

Value chain study 03

Improvement in walnut value chain by The Livelihoods Programme



Government of KPK



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Context

Walnut holds a major identity with high demand in national and international dry fruit markets. It is a major source of cash income after pine nut in Shishi and Birir valleys of district Chitral. It is not found growing wild in these valleys and only grows on private lands. Regular orchards and linear plantations are however, not common due to small landholdings and subsistence farming. Scattered and solitary trees of walnut are grown on peripheries of agricultural fields, along irrigation channels, paths, in compounds and backyards, etc.

Tenure and ownership rights over trees are a major issue, especially in Birir valley. Out of a total of 2214 walnut trees standing on private land proprietary rights over 422 (19%) trees are owned by people from other communities. These ancestral trees have been mortgaged, sold or given to other non-local absentee owners in the past. Tenure and ownership over walnut trees is generally clear in the case of

Shishi Koh valley which rests with the concerned landowners. Yet a small proportion of trees are owned by people belonging to other communities (mostly Drosh). This tenural issue is a source of strong psychological discomfort for the local landowners as they are sustaining all the negative impacts of trees on their crops while the economic benefits of these trees accrue on their absentee owners.¹



Realizing the economic importance of walnut, the Livelihoods Programme (LP) analyzed its value chain for the livelihood improvement of the communities involved in both valleys.

Initial situation at the time of study

The value chain of walnut in both the valleys was restricted to nuts only and did not cover other products such as timber and bark, as activities regarding walnut timber and bark were limited to making of local furniture and cleaning of teeth respectively. Mostly, only local walnut varieties are grown and improved/high yielding varieties have not yet been introduced in the valleys. Harvesting of walnuts was done by climbing the tree and striking the branches with a long stick. The walnuts on the ground were collected by women & children. The walnuts were dried in the sun and the blackish, small & broken nuts were separated.

For Birir collectors, the marketing process ended at the farm gate where the whole produce was taken away by the middle men (contractors) from the down country.² The local inhabitants were unaware of the potential markets having no knowledge of improved marketing practices/market functionaries. Major quantities were purchased by the visiting traders on lower prices (Rs.30 to Rs.50 per kg) through the village shopkeepers, who acted as their agents in assembling the product in the valleys.

The nuts were sold to the contractor through village shopkeeper (85%) or directly by the farmer (15%). The gross margins of these intermediate traders (village shopkeepers and Dir traders) were 23.08% and 9.90% respectively in Shishi valley while 50 % and 14.29% in Birir valley. The margin of village shopkeepers in Birir valley was higher (50%) as they bounded producers to supply walnuts at lower prices under pre harvest agreements and loans.

The processing of walnuts (the extraction of kernels) was predominantly done by women for domestic use (making of Khomoon,³ extraction of oil etc.) whereas its extraction for commercial purposes has not been initiated in both valleys. The extraction of kernels was done by cracking the walnuts with stones which resulted in the breakage of kernels, usually used for domestic purpose.

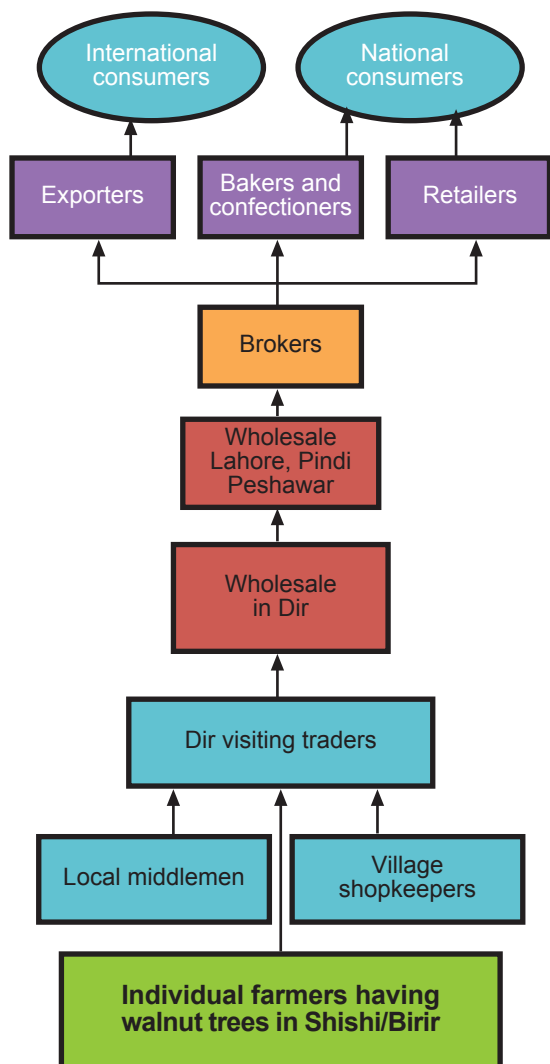
In both valleys, the harvesting of different varieties of walnuts starts in the last week of September and continues till mid October. The inhabitants of the Birir valley ban the picking of all fruits including walnuts till ripening and this ban is called "Dann" in local language. It is usually for one month i.e. from 17th August to 17th September. After one month, the ban is lifted, which is called "Pule" in local language.

¹Resource inventory of chilgoza and walnut in Birir and Shishi Koh valleys of district Chitral, November, 2008

²The term is usually used for the places situated across the Lowari pass/tunnel.

³This product is prepared by boiling mulberry juice. When juice gets concentrated the walnut kernels are added and mixed. The concentrated juice sticks to the kernels, and then the kernel are knitted in the form of a garland. This product is stored for a long time and is presented as a gift to relatives/friends and consumed in winter as energizer.

The following supply chain map of walnut shows the initial situation of walnut business before LP interventions.



Value addition was carried out only in district Dir. Dir supplied the overall national market; its exports were entertained from Lahore market through fulfilment of their requirements related to size, color, labeling and packaging.

The consumers in Punjab and Sindh prefer white-shelled nuts i.e. the external appearance, which has nothing to do with the quality of kernel (edible portion). In this connection, Lahore wholesalers bleach the nuts by treating with sulfuric acid, soda ash etc. which turns the brown color of the shell to white.

Dir wholesalers have a dominant role through the chain and mostly dictate the terms and conditions in fixation of the prices, quality and supply timings of raw products.

Interventions undertaken by the Livelihoods Programme (LP)

Based on the value chain study, LP strategized its interventions both at production and marketing levels. At production level, scattered collectors were organized into Business Interest Groups (BIGs) for the purpose of achieving economies of scale and to impart capacity building measures related to business management. Due to the commonalities in the harvesting and consumption seasons of pine nuts and walnuts, their collectors were merged into combined Business Interest Groups in Shishi and Birir valleys. Value addition in terms of kernel separation, linkages development with reliable buyers and development of appropriate post harvesting tools (nut crackers) are the major marketing interventions of LP in the walnut value chain. Other interventions are highlighted below;

1. Developed linkages with local agriculture research station for plantation of market leading varieties of walnut.
2. Collectors were capacitated in adopting safety measures in climbing of the walnut trees and harvesting of produce. The tools (safety belts and walnut crackers) were developed for climbing the tree and processing the walnut respectively.
3. Exposure trips and marketing trials revealed that a good market exists for the walnuts having a larger size, thin shell and white kernels. The thin shelled walnut requires a light force to crack the shell with subsequent extraction of whole kernel (in two pieces) whereas the hard shelled nuts require a heavy force resulting in the breakage of kernels and subsequently decreasing the market value.
4. The export market demands a whole or half kernel with white colour and appropriate taste. Rancid, moldy kernels have no market potential. These preferences are similar in Rawalpindi and Lahore markets.
5. Market linkages were developed with reliable buyers of Peshawar, Batkhela and Mingora markets which minimized the dependency of the locals on traders from Dir, who used to establish pre harvest contracts at low purchasing prices.
6. Value addition in the form of kernel separation was introduced through simple and economical technology (walnut crackers). These walnut crackers received a positive response from the women folk of the community as they helped in decreasing their work load by increasing processing efficiency of the product.

Comparison of added value in walnut value chain

The following situation shows a clear increase in the share of added value of collectors from 25% to 50% as a result of LP interventions. This share can be further increased if the local traders and shopkeepers are bypassed and direct linkages are established with Dir and Lahore traders for raw and value added products respectively.



Situation of added value before LP interventions

Price received/kg	Rs.50	Rs. 100	Rs.130	Rs.150	Rs.200
Value share	25%	25%	15%	10%	25%

Situation of added value after LP interventions

Price received/kg	Rs. 100	Rs. 120	Rs. 150	Rs. 170	Rs. 200
Value share	50%	10%	15%	10%	15%

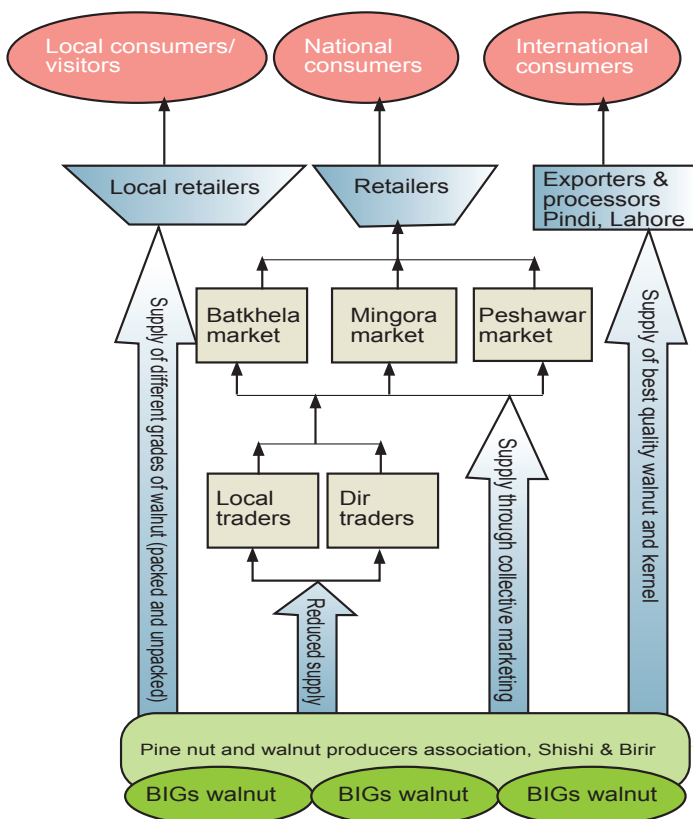
Visible impacts

The LP interventions regarding the formation of Business Interest Group (BIGs) and the development of business linkages with reliable buyers proved to be fruitful. The higher prices (Rs.5,000 per 50 kgs) in comparison to the prevailing local prices (Rs.1500 per 50 kgs) motivated the producers to withhold their products for better market opportunities. The early impacts coming out by the interventions of the Livelihoods Programme are:

- Value addition in terms of kernel separation was successfully introduced and adopted by the concerned communities.
- Business of worth Rs.1.2 million took place with Mingora, Batkhela and Peshawar markets through collective marketing of 12,000 kgs of walnuts.
- Formation of the new and strengthening of the existing Business Interest Groups.
- Collectors mind set is mature enough towards the formation of pine nut / walnut business association at the valley level which will be materialized in the coming year.
- The introduction of brand name of “Pure Chitrali Walnut” attracted the buyers in bigger markets. This made the product different from the others and therefore successful in establishing good identity in the dry fruit market.

Up scaling

The successful interventions in the walnut value chain are up scaled in Birir valley. The work is mostly carried out with the owners of the walnut trees. However, the collectors in Birir were unaware about its market and other related post harvest management and value addition practices. They were equally benefited by the LP interventions, where 10 walnut BIGs were formed which grouped together about 100 walnut producers. Representatives of BIGs of Birir were exposed and linked to markets which resulted in a good price premium.



Vision

“A stronger business association of pine nut/walnut producers, supporting the collectors for sustainable market linkages, ensuring quality walnut and pine nut according to different market segments, with advocacy for the conservation and expansion of the pine nut/walnut resource base.”

Road map

- To form a sustainable system of demortgaging the walnut trees by involving the concerned stakeholders of Birir valley.
- Promotion of thin shelled (kaghzi) variety of walnut throughout the valley in order to fetch maximum price premium
- Formation of the association by merging both IGs of walnut and pine nut and imparting related capacity building measures.
- Linking the association with the appropriate lending institutions to fulfill the working capital requirements.

Expected association functions

- Collective marketing
- Linkages development with support organizations
- Advocacy by influencing

The Livelihoods Programme

The 'Livelihoods Programme' (LP) started in January 2008. It operates in districts Chitral, Swat, Buner, Haripur, Karak and Dera Ismail Khan in Khyber Pakhtunkhwa (KPK, previously known as NWFP). It merged and capitalized on the successful elements of four previous IC projects under one programme. The programmatic approach provides an opportunity for replicating and up-scaling relevant successful components. LP aims at increasing the effectiveness and efficiency of SDC's development assistance in Khyber Pakhtunkhwa. The Sustainable Livelihood Approach (SLA) and Human Right Based Approach (HRBA) form the basis of the Programme. LP supports people in improving their livelihood strategies based on their potentials and with concrete means to reduce their vulnerabilities caused by various factors such as natural disasters. Programme interventions are designed to emphasize on the rights of marginalized women and men (rights holders) and obligations of state institutions (the duty bearers). LP strategically builds local capacities and service delivery systems around specific resources (products or value chains), aiming at empowering communities to deal independently with various service providers. LP is implemented in close collaboration with the Government of Khyber Pakhtunkhwa under a Memorandum of Understanding. For field activities, two geographical hubs have been established in the north and the south of Khyber Pakhtunkhwa. The Programme Steering Committee (PSC) comprising of representatives from SDC, IC, Government, civil society and the private sector is responsible for providing strategic guidance to the programme.

Key facts on the Livelihoods Programme

Funding: Swiss Agency for Development and Cooperation (SDC)
Implementation: Intercooperation, (Swiss Foundation for Development and International Cooperation), in collaboration with the Planning and Development Department, Government of KPK
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