

Domesticating Wild Non-wood Forest Products (NWFPs): Opportunities of Alternative Farming for Rural Livelihoods in Nepal

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Background

Cultivation of NWFPs, particularly medicinal and aromatic plants (MAPs) in the community and private land in Karnali zone could be the best alternative for conserving the biodiversity as well as generating income. In past decades, few MAPs such as Keshar (*Crocus sativa*), Jatamansi (*Nardostachys grandiflora*), Sugandhwal (*Valeriana jatamansi*), Padamchal (*Rheum australe*), Bojho (*Acorus calamus*), Kutki (*Neopicrorhiza scrophulariiflora*) and Atis (*Delphinium himalayai*), Chiraito (*Swertia chiraita*), Hatkaudo (*Podophyllum hexandrum*) and Nirbisi (*Pernacia nubicola*). Atis, Kesar and Chiraito are the introduced species in CF which can also be grown along with the agriculture crops. Out of those cultivated MAPs Atis, Chiraito, Keshar are selected for the study.



Fig. 1. Saffron sprouts- ready for planting

Objectives

Study aimed to assess the profitability in cultivation and market opportunities of selected NWFPs. It also assessed the investment feasibility of NWFP cultivation and attitude and preference of people toward NWFP Cultivation.

Methods

- Selection of 3 MAPs namely Atis, Chiraito and Keshar in order to compare the benefit cost ratio with agricultural crops.

Location: Jumla District, Nepal

Methods used

- Household survey with semi-structured questionnaires
- Focus group discussions and field visits
- Periodic measurement of height, collar diameter and counting branch for growth measurement
- Economic analysis based on Net Present Value (NPV) assessment, benefit cost ratio and internal rate of return (IRR)



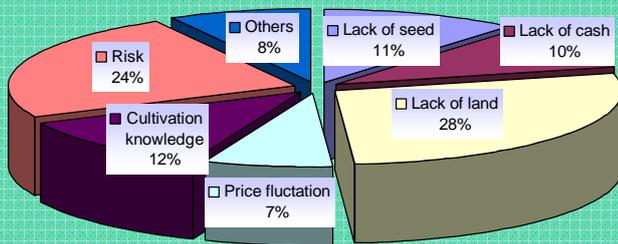
Fig. 3. Interviewing Saffron farmer in Jumla



Fig. 2. Herb cultivation under apple trees

Results

Fig. 4. Factors hindering NWFP cultivation (% of farmers)



Study finds that major hindrance in NWFP cultivation is the lack of land in high mountainous terrain. It is followed by the risk involve in cultivation. Particularly, It is due to the lowest survival rate of cultivated Chiraito 45% and Atis is 50% with no buy-back guaranty on cultivated NWFPs.

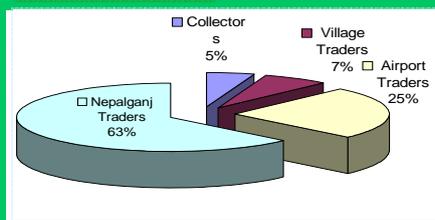


Fig. 5. Profit margin of *N. Grandiflora* at various Level

In case of *N. grandiflora*, which can be exported only in its processed form, main profit is shared by the regional traders at Nepalganj. Where collectors receives least profits.

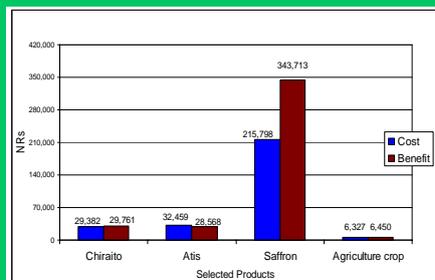


Fig. 6. Comparative advantage of Saffron cultivation

Saffron cultivation is more profitable than other NWFPs and agriculture crops. Saffron is successfully grown under apple trees.

Conclusions

The NWFP cultivation is 3.5 to 26 time costly than agriculture crop while it is 4.5 to 53 times more beneficial than agriculture crop. NWFP cultivation is a risky activity in terms of perennial NWFPs such as Atis, Chiraito, Jatamansi, particularly in a food deficit area like Karnali, where farmers are not able to wait for years to fetch the profit from the cultivated NWFPs. However, any enrichment plantation of NWFPs under community forests and government managed forests.