linkages to international market
- Storage and transportation facilities
- Limited market
- Absence of farmer associations

[1] Attock, Chakwal, Rawalpindi, Jehlum, Islamabad

Most of the constraints are cross-cutting and generic in nature which provide information on the overall sub-sector and some of the constraints can be considered as opportunities for investment by the project provided that willingness in the private sector for investment exists.

In general all variety of vegetables are grown in almost all districts of the region. Chilli is a high priority vegetable particularly cultivated for commercialization. It has high women involvement especially at the time of picking. Vegetables are mostly grown for commercial purposes and some are also utilized domestically by producers.

Major priority opportunities are represented by:

- Technical assistance
- Increased demand for fresh product
- Value addition
- Off-season farming
- Provision of financial assistance

These opportunities are cross-cutting and investment in these will generate employment and income generation opportunities. Some major constraints faced by the vegetable sub-sector are:

- Limited access to finance
- In-efficient input supply
- Low productivity
- Poor packaging and packing
- Limited technical and managerial knowledge
- Hard policy for trade
- Very weak export linkages
- Limited storage and transportation facility
- Limited market
- Number of farmer association

The high ranking constraints provide opportunities for investment which will not only generate income and employment but also act as drivers for the wider development of the sub-sector. However, the key consideration for intervention in addressing the constraint should be private sector investors willing to partner with the project.

Gladiola is the most grown crop for commercial sale among other cut flowers. It is engaging 99% small farmers with their 100% employment coupled with 90% involvement of women through its 50% commercialization. The study reveals that a number of opportunities exist for floriculture in the region, which can boost development of this sub-sector. Of them the most important are:

- Provision of technical assistance,
- Strengthening existing market,
- Exploring new markets
- Provision of financial assistance
- Potential for introduction of other cut flowers

Some major constraints faced by the floriculture sector are:

- Limited market access
- Fewer technical expertise in packing and packaging
- Improper transportation
- Exploitation by middleman
- Only one value chain i.e. gladiola has been opted by the farmers

The availability and quality of business development services is important for the overall development of any sub-sector. The situation with regards to service provision for both fruit and vegetables was appraised together with focused groups. In most cases the linkages between service providers and users were termed as medium. To be effective in enhancing profitability of fruits, vegetables and flower growers, there is a need to build confidence and develop strong linkages of agribusinesses with service providers.

Marketing of fruits, vegetables and flowers varies from commodity to commodity; however, generally, most of the produce is channelled to local and national markets. The existing marketing operations are performed in traditional ways including, rough harvesting and handling methods, rudimentary grading, and poor quality packing. It results in reduced marketability, leading to lower prices. The non-availability of refrigerated lorries/trucks to transport vegetables and fruits from farm to distant markets increases the spoilage rate and reduces the bargaining position of the sellers. Absence of enabling policies favouring growers (particularly small farmers), ineffective approaches towards improving and sustaining product quality, and limited market information impedes farmers' ability to take maximum benefits of their produce. Strengthening market information system can play a vital role in increasing returns to the growers, which can ultimately improve the living standard of the rural population and bring prosperity in the country. Exports are considered as a means of surplus disposal mainly channelled from the wholesale markets. Exports endeavour need to be supported by a “grow-for-export” strategy.

Introduction

The Agribusiness Project is an initiative funded through the financial assistance of the American People implemented by United States Agency for International Development (USAID) in collaboration with Agribusiness Support Fund (ASF). 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 potential of the sub-sector and to prioritize value chains in the context of multiple project regions. The project planned and conducted Participatory Rapid Horticulture Appraisal/Livestock Appraisal (PRHA/LA) in the Pothwar & AJK Project Region. Findings from PRHA/LA will enable the project to identify and prioritize; horticulture and livestock value chains, opportunities, constraints; and state of the business development services to provide required basis for focussing project interventions.

The report articulates for each district separately to enable better targeting and focusing project interventions. This report covers the project region of Pothwar & AJK covering district Attock, Chakwal, Rawalpindi, Jehlum, Islamabad and the state of Azad Jammu Kashmir. Within the framework of the cluster and value chain approach, a two-prong approach was adopted, first preparation for and holding of PRHA exercise in the field and second collection of relevant secondary data coupled with development of appropriate tools for quantification of factors. This report pertains to work completed through PRHA with the support of secondary information.

The Region

Historically fruits, vegetables and cut flowers have had significant potential in the region where this sub-sector presents a major potential for economic growth and development.

Pothwar & AJK Project Region of consists of 05 Districts[1] and the state of Azad Jammu and Kashmir (AJK). The Region joins occupied Kashmir in the east, Gilgit Baltistan Province in the north, rest of Punjab in the south-east and Khyber Pakhtunkhwa in the northwest.

This project region holds comparative advantage in producing arid as well as temperate crops; however this comparative advantage needs to be translated into competitive advantage, an underlying objective of The Agribusiness Project.

A brief overview and profile of horticulture in Pothwar & AJK Project Region reveals that fruits are mostly grown as per needs and interests of the people. Insufficient knowledge and capacity of farmers coupled with lack of facilities and market linkages mostly result in cultivation for domestic consumption. Some of the fruit gets spoiled and an insignificant quantity reaches the market[2]. Apple, pear, apricot, Walnut, plum, cherry, tomato, bean, potato, spinach, turnip, spinach-like mustard (local name is Krham mustard) and gladiola are the major horticulture crops of AJK[3]. In Pothwar, common fruit and vegetables are pear, orange, loquat, peanuts, peach, melon, citrus, lemon, grapes, water melon and. cucumber, spinach, turnip, radish, coriander, bitter guard, capsicum, squashes, onion, tomato, lady finger, garlic, peas and potato[4].

In Pothwar area, fruits, vegetables and flowers are purposefully grown for commercialization with grapes as an emerging priority in the market. However, little technical and commercial knowledge coupled with fewer market linkages is a major hindrance in this regards.

Through PRHA exercise conducted under the umbrella of The Agribusiness Project in Pothwar & AJK Project Region, grey areas of horticulture that require consideration and avenues that need to be explored have been determined.

Grapes, cut flower, apple, chillies and peach are the five major value chains of the region. Total production of each of these long with their cluster districts is given in Table 1 below.

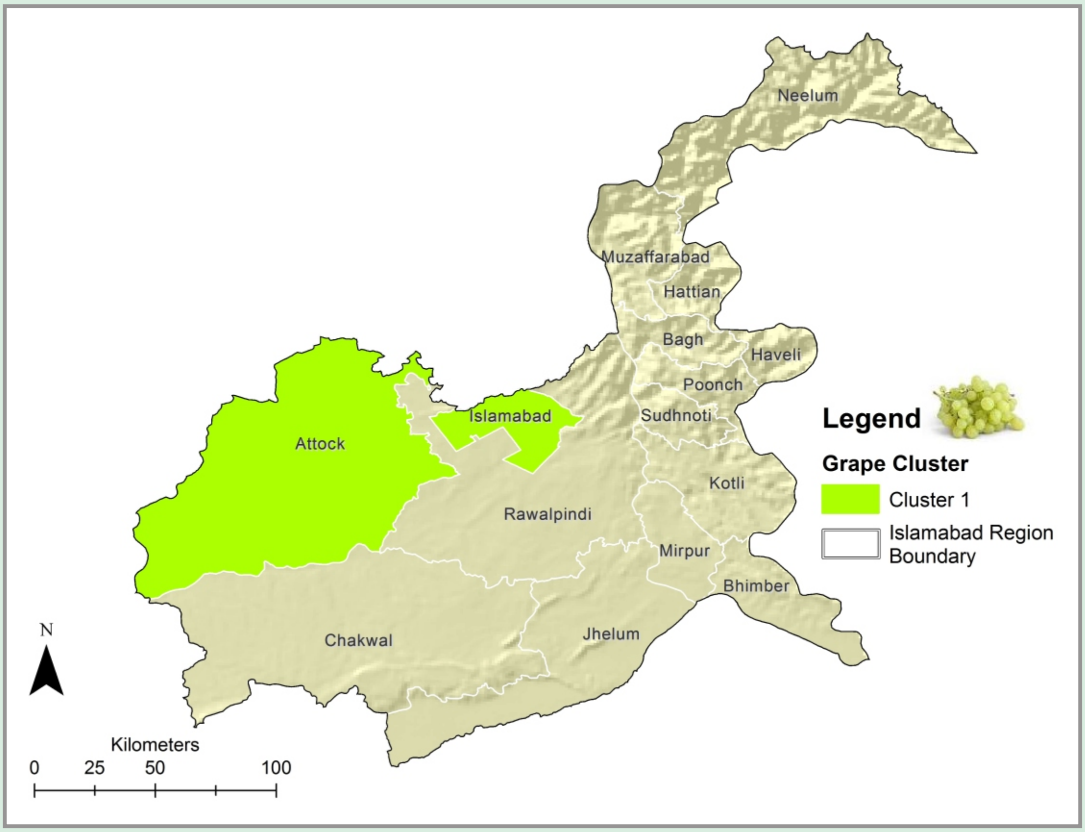
Table 1: Priority Value Chains

S.#	Priority Value Chains (Fruit & Vegetables	Clusters (Mention Districts)	Total Production (Tons)	Percentage share of the Province	Percentage share of the Country
1	Grapes	(1) Islamabad, Attaock, Chakwal	562	8.00	2.00
2	Cut Flower	(1) Islamabad, Rawalpindi and AJK			
3	Apple	(1) Rawlakot (of District Poonch), Bagh, Muzaffarabad	3,767	11.45	2.29
4	Chilies	(1) Attaock, Rawalpindi, Jehlum, (2) Bagh, Rawlakot, Muzaffarabad	497	0.05	0.26
5	Peach	(1) Attaock, (2) Rawalakot, Muzaffarabad	31	0.07	0.06

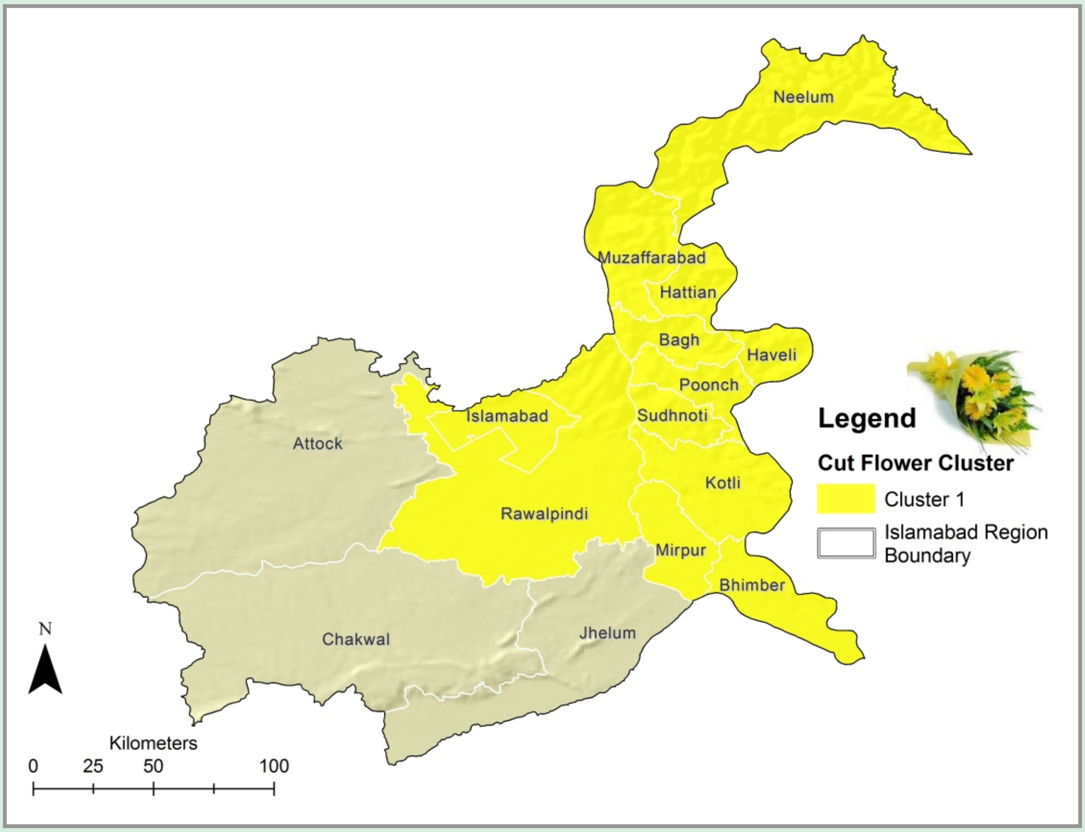
(Source: Ministry of Food and Agriculture, GoP)

1. Attock, Chakwal, Rawalpindi, Jehlum, Islamabad
2. http://www.ajklive.com/videos/apple-fruit-workshop-azad-kashmir
3. http://www.pndajk.gov.pk/glance.asp
4. PRHA Pothwar & AJK region June 2012

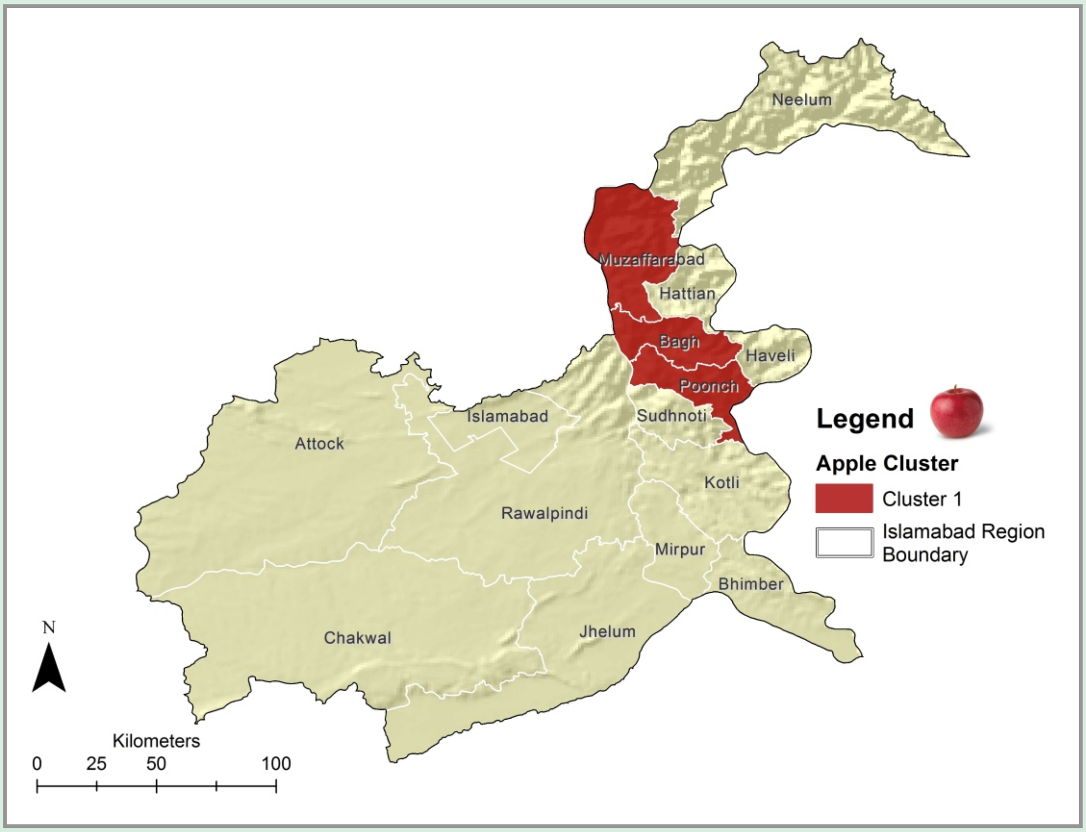
Grape Clusters



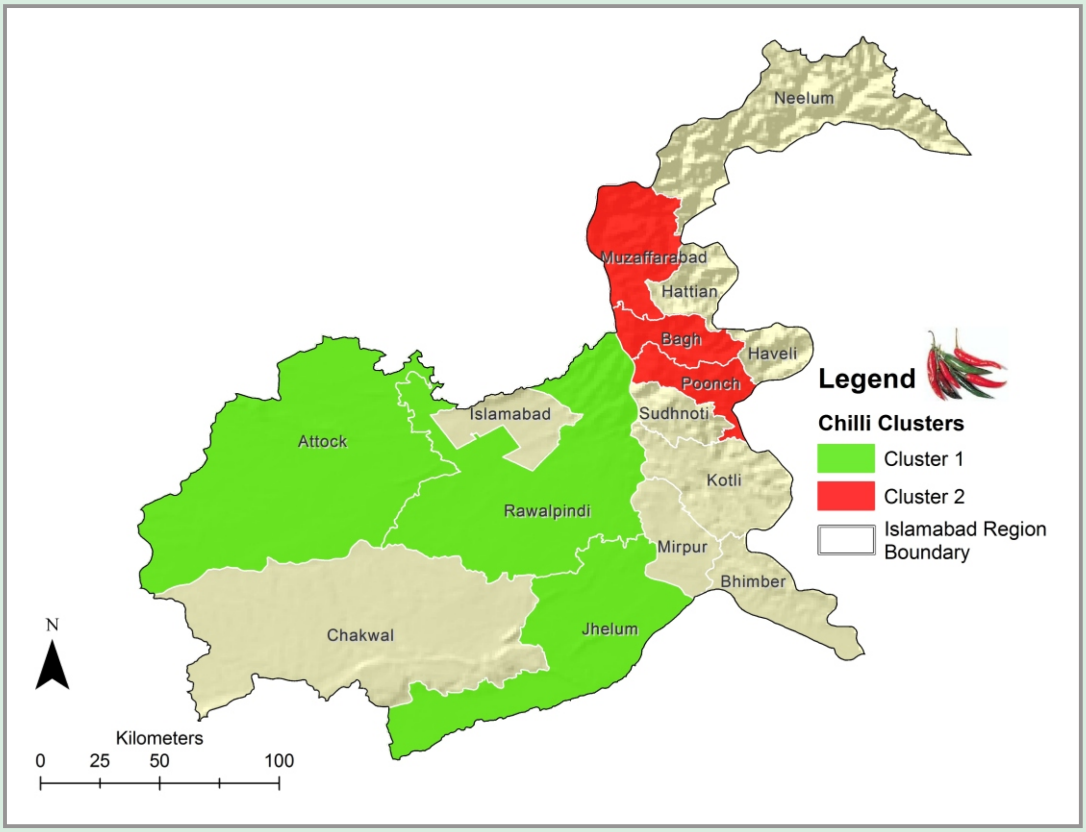
Cut Flower Clusters



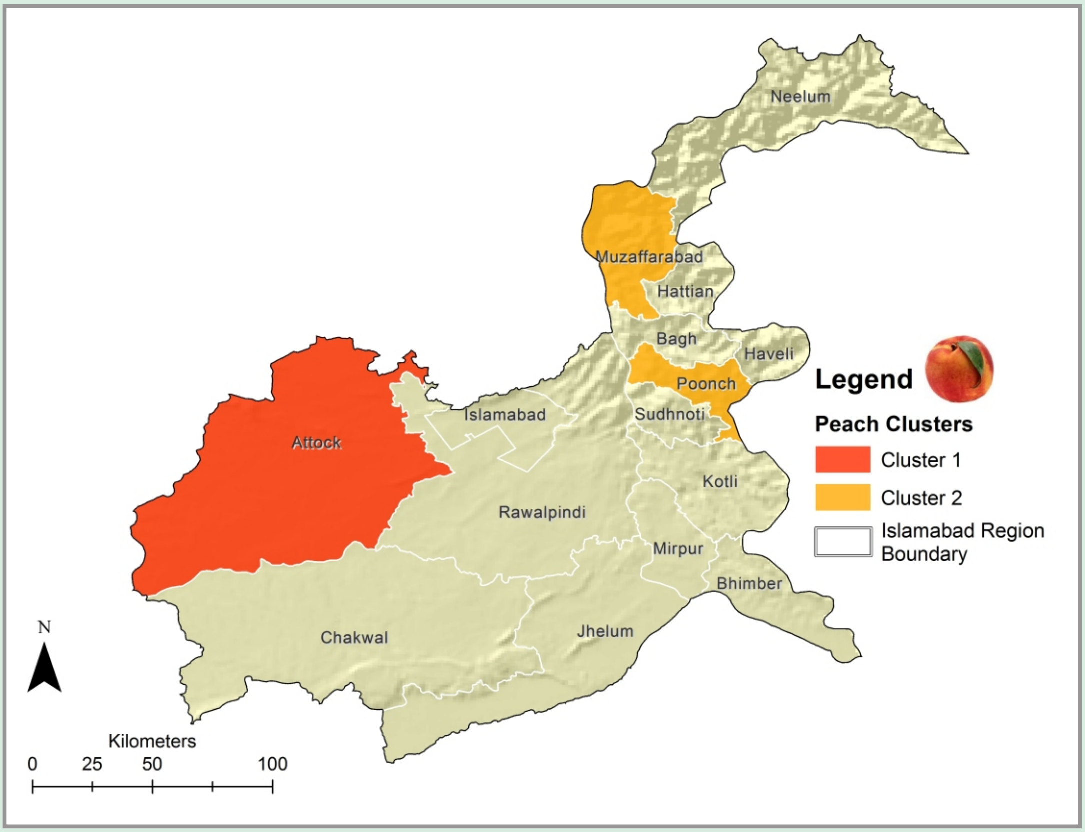
Apple Clusters



Chilli Clusters



Peach Clusters



Methodology and Approach

The Participatory Rapid Horticultural Appraisal (PRHA) is one of the effective methodologies for exploring and gathering topical and focused information about a sub-sector system. Its advantages are to gather and analyse market information in a relatively short period of time employing fewer resources. The methodology facilitates probing, analysis, and validation of information that unfolds during the field work.

The PRHA exercise eased a quick assessment of the sub-sector, including identification and prioritization of value chains, opportunities and relevant constraints impeding realization of the opportunities coupled with an assessment of the current state of services provided to agribusinesses in the region.

Further, linkages of the sub-sectors with local and national markets were also explored. The appraisal was conducted with a view to prepare the stage for focusing project intervention as well as for the project baseline and value chains benchmarking studies. The data on area and production for around last five years which was collected and tabulated as time series data. From these data, subset for the region was extracted which covers five districts of Punjab and the entire AJK state.

The primary appraisals were based on quantification of factors so that it can be measured on a scale for ranking/prioritization. Seven factors applied in the appraisal 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.

The appraisal was carried out by the project region with the assistance of the project Monitoring, Evaluation and Communication unit and consultants retained to guide the team throughout the implementation of the appraisals. Covering 100% of

Focus Group Discussion

PRHA results will enable 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.

The analysis of information is based on district-wise

The districts, the exercise was undertaken in the randomly selected settlement/villages within each cluster/region. Each focused group consisted of 10-15 diverse stakeholders, a representative sample of sub-sector. In each district, 2 FGDs were carried out. The analysis of the information was consolidated at the project region level to draw conclusion and inferences.

Appraisal of Fruit Sub-Sectors

Prioritization of value chains

The comparative appraisal is based on the composite index calculated based on the seven factors used in the grid analysis. The analysis of fruits places grapes as the priority followed by lemon, peach, apple and peanut in the region as shown in Figure 1.

Grapes: The production area of grapes is particularly extended to district Attock & Chakwal. As shown in the table, growth rate of grapes has been estimated to be about 400%, which is the highest percentage among the top ranking five fruit value chains of Pothwar & AJK Project Region.

Lemon: In Pothwar & AJK Project Region, Lemon is widely produced specially in Muzaffarabad and Rawalpindi areas. The growth rate of lemon as indicated in the PRHA data is around 70%. This places lemon on the second position on priority index. Lemon offers approximately 70% employment to women and provides livelihood to almost 85% of the small farmers.

Peach: Peach is grown in districts of Attock, Rawlakot and Muzaffarabad. As shown in the table, growth rate of peach has been estimated to be above 150%, which is third highest percentage among the top ranking five fruit value chains of Pothwar & AJK Project Region.

Apple: Apple producing areas in the region are Rawlakot, Bagh and Muzaffarabad. The FGDs conducted showed that growth rate of apple over the past five years is above 50%. Apple presents above 50% women involvement and provides livelihood to 90% small farmers (approx).

Peanut: Peanut is mostly produced in Attock and Chakwal districts. The growth rate as indicated in FGDs is 10%, however, it involves almost 100% women farmers of the area. Percentage of small farmers involved in peanut production is above 40%.

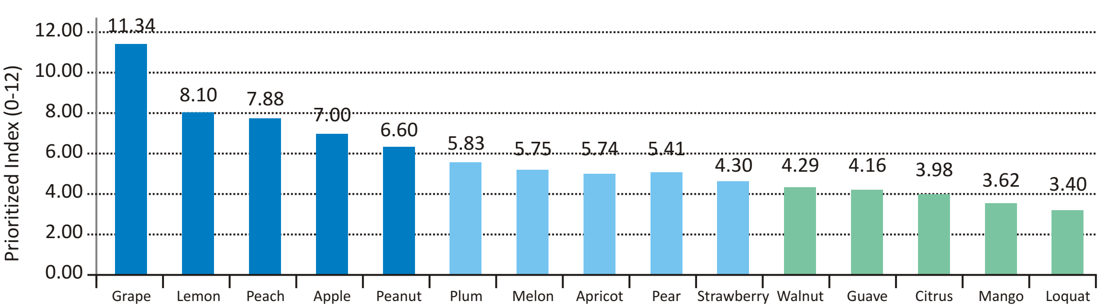


Figure 1: Priority ranking of fruit value chains in Pothwar & AJK Project Region

Source: PRHA Exercise conducted in June 2012

Analysis of Fruit Value Chains

Table 2 shows the district wise production cluster and their contribution at National and Provincial level.

Priotitized Opportunities

For prioritization of opportunities, pair-wise ranking tool was used. Table 3 provides self-explanatory list of opportunities as prioritized/ranked by the participants during the FGDs.

Production Clusters (District-wise) 2008-09

Value Chain	District	Cultivations Area	Production (Metric Tons)	Share in Provincial Production	Yield (MT/Hectare)
Peach	Rawalpindi	3	20	4.2%	6.67
	Chakwal	2	11	2.3%	5.50
Apple	Rawalpindi	372	3,606	98.1%	9.69

Figure 2: Fruit value chains-clusters and production
(Source: Ministry of Food and Agriculture, GoP)

The study reveals that a number of opportunities exist, in the region, which can catalyse development of the sub-sector. These are listed in Table 2 of which the most important are the provision of technical assistance, increasing demand for fresh product. Marketing processed products and provision of financial assistance. These opportunities can be further reinforced through the project interventions leveraged by primary-sector investments provided that a holistic and integrated approach is applied.

component of the farming system which has traditionally been subsistence oriented. Most constraints are cross-cutting and generic in nature which provide information on the overall sub-sector and some of the constraints can be considered as opportunities for investment by the project provided that willingness in the private sector for investment exists.

Table 2: Priority opportunities

Priority Opportunities	Rank
Provision of technical assistance in production	1
Increasing demand for fresh product	2
Marketing processed product	3
Provision of financial assistance in the shape of soft loans for supporting associated enterprises	4

(Source: PRHA Exercise conducted in June 2012)

Priotitized Constraints

Constraints in fruit value chains were also identified and prioritized by participants during the FGDs on the basis of their potential as high, medium or low. Here is a list, which is self-explanatory.

The key constraints hampering the development of fruit sub-sector are listed in Table 3. Of significance are those categorized as high in terms of intensity. Some of the constraints mentioned can be in contradictions with the opportunities listed which indicate that the production and marketing of fruit is in transition as a

Table 3: Priority constraints

Priority Constraints	Intensity
Limited access to finance	High
In-efficient Input supply	High
Low productivity	High
Poor packing & packaging	Medium
Little awareness	Medium
Hard trade policy	Medium
Limited linkages to international market	Medium
Storage & transportation facilities	Medium
Limited market	Medium
Absence of farmer association	Low

(Source: PRHA Exercise conducted in June 2012)

Appraisal of Vegetables Sub-Sectors

Prioritized value chains

On the priority scale of 0-12, spinach-like mustard (local name: Karam) is the leading commodity followed by garlic and chilli. The priority ranking of vegetables based on the rapid appraisal is shown in Table 4 and Figure 3 below.

In general all variety of vegetables are grown in almost all districts of the region except for some areas like Poonch and Neelam valley of AJK state. These areas offer comparative advantage for production of certain vegetables as well opportunity to fit to niches in the market in term of seasonality. Vegetables are mostly grown for commercial purposes as well as domestic utilization. Spinach-like mustard, squashes and chillies lead in providing more employment opportunities. Spinach-like mustard recorded considerably higher women involvement as compared to other top ranking vegetables. Pumpkin leads the priority ranking in terms of growth rate. As regards vulnerability, comparatively more losses have been recorded in tomato.

Table 4: Prioritization of vegetable value chains

Value Chain	Prioritized Index	Score	Rank
Spinach	6.82	1	High
Garlic	6.31	2	
Chili-Capsicum	5.47	3	
Turnip-Radish	5.46	4	
Potato	5.43	5	
Onion	5.34	6	
Cucurbits	4.73	7	Medium
Peas	4.31	8	
Others	4.70	9	

(Source: PRHA Exercise conducted in June 2012)

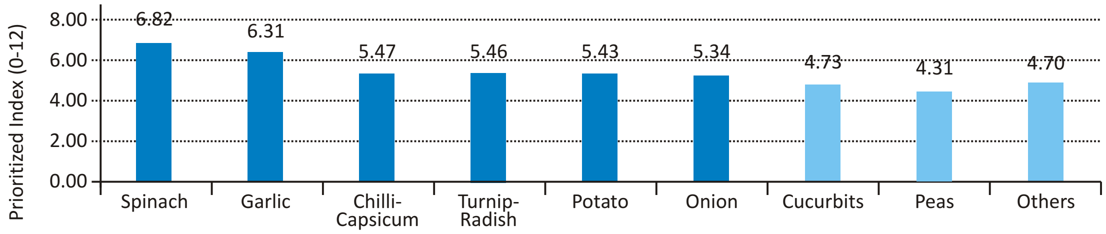


Figure 3: Priority ranking of vegetable value chains

(Source: PRHA Exercise conducted in June 2012)

Prioritized Opportunities

Opportunities for vegetables related value chains were scored and ranked during the exercise.

The appraisal reveals that major priority opportunities are represented by the availability of trainings to produce vegetables through modernized techniques, supplying fresh vegetables to the market, value addition through dehydrating the produce. These opportunities are cross-cutting and investment in these will generate employment and income generation opportunities. Ranking of priority opportunities concerning vegetables is given in Table 5.

Table 5: Priority opportunities

Priority Opportunities	Rank
Technical Assistance	1
Increased demand for fresh product	2
Value addition	3
Off season farming	4
Provision of financial assistance	5

(Source: PRHA Exercise conducted in June 2012)

Priotitized Constraints

Constraints to vegetable value chains were also identified and prioritized by participants during the FGDs on the basis of their potential as high, medium or low**.** Here is a detailed list.

The key constraints hampering the development of vegetables sub-sector are listed in Table 6. Most constraints are cross-cutting and generic in nature relevant to the sub-sector in general. The high ranking constraints provide opportunities for investment which will not only generate income and employment but also act as drivers for the wider development of the sub-sector. However the key consideration for intervention in addressing the constraint should be private sector investors willing to partner with the project.

Table 6: Priority constraints

Priority Constraints	Intensity
Limited access to finance	High
In-efficient Input supply	High
Low productivity	High
Poor packing & packaging	Medium
Very little awareness both technical & managerial	Medium
Hard trade policy	Medium
Export linkages	Medium
Limited storage & transportation facilities	Medium
Limited market	Medium
No farmer association	Low

(Source: PRHA Exercise conducted in June 2012)

Appraisal of Floriculture Sub-Sectors

Prioritized value chains

The comparative appraisal is based on the composite index calculated based on the seven factors used in the grid analysis. Gladiola is the most grown crop for commercial sale among other cut flowers grown in AJK and some other parts of the region like Islamabad, Rawalpindi and Attock. On a small scale it is also grown in Jehlum

It is engaging 99% small farmers with their 100% employment coupled with 90% involvement of women through its 50% commercialization (at present). Its growth rate (increase in area and production over the past five years) is 100% with local informal consumption by 30% and losses at the rate of 20%.As shown in the table, growth rate of gladiola has been estimated to be about 100%. It has high potential in the national and international markets. Table 7 below shows that prioritization of floriculture value chain based on PRHA studies.

Table 7: Prioritization of floriculture value chains

Value Chain	Employment %	Commercialization	Small Framers Involvement %	Women Involvement %	Growth %	Losses %	Involvement (HH) %	Prioritized Index
Gladiola	100	50	98	90	100	20	100	9.98

(Source: PRHA Exercise conducted in June 2012)

Prioritized Opportunities

For prioritization of opportunities, paired ranking tool was used. Table 8 below provides self-explanatory list of opportunities as prioritized/ranked by the participants during the FGDs.

The study reveals that a number of opportunities exist for floriculture in the region, which can boost development of this sub-sector. Of them the most important are the provision of technical assistance, strengthening existing market, exploring new markets and provision of financial assistance. These opportunities can be further reinforced through the project interventions leveraged by primary-sector investments provided that a holistic and integrated approach is applied.

Table 8: Priority opportunities

Priority Opportunities	Rank
Provision of technical assistance	1
Potential for other value chains (Cut flower)	2
Strengthening existing markets	3
Exploring new markets	4
Provision of financial assistance	5

(Source: PRHA Exercise conducted in June 2012)

Prioritized Constraints

Constraints in flower value chains were also identified and prioritized on the basis of their intensity as high, medium or low. Here is a list, which is self-explanatory.

The key constraints hindering the development of floriculture sub-sector are listed in Table 9. Significant among those are categorized as high in terms of its intensity. Most of the constraints are general but provide associated information on the sub-sector.

Table 9: Priority constraints

Priority Constraints	Intensity
Limited market access	High
Fewer technical expertise in packing & packaging	High
Transportation	Medium
Exploitation by the middlemen	Medium
Only one value chain is opted (gladiola)	Low

(Source: PRHA Exercise conducted in June 2012)

State of the Services Provision

The availability and quality of business development services is important for the overall development of any sub-sector. The situation with regards to service provision for both fruit and vegetables was appraised together with focused groups. In most cases the linkages between service providers and users were termed as medium as shown in Table 10 below. To be effective in enhancing profitability of fruits, vegetables and flower growers, there is a need to build confidence and develop strong linkages of agribusiness with service providers.

Table 10: State of the service provision

Services Providers	Linkages	Paid/Free	Services Provided
Agriculture Departments (Research, Extension etc.)	Medium	Free	Awareness, guidance and information regarding seeds and improved agriculture practices.
Financial Institutions	Weak	Paid	Finance, training and information
NGOs	Medium to strong	Free and paid	Trainings and information, consultancy and timely supply of inputs on subsidized cash payments
Private seed, agro-chemical packaging and fertilizer companies	Medium to strong	Paid	Provide inputs, timely supply of inputs on cash payment, awareness of the farmers

(Source: PRHA Exercise conducted in June 2012)

State of Market Linkages

Marketing of fruits, vegetables and flowers varies from commodity to commodity; however, generally, most of the produce is channelled to local and national markets. Some of the national markets relevant for regional producers include Rawalpindi, Islamabad, Lahore, Gujranwala, Peshawar, Abbottabad and Attock. Demand for fruits, vegetables and flowers exists in the international markets (particularly Gulf countries) however there is a need to overcome the existing constraints to increase their exports.

Marketing of fruits, vegetables and flowers is characterized by the presence of numerous intermediaries performing at various distribution stages, thus adding to marketing costs. However there is a high difference in the amount paid to the farmer and the price paid by the consumer. The domestic market players include farmers, commission agents, contractors, wholesalers, inter-market traders and retailers. In general, intermediaries dominate the system and there is little direct market participation of the farmers, particularly small farmers.

The existing marketing operations are performed in traditional ways including, rough harvesting and handling methods, rudimentary grading, and poor quality packing. It results in reduced marketability, leading to lower prices. The non-availability of refrigerated lorries/trucks to transport vegetables and fruits from farm to distant markets increases the spoilage rate and reduces the bargaining position of the sellers.

Absence of enabling policies favouring growers (particularly small farmers), ineffective approaches towards improving and sustaining product quality, and limited market information impedes farmers' ability to take maximum benefits of their produce. Strengthening market information system can play a vital role in increasing returns to the growers, which can ultimately improve the living standard of the rural population and bring prosperity in the country. Exports are considered as a means of surplus disposal mainly channelled from the wholesale markets. Exports endeavour need to be supported by a “grow-for-export” strategy.

Conclusion

The region represents a special case for opportunity and constraints to expand horticulture exports. The key constraints that are hampering the abilities of the sector include quality of the produce often failing to meet export standards; perishability of produce that requires efficient handling, low level of value addition, processing and marketing, resultantly poor performance of the sub-sectors as a whole. On the other hand Pothwar & AJK region offers varied climatic zones, close proximity to growing markets (national and international), lower production cost due to cheap labour and availability of water provide good opportunities to grow a variety of products year round and to capture larger share of niche markets.

Based on the PRHA, the following summary conclusions can be drawn;

- Among the fruits grapes, peach and apple value chains represent potential in terms of volumes, value and diversity while other products can be promoted as niche market opportunities. Among the vegetables, priority of the grower is associated to chilli whereas many other vegetables can be produced in off-seasons as well. Gladiola is also an important value chain in the region.
- For fruits, vegetables and flowers, to develop in the region, it has to realize growth in volumes, however competition at domestic and international market would, in addition, need to invest in quality improvement.
- The productivity of the sub-sectors as well as post-harvest loses specifically need to be addressed. Relatively lower productivity and poor quality of the produce makes Pothwar and AJK region's products uncompetitive in export markets.
- Limited post-harvest infrastructure (cool chain, pack houses, poor packaging etc.) and logistics for maintaining the quality of the highly perishable fruits that carries poor physical market access, increasing input prices, poor coordination among stakeholders, lack of economies of scale and traditional practices are some of the constraint that impact the production.
- Similarly gladiola is the only flower (as per PRHA/LA data) which is dominantly being marketed; while there are some other floricultural value chains (cut flower, tube roses) that need to be considered at as well. Most of the production of gladiola is consumed in AJK, however, it is thinly transported to national market as well.
- In floriculture, the middlemen take major portion of the profit and the growers get only nominal part of it and this is one of the main causes not letting the sub-sector to flourish.

References

The secondary data in this report has been taken from and estimated based upon data given with the following sources:

1. Agriculture Statics of Pakistan

2. Economic Survey of Pakistan

3. FAO Database

4. **The Growth % rates**

4.1 Crops area and production (by districts) 2004-2005 to 2008-2009, Government of Pakistan, Ministry of Food, Agriculture and Llivestock (MINFAL)

5. **Share of commodity in world production**

5.1 Crops area and production (by districts) 2004-2005 to 2008-2009, Government of Pakistan, Ministry of Food, Agriculture and Livestock (MINFAL)

5.2 Agriculture Statistics of Pakistan, 2009-10 and previous publications

5.3 FAO Database 2012 accessed through internet

6 **Region Share in National Production**

6.1 Crops area and production (by districts) 2004-2005 to 2008-2009, Government of Pakistan, Ministry of Food, Agriculture and Livestock (MINFAL)

6.2 Agriculture Statistics of Pakistan, 2009-10 and previous publications

7 **Region Share in the Province**

7.1 Crops area and production (by districts) 2004-2005 to 2008-2009, Government of Pakistan, Ministry of Food, Agriculture and Livestock, (MINFAL)

7.2 Agriculture Statistics of Pakistan, 2009-10 and previous publications

8 **Productivity Gap**

8.1 Crops area and production (by districts) 2004-2005 to 2008-2009, Government of Pakistan, Ministry of Food, Agriculture and Livestock, (MINFAL)

8.2 FAO Database 2012 accessed through internet

9 **Employment Intensity**

Potential for labor per acre calculated as percentage of labor days of wheat (ADB) plus index derived by PRHA results at field survey in the region and information gathered from various reports.

10 **Export Potential as Measured by Incentive Structure**

FAO Database: The difference between export value of Pakistani produce and world export value (five years average).

(Annexure are available at The Agribusiness Project Office Islamabad, and can be provided upon request for reference) www.agribusiness.org.pk