



a) Fresh & Dry Fruits

- 1) Product*
- 2) Production and Collection*
- 3) Marketing*
- 4) Sale and Distribution*
- 5) Gender Equality*
- 6) Support Mechanism*
- 7) Issues and Concerns*



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ACRONYMS

CBOs	Community Based Organizations
CCBs	Citizen Community Boards
CCBs	Citizen Community Boards
CDG	Chitral District Government
CDG	Chitral District Government
CEO	Chief Executive Officer
CIADP	Chitral Integrated Area Development Programme
COO	Chief Operating Officer
COs	Community Organizations
FGDs	Focus Group Discussions
ICDP	Integrated Chitral Development Programme
IDIs	In-depth Interviews
KPK	Khyber Pakhtun khwa
LGO	Local Government Ordinance
LPs	Livelihood Programs
LSOs	Local Support Organizations
NGOs	Non-Government Organizations
PRC	Pakistan Research Council
TOR	Terms of Reference
VC	Value Chain
VCA	Value Chain Analysis
VOs	Village Organizations
YSDO	Young Star Development Organization

ACKNOWLEDGEMENT

The Value Chain Assessment Studies were sponsored by CIADP, a project of Thrive Pakistan. The purpose of this assignment is to identify the key product of Chitral and neighbouring valleys, the potential of these products with associated issues. The studies will also provide an insight of these products and key recommendations to boost their brands and sales for an improved livelihood of the locals.

We would like to take this opportunity to convey our sincere thanks to the Thrive Management, Mr. Aazir Ayaz Mr. Asfandyar Khan and his team in Chitral for their valuable support, encouragement, cooperation and constructive criticism throughout the duration of this project. In addition to this, we would like to extend our sincere gratitude to the members of the LSOs, Local Supports Organization including ICDP, YSDO, QASADO and BLSO that provided excellent support and input in various ways.

Last but not least, we would like to thank all the virtual resources, including project, institutional, organizational and other websites consulted for guidance during the preparation of these assessments.

We have put all our effort into organizing this document as an error-free product, with due acknowledgements to sources we have consulted. Any errors that remain are our own.

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BACKGROUND

This chapter is dedicated to the description this chapter is dedicated to description of profile of Chitral district, covering its demography, culture, environment, the administration and the state of donor interventions.

Chitral is home to over one dozen different cultures with more than 14 languages spoken, yet with multiple dialects. It has an extremely peaceful environment which is evident from the coexistence of diversified cultures on one hand and admixes of religious beliefs on the other. For example approximately 70% of its population consists of Sunnis and 30 % of Ismailis with Kalash being a small non-Muslim minority. Chitral is rich in natural resources but its non-replenished utilization has put it under sustained pressure and hence the region is prone to frequent natural disasters. The district carries low health and education indicators which add to its developmental backwardness.

By the same token, Chitral District Government (CDG)'s technical capacity is non-facilitative to its proactive development agenda and also the vision. However, the level of citizen participation and mobilization remains high which is largely indebted to civil society engagement. The civil society, which houses 500 Citizen Community Boards (CCBs) functions under the Local Government Ordinance (LGO - 2001). The LGO2001 aims at engaging the citizens in the process of local development.

The experts expect Chitral to become a regional connector in coming years. Thus it will be linked

with Central Asian States, Afghanistan and China through the channel of Northern Areas. The upcoming Lowari Tunnel will also unleash its nationwide connectivity. Such developments and those brimming out of these developments will offer several (opportunities to CDG in terms of preservation and strengthening of its peculiar natural resources, culture, economics and infrastructure. The negative effects of such developments if any would certainly be undermined by the overwhelming positive influences of the same.

However, the developments will not take place effortlessly; instead the development to take place will demand partners to pool in their resources, both technical and financial. This congregation of resources would help capacitate CDG and the people of Chitral so as to cast its overarching impact on the endeavors concerning poverty alleviation and other similar right- based developments.

Chitral has been facing challenges like inadequate infrastructure, minimal of cultivable land (2%), poor market access and inadequate access to extension services which are in turn limited as well. At the same time these are some of the key factors which are constraining growth of agriculture sector in the area. Although Chitral is suitable for a variety of high value crops but the area has not been able to capitalize on its cultivable potential due to above noted challenges and predicaments. Similarly, these challenges have taxed and degenerated the

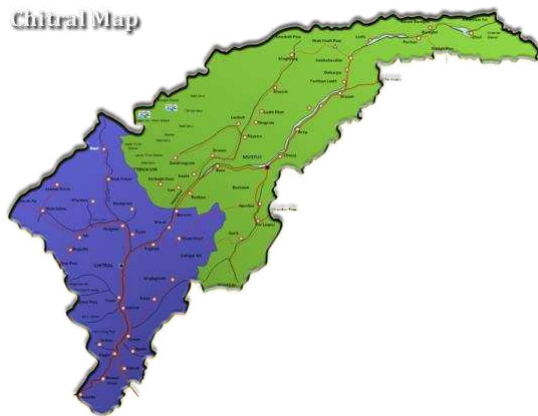
capabilities of Chitralis and have at the same time exacted a severe toll on the resources, economic growth and development agenda of the Chitral district.

About Chitral Integrated Area Development Programme (CIADP):

The Chitral Integrated Area Development Programme (CIADP) has adopted a multidimensional intertwined approach to build the resilience of the people of Chitral and its institutions to safeguard their interests, environment and culture from the expected influx of capital, migrants and the resultant pressure on its natural resources.

CIADP in its last more than 4 years' operations has undertaken several NRM and Non-NRM interventions e.g. Social Farm Forestry, Mini Orchards, Wheat & Maize Demo Plots, Backyard Poultry, Livestock Extension Workers Trainings, Fruit Processing, Honey Bee keeping etc. Most of CIADP activities are undertaken by women and are major source of improving livelihoods of the marginalized.

Chitral Map



The mutual aim of participatory development and collaboration in Chitral took two years to get crystallized. In this regard, the Norwegian initiative to facilitate this process has not only been locally appreciated but has also been well received by other donors that have expressed their interest to join the process. The development programme under discussion was funded by the Norwegian Embassy.

Introduction of Chitral

Chitral, a princely state (merged with Pakistan in 1969) with its unique socio-cultural and religious characteristics, is the largest district in Khyber Pakhtun khwa (KPK) province of Pakistan in terms of geographical stretch as depicted in the map in figure 1. The local people of this area speak Khowar language which is also known as Chitrali (Haserodt, 1996). The valley of Chitral has a captivating and enchanting landscape which is surrounded by the mountainous ranges of Hindukush which also include part of Pamir Mountains (Screenland & Lie shout, 1995). As shown in figure 1, the west border of Chitral valley touches Afghanistan, Wakhan Corridor lies in the north and Chitral is the only district of Pakistan which remains isolated from the rest of the country for several months due to heavy snowfall at the Lowari Pass during the winters.

Cultural Landscape

Life in Chitral dates back to around 4,000 years. Chitral occupies a unique place in Pakistan by enjoying religious and cultural coexistence where more than 14 languages are spoken and several dialects are used. There are more than a dozen ethnic groups. Due to its rich history and linkages with different parts of the world, the culture of Chitral is very rich in terms of the mores which have high traces of the Tatar, Turks, Mongolian and Greek cultures (Nüsser, 2001).

Chitrali society consists of two very different social and cultural groups, the Kalash and the Khow. Culturally, the Chitrali women remain engaged in making dairy products, honey bee keeping, picking fruits, doing kitchen chores, gardening, producing silks, making woolen handicrafts, carpets, sweaters, surband, Chitrali caps, and waistcoats. An analysis of their lifestyles also reveals that there prevails gender equality in the region. The population of Chitral includes Muslims, non-Muslims, Ismaili's and Kalash people (Marsden, 2008). With respect to the use of natural resources by the local people, the non-replenished utilization of abundant natural resources leads Chitral to become victim of extreme disasters. The development indicators

have also rated the area low in health and education facilities.

Importance of Women in the Chitrali Culture

Historically, women have enjoyed a high status in Chitrali society. This fact can be proved by one of the old saying of the locals, that is, “Khowistanauratabad” meaning the land of Kho is prosperous owing to the ability and skills of its women. Another famous local saying that reinforces the fact is; “harchamoto tan hunar” (each finger has a skill). The fort Chitrali women have ability to effectively use the finances and to better manage the resources; one of the resources is locally known as Madiri. The pages of history unfold that women have inherited property and managed large estates. During the reign of Chitral’s former rulers, the Mehtars for example, the women of the ruling family played an important role in statecraft.

The southern region of Chitral is not favorable for the involvement of women in development initiatives mainly due to prevalence of strict cultural constraints. However, the women living in upper Chitral enjoy the liberty to participate in development of the area. To address the extreme poverty in Shishi and Birir in Chitral district, various Livelihood Programs (LPs) are being run by various organizations. But at the same time, owing to limited access to the area relative to other cities of Pakistan, many organizations find it hard to provide their developmental services.

The landmark Lowari tunnel of Chitral has connected the valley with the rest of Pakistan reducing the distance of Chitral and Dir by about 50 %. This tunnel, after its complete operation, will help to link Pakistan to various international borders like Afghanistan, Central Asian States and by far to China (PRC Engineering, 1988). This will certainly open doors to economic development but at the same time will also be a threat to socio-cultural values of the area, since the evils of the advance international cultures will also inadvertently creep in.

The limited agricultural land; that too constrained due to the vagaries of weather, poor

infrastructure and lack of trade linkages is the major cause of under-development and persistence of poverty in the area. Historically, the locals have been facing these problems since ages. On the other hand, the high value fruits, dry fruits, handicrafts, gems, stones, therapeutic plants and honey—are the products which if developed on modern lines can turn around the destiny of Chitralis. This dream can only come true if the pertinent development process is properly planned and executed and then the local farmers are linked to the major national and international markets. Similarly, there is a dire need to build the capacity of the people in general which will certainly help in developing Chitral even further and faster. However, there are various challenges which tend to hinder the development process but their impact can certainly be minimized, if not eliminated.

There are no monsoon rains in the valley and hence the weather is dry throughout the year. The economy of Chitral is mainly based on natural resources and people search for their livelihood mostly in forests. Unfortunately Chitral is prone to natural disasters like terrible snowfall and flash floods; therefore its isolation during the winter season casts adverse effects on every aspect of life. This may include; restricting the mobility of labors, disrupting agricultural exports, meddling with imports of grain, livestock feed and agricultural inputs. To add fuel to fire, the scarcity of agricultural land and poor irrigation facilities restrict landholding of small level farmers, who are plenty.

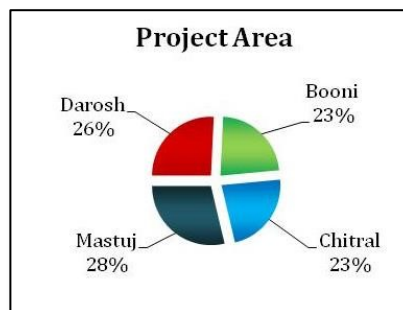
It is pertinent to highlight the pivotal role that civil society has played in mobilizing the inhibitors and in the development of the area. In a sense one can proclaim the civil society has literally complemented the district government’s endeavors that fell short of meeting developmental needs in the hands of scarcity of resources, and expertise. Today some 500 Citizen Community Boards (CCBs) under Local Government Ordinance (LGO) 2001 harnessing their resources in the development process. So much so, the civil society is helping the district

government in providing health and education facilities to the citizens especially when it comes to be providing the same at their door steps.

BRIEF ABOUT THE ASSESSMENT AREA

There are different valleys and areas in Chitral¹. The district of Chitral comprises of two Tehsils, 24 Union Councils and 99 Village Councils.

The sampling technique was kept uniform across the four areas so that a consistent analysis of value chain could be ascertained. The representation of men and women was also ensured at all level.



1. Chitral

The only district which is cut off from rest of the Pakistan is Chitral. This is due to the closure of Lowari tunnel during heavy snows. Main source of food in this area is livestock. It is estimated that about 700,000 head of livestock (75% goats and sheep) are present in the district. Forests cover 70,045 ha in the area Chitral and Daroosh area, out of which 25,000 ha is considered suitable for commercial harvesting. Despite widespread hunting by the local people, the remote mountain valleys of Chitral are home to a considerable variety of wildlife.



2. Daroosh

It is a small town of Chitral District as shown in figure. It is located at an altitude of 1,100 m (3,609 ft.). This town has been under governor rule since 1860s. In 1870, Shahzada Kohkan Baig was the Governor of Daroosh. After that Shahzada Shahi Mulk took over as Governor of Daroosh from 1870 to 1892. The time when Shahzada



¹ The word Chitral in the report will represent the Upper Chitral, Lower Chitral including all valleys.

Shahi Mulk was the governor of Daroosh, the valley was extended from Broze to Chaqansarai (in Afghanistan).

3. Mastuj

Mastuj valley lies in between latitudes $30^{\circ}2$ to $36^{\circ}57N$ and longitudes 72° to $37^{\circ}58 E$. It has a population of more than 34000 individuals distributed in more than 4500 houses. About 85% of the population depends upon forests and rangeland resources including herding of livestock. It is drained by Yarkhun (Mastuj) and Laspur rivers. The climate of the area is arid temperate to alpine in the upper reaches with mild summers and snowy cold winters. The valley is snowbound from November to March in the lower

reaches while upper parts are covered by snow till June. The scanty rainfall is mostly received from December to March along with snow. This botanically unexplored valley is rich in traditional knowledge.



4. Booni

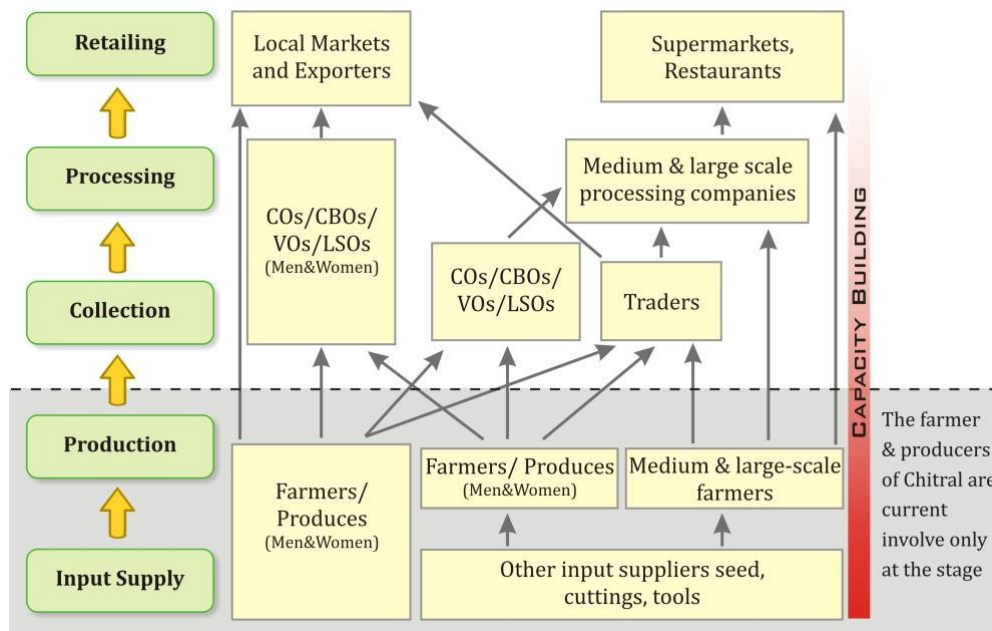
Booni is a town and Tehsil of Chitral District. It is located at $36^{\circ}17'0N$ $72^{\circ}31'0E$ with an altitude of 2359 meters (7742 feet). The main villages include Mastuj, Reshun, Parwak, Kuragh, Charunoweer. Booni is situated 80 kilometers to the north of Chitral town. It is famous for the fruit-laden orchards where for example apricot, mulberry, grapes, peaches and apple trees are abundant. The area is also endowed with fresh water, grasses and cool shadows. The area is also famous for honey. Nevertheless, the medicinal plants of Booni attract researchers and tourists equally.



Value Chain Analysis (VCA) is defined as continuous development of strategic learning at enterprise level, where the components of the chain process range from the step of obtaining inputs and finally delivering the finished good to the end consumer. In VCA an enterprise is not considered a single, isolated and independent entity rather a part of a long integrated chain

which has its linkages with all the stakeholders. In our context, the Value Chain Studies based on VCA serve as an effective tool since they would be helpful in designing and devising development plans, all converging to a single objective: exploring strategic alternatives for poverty reduction.

Ideal Value Chain Map



02

Chapter

ASSESSMENT METHODOLOGY

Research Methodology

The VCA Research Process was designed to serve as a guideline for generation and analysis of data for the Project. The research process was divided into two main components, namely, the Desk Information Review and the Primary Data Collection. Several sub-components and activities were identified under each stage was guided through the TOR as follows:

Desk Information Review

The information is extracted from previous research results, especially 2007 Chicken survey conducted by 13th Young Graduate; under the guidance of Dr. Yang Sain Koma. The secondary data were used for the report which stemmed from CEDAC's published action research documents.

After looking at the points of analysis in the TOR, we screened the existing data which had not

been necessarily collected through our surveys or our Focus Group Discussions with the producers.

The research tools were developed on needbase.

Sampling

The sample consisted of all stakeholders like the producers, traders, exporters, LSOs, NGOs and Government officials, and nevertheless the consumers. The VCA process was clearly delineated after conducting a two-day' session in Chitral city. After that, the LSOs and their enumerators were briefed and trained by research team about value chain concept and how to use the tools. It was ensured that the LSOs and their enumerators completely and clearly understood the concept of VC and also the tools.

(The sample/mapping of the FGDs and IDIs is attached as annex 01)

For quantitative data, the enumerators were asked to conduct IDIs with producers and consumers of their respective territories. For qualitative data, the LSOs were required to conduct FGDs with shopkeepers, exporters, NGOs and government officials. The FGDs with producers, traders and LSOs were however conducted by the research team in all four areas: Chitral, Daroosh, Booni and Mastuj.

The judgmental sampling technique was used to reach the respondent of producers, traders, LSOs, shopkeepers, NGOs and government officials. The research team members moved out to remain vigilant about collection of quality data. During these interfaces, the respondents were cross-questioned where the objective was to find out whether they professionally knew about their own business or not. The respondents were those ones who showed great interest in the VCA.

Development of IDI and FGDs Tools:

The IDI and FGD tools were designed after screening the existing reports, articles and other relevant materials about Chitral and its products. As discussed below, the research tools were designed for the producers of honeybee, fruit/agricultural product, handicraft, medicinal plants and gems and jewelry from Chitral,

Daroosh, Booni and Mastuj; and also for consumers from the same areas.

FGDs Tools: The FGD tools were developed to gain information from the producers, traders, exporters, LSOs, NGO and Government officials: detail needed as given in case of IDIs. The FGD tool was developed to find out people engaged in VC of products, beneficiaries of VC of products, training capacity building, marketing links, branding, facility level for availability of VC product, institutional support, health issues, middle-men's role, quality, demand and supply levels, price system, and problems of men and women involved in VC product.

Further, it was also aimed to dig out problems of exporters (and importers), role of exchange rate, problems of logistics, government quotas and access to international markets. The nature and significance of LSOs and NGOs was also explored through these FGDs. Nevertheless, the role and limitations of government was also brought to light and how can the concept of PPP (public private partnerships) evolve. Added by AP

IDI Tools: The IDI tool was developed for honey producers in order to find out nature, types, quality, production, packing, machinery tools used, transport facility/issues and other relevant problems related with the product of honey. The IDI tool for fruit/dry fruit producers was designed to seek information about nature, types of fruits, nature of customers, market links, machinery/tools used, issues, women involvement, and institutional/state support. The IDI tool for handicraft was developed to get data about types of handicrafts, marketing strategy, demand and supply situations, price system and the government support. The IDIs for gems/jewelry was developed to find out information on types of jewelry/gems, nature of buyers, communication channels, demand and supply situation, machinery/tools availability, training, packing and women's role. Finally, the IDI of medicinal plant was conducted to get information on types of plants, weather impact on them, their availability, communication issues, demand and supply forces, packing, training problems, and women's role. The IDI of consumer was meant to find out buying behavior, price mechanism, product availability, packing, and packaging and satisfaction levels.

OVERVIEW OF FRUIT PRODUCTION

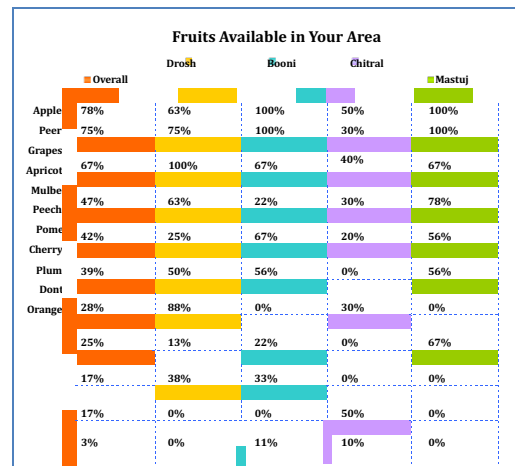
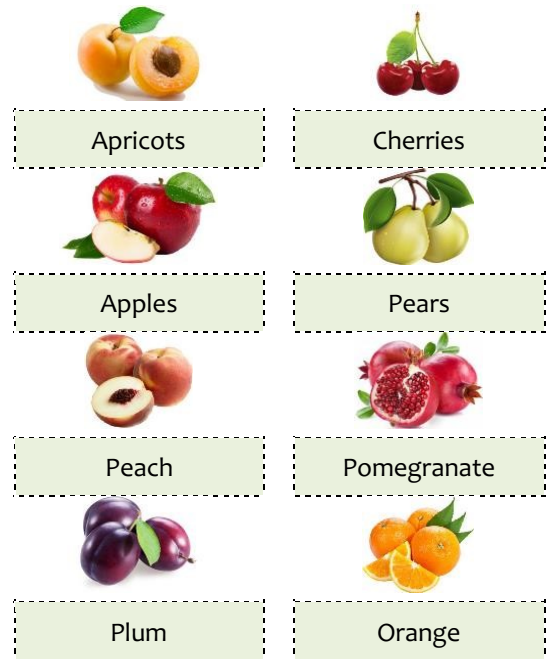
1. Product

Chitral is known as a fruit-rich city of the country, in fact it has an ample production of fresh and dry fruits. Chitral's economy could be considerably boosted if the bulk of the fresh fruit produced in the valley is utilized on commercial lines. The valley is known for its fabulous products like apricot, mulberry and apples but no organization had so far come forward to modernize the production and marketing of these fruits. This could have helped raise the income of the people who are associated with this sector and yet are mired in abject poverty. As per data collected by an NGO in 2007, apricot, mulberry and apple were grown in about 100 per cent households in the sub-valleys of Mulkhow, Torkhow, Mastuj and Lotkoh, what remained was proper value-extraction from the produce. The data revealed a startling fact that only a fraction of one per cent of the surveyed households dried the surplus amount of these fresh fruits.

Fresh Fruits

The advantages of fresh fruits are numerous. The fresh fruit contains many vitamins and minerals. Fresh fruit also contains water, which can help hydrate human body. Fresh fruit though contains fewer calories per serving because of its water content, yet it is generally very nutritious. Fresh fruit is less nutritious if it is under or over ripped. However, fruits get spoiled during transportation, they lose nutrition as well. Being perishable, fresh fruits need to be transported faster to consumers, which make their marketing even more challenging.

Following are the few key fresh fruits of Chitral and surrounding areas.

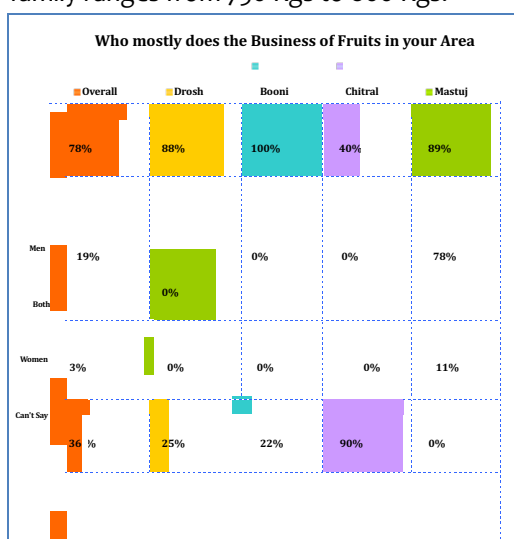


The data, collected during the assessment exercise, shows that apple; peer, grapes, apricot, mulberry and peach are most commonly grown in Chitral and its surroundings.

It was reported that Mastuj and Booni had the highest number of producers of apple and peer, while the grapes is mostly produced in Drosh Valley. Cherry is produced mostly in Mastuj, but little in Drosh and Booni but none in Chitral. The Plum is also one of the key products of this area but it is only produced in Drosh and Booni.



Apricot is the most common fruit produced in all four areas. Apricot is available in both fresh and dried form in the local market of Chitral. Dried apricot is more famous in these areas. According to the survey of Government of Pakistan (1989) Apricot is one of the primary cash crops for many producers with around 10 trees producing Apricot on average in a single family. Average fruit production capacity of single family ranges from 750 Kgs to 800 Kgs.



Both men and women are engaged in the production and processing of fruits in these areas. Understandably the fruit business is dominated by men, as part of culture Booni shows the highest participation i.e. 100% as responded by the local community. Though negligible, by participation of women is also indicated as emerging phenomena, which can be enhanced further through programmatic interventions.

Apart from the general involvement, we also assessed participation of men and women in each line of fruit production.

Who mostly does the Business of Fruits in your Area

Grapes	67	33	
Pomegranate	86	14	
Apricot	70	10	20
Peech	66	33	
Apple	68	20	12
Mulberry	50	33	17
Peer	63	38	

Men
 Women
 Both
 Can't Say

Pomegranate is dominated by men (86%). Grapes, mulberry and peer though dominated by men also involve both sexes. Women are reported to be more exclusively involved in the business of apricot (33%) and peach (10%).

Dry Fruits



In its most basic form, dried fruit is simply fruit with the moisture removed from it. If the fruit is dried naturally, it should contain all of the vitamins and minerals that you

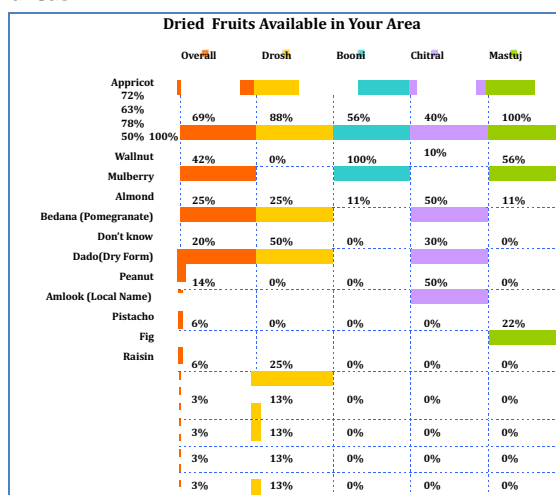
would only find in fresh fruit. Dried fruit can even be more advantageous than the fresh fruit in certain cases depending upon the application of the fruit. First of all, dried fruit is sometimes boiled before it is dried.

Boiling the fruit can kill microorganisms which are otherwise used in digestion.

Additionally, dried fruit can be preserved longer than fresh fruit, so one can eat it when the fresh fruit is not in-season.”

If fruit is dried chemically by adding preservatives (such as sulfur dioxide), it becomes increasingly unhealthy. Sulfur dioxide can reduce certain vitamins in the fruit (such as vitamin B), and high heat drying can cause fruit to lose even more nutrients. In addition to preservatives, sugar is added to dried fruit which continues to degrade its value in terms of its nutrition.

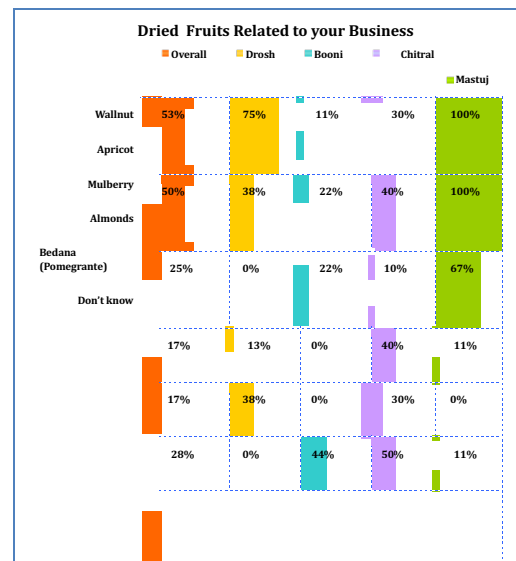
Following are the available dry fruits of these areas.



Dried apricot comes on top in terms of availability across all regions (72%) followed by walnut (69%), mulberry (42%), almonds (25%) and white pomegranate (20%).

However there are significant variations in reported availability within each area. Pomegranate is maximum in Drosh (50%), almonds in Chitral (56%). Booni leads in availability of mulberry (100%) followed by Mastuj (56%). Drosh comes out as the most fertile for fruits of all kinds including peanut, fig, pistachio, and raisin, which are not available in other areas.

Apart from the general availability as mentioned above, we next focused on the dried fruits on which businesses are based.



Interestingly walnut replaces apricot on top of the table, indicating that although apricot is available more, but it is processed less into dried fruits business. Other than this, this list is in line with the availability pattern reported above.



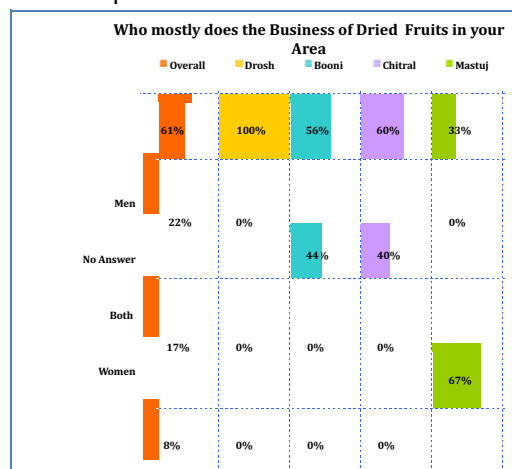
There is a good quantity and quality of dried fruit available in these areas but due to the lack of branding, good packing, and packaging it is not recognized in the down town market. The products are further processed and packed in cities like Peshawar, Islamabad and Lahore to export in other countries. This value addition benefits these cities instead of the origin of fruits. Therefore, there is an immense need to support these farmers to upgrade their product and climb couple of steps of value chain and improve their livelihood and living standards.

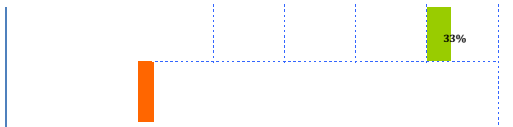


Pine nut is one of the main sources of income in some forested valleys of district Chitral. This potential was revealed in 2000, when the “Innovation for Poverty Reduction Project” (IPRP) started its interventions in the area. By then, the community of Shishi Koh valley – which is very poor - started realizing the economic benefits of pine nut and its high market value. Training was

organized for the people to adopt proper way to collect and sell the pine nut cones. Later on, specific analyses were conducted, in order to identify and understand the important role of the traders, as well as the various marketing channels. In 2008, a comprehensive value chain analysis was undertaken by the Livelihoods Programme (LP), taking into account the previous learning and in particular the specific problems faced at the harvest and postharvest levels. This analysis was the starting point for interventions aiming at empowering the pine nut collectors, organizing them into interest groups, and giving the means of having an active role in the marketing process of their product.

At the market level, Bannu was a large wholesale market of national and international importance for unroasted pine nuts. Large supplies from Waziristan, Afghanistan, Zhob (Baluchistan), and Chitral were made to Bannu market where big commission agents, wholesalers, contractors and other market functionaries were active. From Bannu market the supplies were mostly taken to Lahore market where value addition (roasting, kernel separation, grading, cleaning, improved packing etc.) was done for exporting to overseas markets through Karachi based exporters.





Same as in case of other products, both men and women are involved in the fresh and dried fruit business. Drosh has more outsiders (Pathan, Afghan, and Dir people) than other areas, which increases the men's participation. Interestingly Mastuj has quite a balanced presentation of both men and women, which becomes significant in the backdrop of overall findings which are tilted in favor of men.

Fruit Type	Men	Women	Both	Can't Say
Graps	67	33		
Pomegranate	86	14		
Apricot	70	10	20	
Peech	66	33		
Apple	68	20	12	
Mulberry	50	33	17	
Peer	63	38		

Pomegranate, both types, is an exclusive domain of men, who also dominate the business of almonds, walnut and apricot. These three also allow participation of women to some degree. However, the highest level of participation by women, equal to that of men, is in the business of mulberry and to a lesser degree in apricot.

2. Production, Collection & Process

According to the local farmers, the fruits of apple and apricot go waste in large quantity in Chitral, since there is no scientific method for their preservation and marketing. They said that apricot and apple are produced in large quantity in Chitral which included superb species but the farmers derive no benefits out of it; though it could improve their economic conditions as well. "We feed the animals a good quantity of the fruits in the peak season days when there is a galore of the fruits and we find no way of their proper utilization"². The farmers also said

² A farmer Khosh Khan from upper Chitral

that the marketing of fresh fruits is not possible due to the transportation problem which is too costly. They said that the fruits of local species of apricot and apple start decaying very shortly after they are ripe as these are very juicy. No effort has been made to introduce any procedure and mechanism of preserving the fresh fruits or dry them up retaining their colour and tang. The farmers were of the view that the local species of apricot are far more superior to that of the other areas which are available in Chitral market. They said that despite the fact that there is abundance of the fruits, in the local market; the dried fruits of other areas are also sold.

The local farmers expressed deep sorrow over the marketing of dried apricots from Gilgit and neighboring areas of Afghanistan, they said that the quality of fruit in Chitral was in no way inferior but there was no dehydration facility available in Chitral on scientific lines.



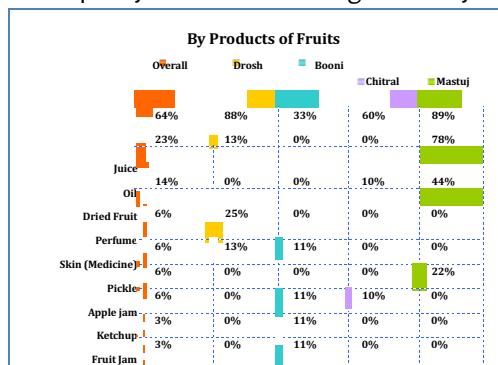
The fruits dried in customary way through direct sunlight lose their pleasant charm, taste and brittleness.

By-Product Analysis

An important source of value addition are by-products of fresh and dried fruits. These by-products not only have extended shelflife but also at times command premium prices in local, national and international markets.

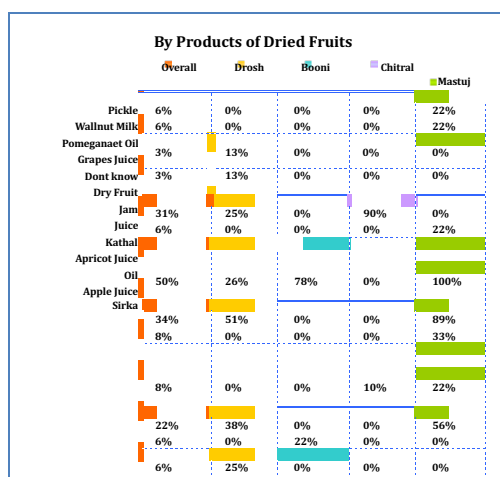
We therefore assessment the current practices of generating by-products.

Traditional and obvious by-products are made from fresh and dried fruits. Making byproducts is unorganized, home-based activity; it does not even qualify to be called cottage industry.



Case in Point

The Aga Khan Rural Support Programme (AKRSP) had introduced manufacture of jam and pickle out of the fresh fruits but the scope could not be widened to reach commercial levels of output generalized as the training was imparted only to a very limited segment of population. The womenfolk could be engaged in the preservation process which could empower them economically. Some women organizations formed by the AKRSP and SRSP in some villages had successfully launched women-specific projects, which has boosted income, saving and general prosperity at household level.



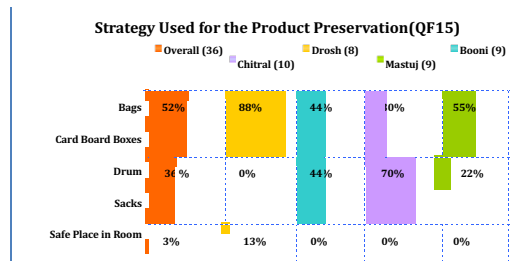
Peels of fruits, especially edible fruit skin is a rich source of value-addition as skin extracts are used in perfumes, medicines, food and confectionary.

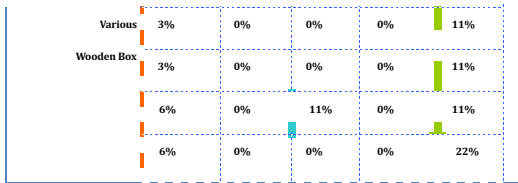


Beside the bi-products there is another range of products made with the waste of fruits, e.g. peel, skin, seeds etc. One of the most useful waste is the skin which is converted into different medicines, and products used in foods e.g. the peel of orange is used in traditional sweet rice (Zarda) not only in Chitral but other areas of the country. Yet the most significant findings is that an overwhelming 72% respondents do not know that something useful can be made out of fruit skins.

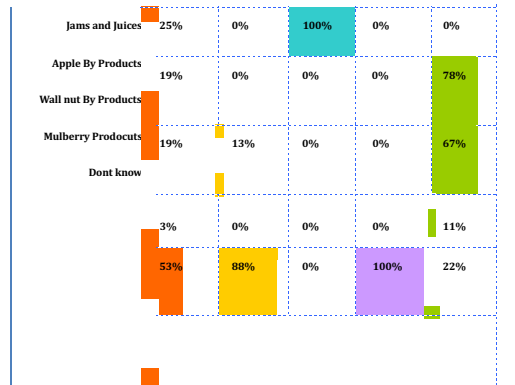
Preservation of Fresh and Dried Fruits

Post-harvest loss in value-addition comes chiefly from the methods and materials used in storage and preservation. Prevalent practices are traditional and devoid of any innovation.

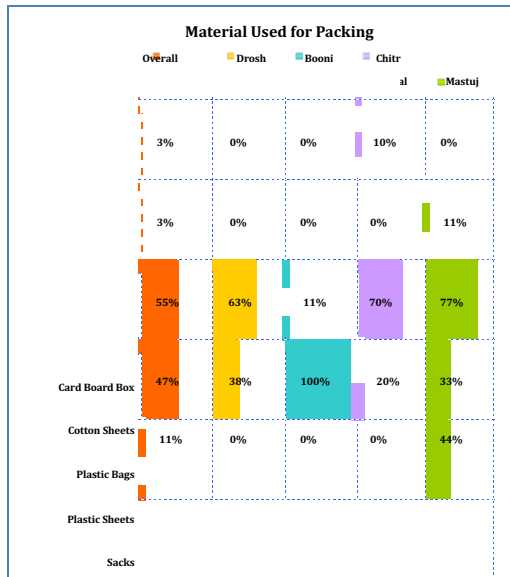




Storage and preservation is an immediate area for programmatic intervention, where training and material support can significantly reduce loss of value and improve livelihoods.



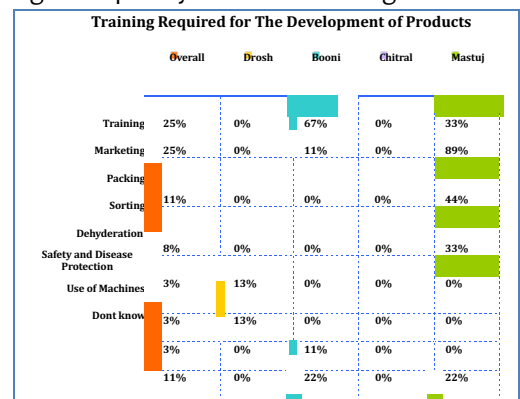
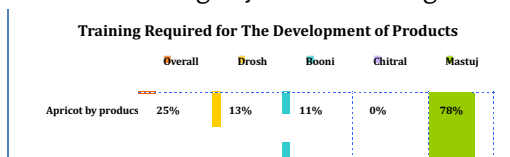
There is a massive need of capacity building and skill enhancement in Marketing, Packing and Packaging of these products especially through adequately established linkages.



The local producers mostly use the clear plastic bags for packing, sale and distribution of dry fruits. The fresh fruits are sold in shopper bags while the dry in clear china zipper/stick bags. The packing is not very low but a better material can be used for out-of-city, national and international level distributions.

Capacity Needs Assessment

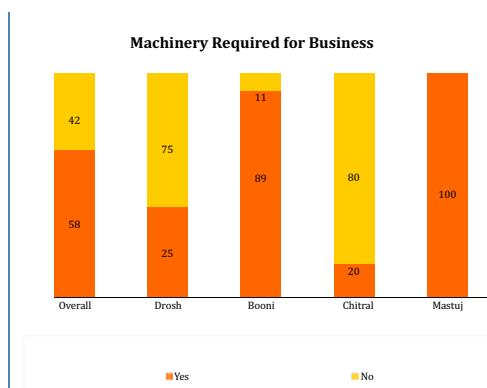
The destiny of the farmers can improve if the fruits are saved from growing waste. Further, training should be imparted to the farmers especially the womenfolk on how to prepare jam of apple and apricot. Although a project named Fruits and Vegetables Development Board was launched some years ago but it faced closure without achieving any substantial targets.



There is a special machinery i.e. dehydration plant which is required for the processing of dried fruit. Due to the high cost of the machine it is hardly available. The traditionally famous drying training was provided but on minor scale since the available local resources was insufficient.

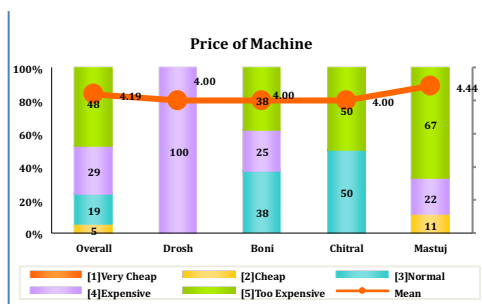


Material Support for Value Chain Improvement

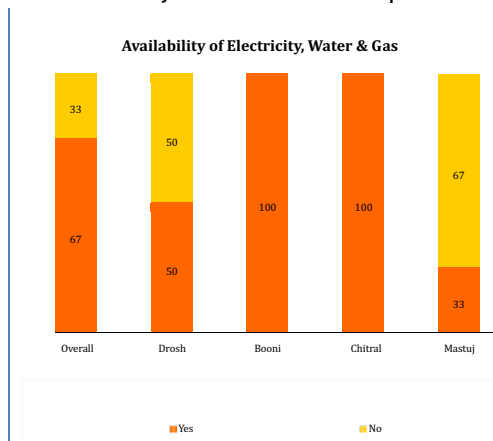


An overall 58% require machinery and equipment for their businesses. The requirement in Booni is reported to be at 89% and 100%.

Procurement of required equipment comes out as a major obstacle.



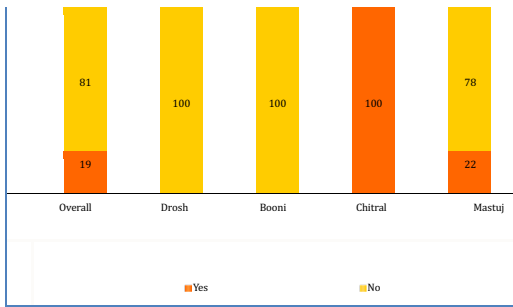
The price of machinery is rated very expensive which out of the range of locals to purchase. So far, traditional mean of drying and dehydration is used for the preservation. The machinery is only used by the institutions, NGOs and training institution for training purpose. If a trade union is formed on the basis of product and products, collective machinery can be purchased which can be used by all the farmers and producers.



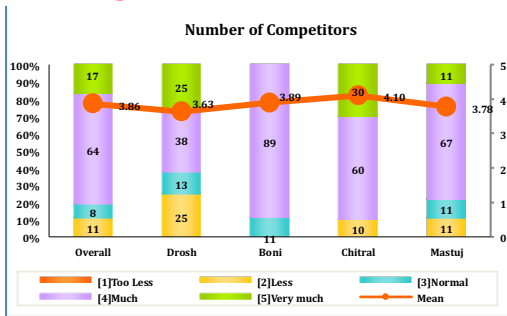
Although the electricity is a national problem but the producers of Chitral and Booni did not claim much of its shortage mainly because of micro-hydel generation.

Equipment alone will not improve the production and preservation practices, unless it is complemented by skilled manpower, whose availability is reported to be no problem in Chitral, the urban center with training institutes and colleges. Everywhere else the lack of skilled manpower remains a major challenge.

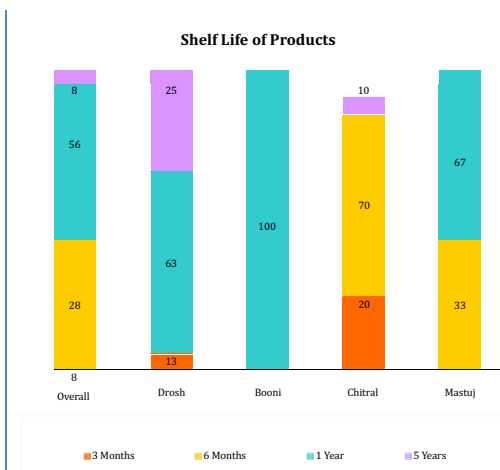
Availability of Skilled Persons to Operate the Machinery



3. Marketing

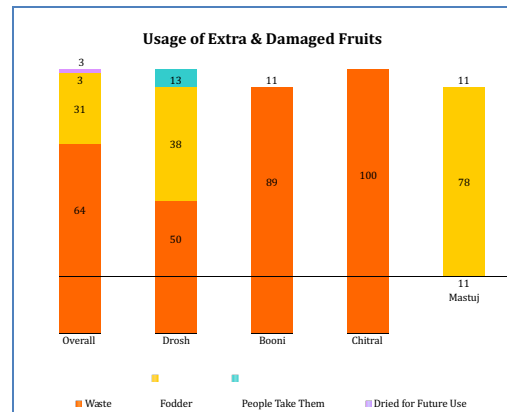


There is an abundance of fruit produce, almost everyone is in the same business so the reported competition is very high, with no one leading in terms of product differentiation. Due to the lack of product development and by-product development training almost all the local businesses offer similar quality and types of products. This often results in price wars which adversely affects incomes across the board.

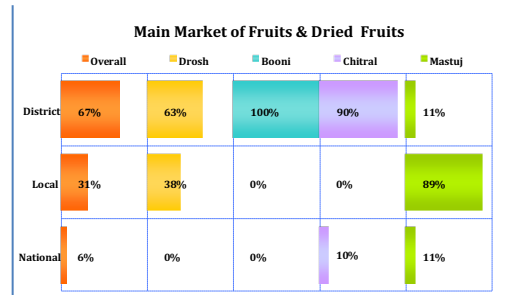


The dry fruit can be stored and saved from 03 month to 05 years, based on the type of fruit and material used for their packing. The

material is much saved in winter comparing to summer. There are less chances of disease, insects in winter than summer.

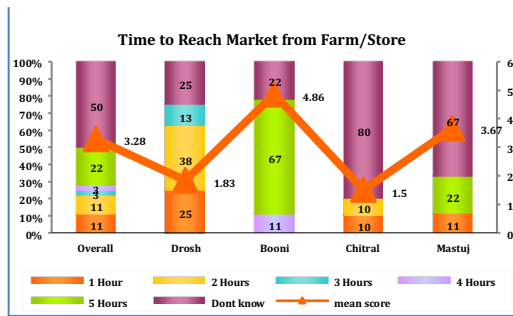


Overall the extent of fruit going to complete waste is 64%, which if combined with the next most wasteful use (fodder), jumps to a whopping 95%. This fact when combined with general lack of knowledge about using skins and seeds for value extraction indicates a very high degree of loss in value addition opportunities.



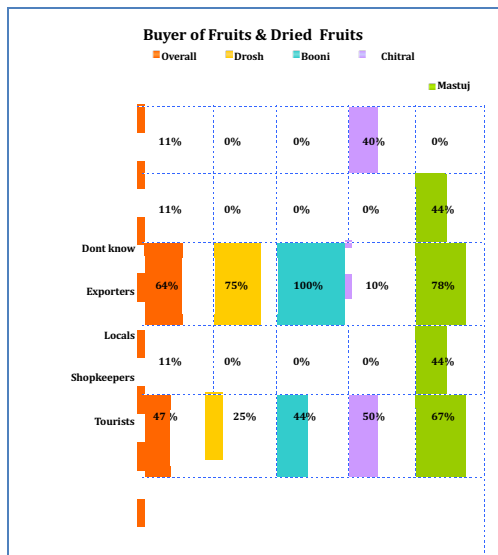
The fruit and dry fruits is mainly sold in the district (i.e. Chitral) and then in local market. There are few farmers who sell their product to Peshawar and Dir, Upper Dir and Timar Garah. From the wholesale market in Chitral, the dried fruit is being sold to major cities of Pakistan i.e. Lahore, Islamabad and Karachi.

The current market linkage emerges as another obstacle to improving fruits value chain. Overall 98% ends up to middlemen in local and district markets.



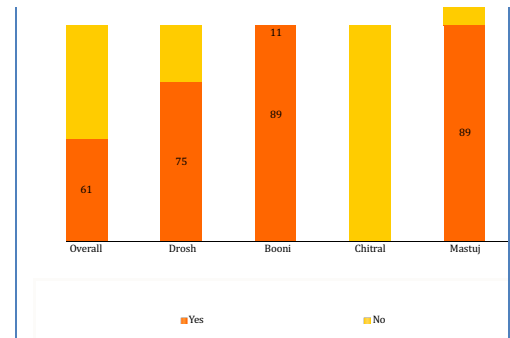
An overall 50% do not know the time it takes them to reach the market from their farms, indicating that the significance of this important value-factor is lost on them. However, given the fact that cold temperature throughout the year aids in preserving the freshness of produce, the “don’t know” answer makes sense.

4. Sales and Distribution



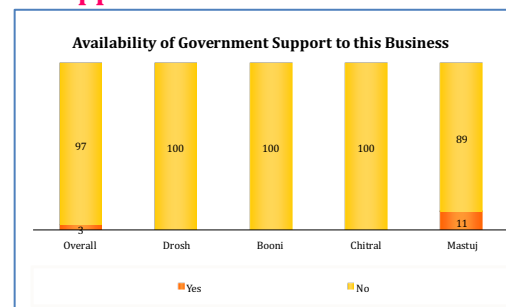
The fresh and dry fruits are mainly sold to local shopkeeper and contractor. Tourist buyers rank as second highest as 47% report selling directly to tourists, which gives them better returns as confirmed by the respondents during the in-depth interviews. Tourists not only pay higher prices but also pay in cash instead of credit offered by local market channels.

5. Gender Equality

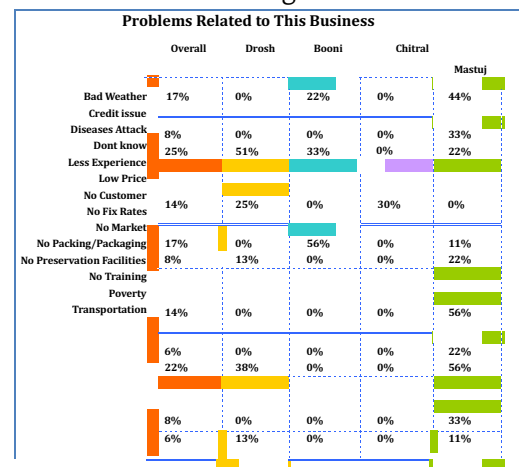


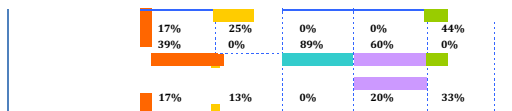
Both men and women are involve in the production, collection and selling of these fruits. Except Chitral all three valleys have similar role of women as men. Presence of tourists and outsiders in Chitral is cited as main reason for not allowing women to work in fruit fields and farms.

6. Support Mechanism



Complete absence of government support is reported in Chitral, Booni and Drosh resulting in 97% respondents' acknowledgement of 'no role or support' to their business from the government.





Here are few of the problems faced by the fruit growers:

Protection from diseases: Diseases are the major concern for fruit production in Chitral. There is no proper training and information available to the fruits' growers to protect their plants from the diseases. These diseases damage the fruit trees and affect the production volume and the quality adversely.

Top three challenges as identified above are:

- ✓ No low return on investment (41%)
- ✓ Lack of training (20%), and No
- ✓ market available (17%)

All three problems, individually and combined, highlight classical value chain issues that can be addressed by programmatic interventions.

Summary of Findings Marketing Facilities: The marketing options and facilities are very few for the fruit growers. In most of the cases the growers get exploited by middleman or otherwise by the big businessmen. The tough marketing conditions sometimes force fruit growers out of business as well.

Food Crisis and Diversion from Fruits to Food /Cash Crops: It is also regrettably noted that fruits growers are switching to other cash crops. The profit margin on cash crops is better than the these fruits. Further, the increasing population makes it easy to sell cash crops locally or nationally. The crop growers earn more than the fruits growers especially during short lapse of time. So the fruit growers shave off their orchards and replace them with food crops. Finally, the instability in the market regarding fruit prices also causes diversion of fruit growers to cash crops.

Fruit Processing Industries: It is also noted that in district Chitral there are no processing units. Huge quantities of fruits are going

waste due to the non-availability of processing units. On one side it is grower's individual loss while on other side it is loss for the economy on the whole. Nevertheless, the missing links in the value chains adversely affect the production of fruits.

Extension workers: The extension workers are very few in the area. Although the government of KP is investing in the area to put fruit production on forefront but the efforts are very minimal as compared to the needs of the area. Further, the available workers are not efficient and well trained.

Farm to Market Road: Chitral is a hilly area with slopes and tough road tracks. The misery of having no developed infrastructure from farm to market is a point of concern. Lack of infrastructure causes problems in traveling and transportation.

Storage Facilities: Storage plays a crucial part in multiplication of production of fruits. When the price is low the grower keeps the fruits in the storage, when it goes up then he supplies these fruits to market and earn greatly. Storage increases the life expectancy of fruits and allows them escape from being spoiled. Its pity that there are no storage facilities available in the District Chitral and a large part of fruits get spoiled. Lack of storage facilities discourage the fruits' growers and force them to shift from fruit orchards to other crops.

Suitable Irrigation: The irrigation system is not favorable for fruit growing in district Chitral, since they are primitive. Should the irrigation system made better, the drip irrigation facilities may be arranged on need basis.

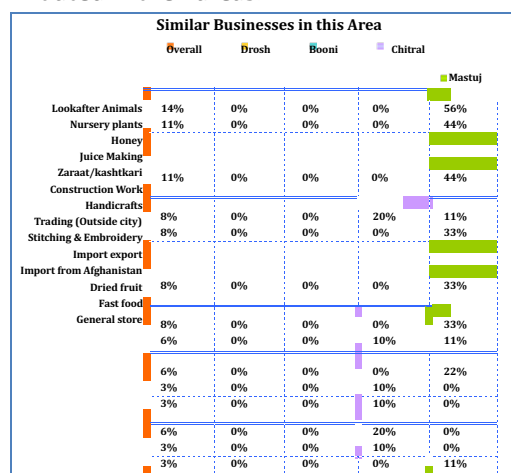
Lack of Finance: Finance plays essential part in sustenance and growth of any enterprise. There are no financial facilities available to

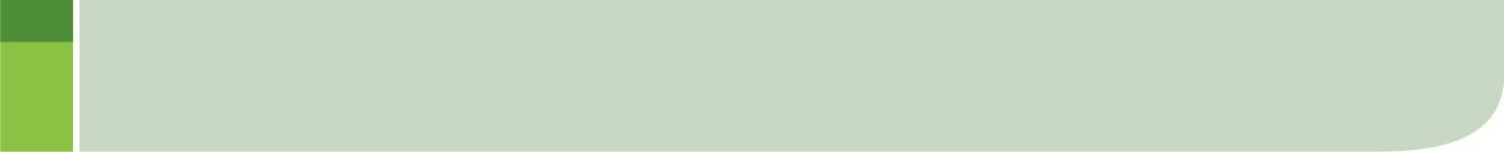
the fruit growers so they have to resort to private lenders who are largely exploitative. The agricultural bank for example must start operations in such areas, or other microfinance schemes can serve the purpose.

Lengthy gestation Period: The fruits produced in Chitral take long period to ripe. Sometimes the lengthy gestation periods disturb the economic position of the grower, since the yield is delayed and that in turns delays cash inflows in most of the cases the growers have to borrow and wait till their product is matured. The growers are exploited by private borrowers since no proper mechanism exists for lending.

Similar Business

Following are the few potential business identified by the locals to be established or initiated in their areas.





RECOMENDATIONS

- There is a need for product diversification by incorporating other potential fruits and vegetables.
- The long- term strategy will focus on ‘grow for export’ approach and will entail.
- New market linkages should be developed and improved e.g. the model of MOGH enterprise may be replicated.
- The local craftsmen/women should be exposed to national and international business o The is a need of reorientation of the production according to export market requirements.
- This would require training of farmers in quality production, timely harvesting.
- The cooperative and collective farming’s should be encouraged. New varieties, nurseries and model farms should be introduced.
- The short- term strategy will focus on support to marketing efforts for existing fruits which has potential for exports such as apples, pear, persimmon and apricot from Chitral
- This would require training of farmers standardized packaging (normally provided by the exporter/buyer)
- Improve support services efficiency which would include better logistics, storage, packaging, etc. through private sector initiatives.
- The greater coordination among different stakeholders such as fruits growers, Extension workers, agriculture department, local government and export processing authorities is needed.
- A task force may be formed to coordinate with provincial government for necessary support; to work in close collaboration with existing development institutions both public and private sectors; to solicit financial support from donors and other institutions to support fruit growers in this area.

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