AFLI Technical Report No. 23

Son tra marketing strategy

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I. Background

Son tra is an indigenous forest tree species that grows primarily in forest areas populated by Hmong people, hence its local name: ‘Hmong apple’. Son tra (Docynia indica (Wall) Decne) belongs to the Rosaceae plant family, along with other well-known fruit tree species such as apple (Malus domestica Borkh.), pear (Pyrus spp.) and quince (Cydonia oblonga Mill.). Son tra trees are classified as semi-evergreen or deciduous. They are suited for planting at high elevations and are normally included as a plantation crop or in mixed plantations with other species. Its yellow sub globes or ellipsoid fruits are generally 2–3 cm in diameter and have an acid taste. Fresh fruits are preserved in syrup or vinegar, or added to alcoholic beverages.

Recent government reforestation programs increasingly promote son tra as a multi-purpose species because it can offer both environmental services and income generation for farmers. Market demand for son tra has also increased in recent years. In some areas such as Bac Yen district, son tra has developed into an important cash crop for local farmers. Such support from the government and demonstrated market demand qualifies son tra plantation as a promising option for livelihood improvement.

Recognizing the species' potential, a project called 'Agroforestry for Livelihoods of Smallholder Farmers in Northwest Vietnam - AFLI' conducted a son tra value chain analysis to assess current performance and identify opportunities for improvement, especially those which increased son tra producer income. Based on analysis results, several interventions, including improving son tra production, establishing market linkages and developing processing techniques were exected over the 4-year course of the project. While AFLI's interventions proved beneficial, several opportunities for improvement remain. For example, intermediaries continue to receive a significant portion of profit from son tra sales, as evidenced by discprepencies between farm-gate and market prices. Plus, a number of new son tra platations have entered the market recently, causing the stabilized price of son tra to significantly decline. Therefore, a son tra fruit marketing strategy is still needed to enhance the son tra value chain.

This document aims to support the design of a marketing strategy which ensures son tra producers a greater, more secure market share by reviewing current market conditions and elaborating on existing marketing options for son tra producers. The ideal strategy should be flexible and context-specific, with consideration of market knowledge and local customs and capacities of Hmong farmers.

The report will be followed by three chapters: the first, an overview about son tra, starting from production, processing, and retail to consumption; the second, an analysis of the current marketing practices, including constraints and opportunities; and the third, a brief exploration of potential son tra marketing strategies.

II. Overview about Son tra

Primary production

Son tra distribution and production volume

In Vietnam, son tra trees are both naturally occuring and planted. Planted son tra are usually introduced either within the framework of different government-owned or donor-supported reforestation programs, or as a form of income generation by local farmers.

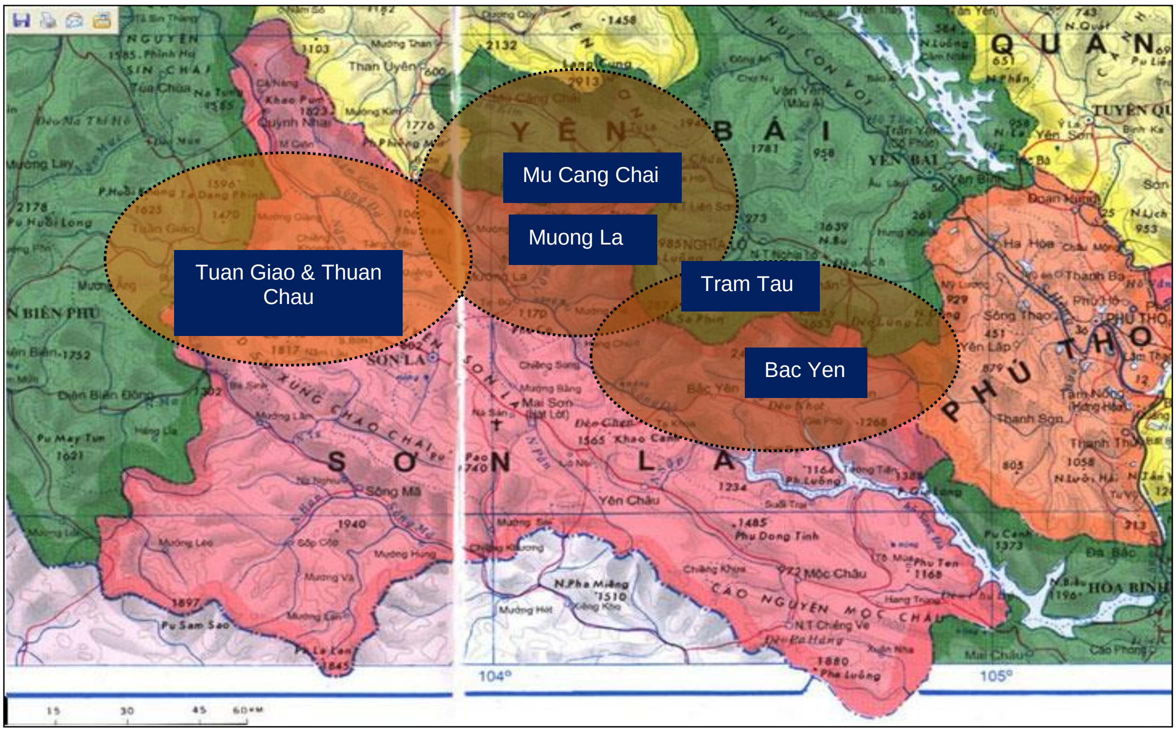

Figure 1- Main production zone of son tra across three provinces

Son tra plantations are concentrated amongst Dien Bien, Son La, and Yen Bai provinces in what is known as the ‘Son tra zone’ (Figure 1). Even though son tra’s economic potential is generally recognized, reliable data on its distribution and production are lacking. In Son La, for example, the natural area of son tra has no inventory records. And in Son La and Dien Bien, only production data for new plantations introduced through reforestation programs are available. Table 1 gives an estimation of the area under son tra and annual production in the three provinces in 2012 and 2015.

Table 1: The estimated area under son tra and annual production

	Province		
Areas	***Son La***	***Yen Bai***	**Dien Bien**

Main production areas	Bac Yen, Thuan Chau, Muong La	Tram Trau, Mu Cang Chai (75% of production)	Tuan Giao
Area with son tra trees - Natural Forest (ha)	Data not available	1930 ha in 2010, 3000 ha in 2015 (including natural forest and plantations)	Area is small and fruits are not suitable for consumption
Area of planted son tra (ha)	1000 ha (in 2012) and 4774 ha (*2015)*		270
Estimated annual production (tons) in 2012	2000	4000	500
Data Sources	Son La Forestry Division of DARD	Yen Bai Forestry Division	Management Board of Protection Forest

Survey sources

Producers and plantation management practice

Son tra farmers, largely comprised of the Hmong ethnic group, live at altitudes over 900 masl and have relatively limited livelihood options. Son tra was once harvested exclusively from natural forests managed by either individual households or communities, depending on allocations. The design of community-managed forests caused members to compete amongst each other for the same resources. As a result, fruit was often harvested prematurely which decreased their market value. Recent field surveys indicate this problem persists as a source of value chain inefficiency in Tram Tau, Yen Bai, and Bac Yen, Son La provinces.

Son tra **planting material** generally has no quality control and are sourced either through self-propagation by farmers or local agencies at no cost, though it is almost impossible to distinguish between the two through field observations. Current seedlings provided by the government for reforestation are missing attributes which add economic value (i.e. high productivity and quality fruit). Thus, for purposes of increasing producer income, superior cultivars must be identified and characterized. However it should be noted that farmers report preference for receiving seedlings with low productivity from provincial authorities at no cost than purchasing highly-productive seedlings from more reliable suppliers.

Study findings indicate farmers are receiving—though not fully implementing—instructions on **plantation techniques** by the same local agencies that supply seedlings for reforestation. During field observations, a number of cases were found where recommended son tra planting densities were not taken into consideration, additional maintenance was limited to weeding once or twice a year, and basic tree management practices, such as tree pruning, fertilisation, and pest and disease control, were absent. Furthermore, farmers interviewed said they were mostly unaware how to solve exisiting pest issues (e.g. fruit and stem borers), especially among newly established, highly dense son tra plantations.

Harvesting is perceived as the most difficult step in son tra production because it is both manual and time-consuming. One hectare of son tra trees requires twenty to twenty-five person-days of intense phsycial activities, including climbing and picking and/or shaking loose each fruit from the tree.

Product specification

Raw, fresh fruit products dominate the son tra supply chain. They require further processing after final purchase and are consumed chiefly for their empirical and locally understood health benefits, including blood pressure control and metabolism and cholesterol management. Dried fruit comprise most of the small remaining portion of the market. Other products processed through traditional and advance processing techniques (i.e. wine, vinegar, and juice) are also sold; however, they have yet to secure a position in the market.

A rapid survey on consumer preferences was conducted in Hanoi in 2014 to assess opportunities to expand the marketshare of more vendible, “ready-to-use” products. Female participants surveyed from three store chains expressed preference for tea, wine, and vinegar processed product.

Retail and consumption

Producers, Collectors and Traders

Farmers commonly sell son tra fruits individually to collectors at farm gate. Farmers who have tried selling fruits directly to traders report experiencing no difference in net profit after factoring in transportion costs from their village to the market. Thus selling at farm gate is preferable, as it is veritably more convenient and equally profitable.

Son tra fruit distribution is controlled by a network of collectors and traders. Harvested fruits typically flow from farmers to collectors to traders, with the exception of a few traders who buy directly from farmers.

Local collectors, often farmers with a commercial mindset, form cost-effective bridges between remote individual farmers to producers and traders. They are usually based near son tra production areas.

Traders are located at lower elevations, closer to main roads where buses traveling between provinces frequent. Some have fixed or mobile sales shops along main town streets, while others rely on buses deliver son tra to retailers at locations far from the production zone such as Lao Cai, Hoa Binh, and Hanoi.

Local processors, like wine and juice manufacturers in Bac Yen, play a similar role to local traders, paying the same price to source son tra directly from either collectors or farmers.

Retailers

Retailers for son tra products are small-scale, seasonal traders. Most are ethnically Kinh women, while few are from northwestern ethnic groups.

For logistical reasons, retail outlets for son tra are largely limited to wet markets and along the roadsides of cities, downtown regions, and national highways, especially at bus rest stops. Though outlets have recently started to expand, reaching vendors in major cities like Hanoi and online markets.

Consumers

Consumers apply processing techniques to the fresh or dried son tra they purchase to produce syrup, vinegar, alcohol, or tea. While processing methods vary from household to household, they are all generally simple and effective. This may be the reason that son tra is sold in such large quantities across many provinces, although the amount of son tra processed this way has little potential to increase unless the son tra market expands to other provinces. Consumption of son tra has started to expand from Northwest Viet Nam to big cities such as Hai Phong, Hanoi and Ho Chi Minh City. However, consumption in these big cities is limited, as health-conscious urban populations prefer more ready-to-use products which accomodate their busy lifestyles.

Son tra prices

The price of son tra fruit is contingent on its size, appearance, season, and proximity to the source. For purposes of simplified price differentiation, son tra is classified into three types of fruits based on size and appearance: large, medium and small. Though there are exceptions where son tra fruits are valued by taste, as observed in the higher overall price of fruits in Yen Bai province compared to Son La.

Between 2004 and 2013, son tra prices gradually rose with natural year-to-year fluctuations, reflecting the overall increase in product demand and supply. Traders and collectors competed to purchase son tra at farm gate, often buying the fruit before the harvesting season. When newly-established son tra plantations entered their production stage between 2013 and 2014, the market became saturated. Prices dropped by 4,000 VND and, in some areas like Hanoi, products were sold until November, a month longer than in the previous year.

Since then, prices have stabilized at lower levels and collectors and traders rarely purchase son tra in advance of the harvesting season.

Policies related to son tra resource management

Because *Docynia indica* is a forest species, activities related to planting, harvesting, processing, and distribution are subject to government regulations on non-timber forest products (NTFPs). Local, provincial and district authorities have demonstrated support son tra plantation. For example, Bac Yen district authorities in Son La province have called for an average of two ha of son tra plantation per household; however, details regarding implentation of such regulations remain unclear. Also, visible activity, rather than market analysis, seem to inform the number of new son tra plantations being introduced. This practice is risky because the market may become further saturated once the plantations reach production period.

Other policies related to the promotion of son tra are largely limited to the provision of seedlings, fertilizers, and financial subsidies for labour cost. Follow-up activities to support plantation management, processing, and distribution of son tra fruits by smallholders also encouraged through existing policies, though they are not sufficiently developed.

III. Assessment of current marketing practices

Price

Market structures with many participants at each level tend to create competition between buyers in favour of producers. The son tra market structure, though filled with many buyers, sellers, and traders, strongly favors intermediaries. The selling price for traders and collectors ranges from VND 8,000-25,000 per kg [USD 0.39-1.15]. Meanwhile, farmers receive a maximum price of only VND 8,000-10,000/kg during peak seasons.

Product quality

The mixture of fruit harvested and sold in markets reflect the different varieties grown within individual son tra plantations. In some regions, farmers grade son tra into categories based on fruit size rather than variety. According to the AFLI study, a huge diversity of son tra fruit quality exists in northwestern Vietnam, where bigger and tastier fruits tend to be preferred by traders and consumers.

A portion of son tra plantations is not properly managed, particularly regarding pest and disease control, weeding, fertilizer application (especially by Hmong farmers), and pruning. This resulted in smaller and low quality fruits.

Accessibility

A key issue for farmer-producers is poor market access. Son tra production areas are mainly at high altitudes, far from the provincial downtown. Since public transportation options in the region are limited, only traders with personal means of transport can take advantage of existing farm-to-market roads.

Product diversification

Under current practice, most farmers sell fresh son tra fruit at a low market price because they cannot store the product beyond its short, month-long shelf life.

Communication

Lack of communication capacity and product knowledge currently pose barriers to successful son tra marketing. Son tra farmers expressed unfamiliarity with what the health benefits of son tra are, and how they could explain such benefits to buyers. Additionally, some farmers were found to not understand the Vietnamese official language, which greatly limits their marketing abilities.

Few exisiting marketing strategies have targeted large NTFP buyers in Vietnam, who were discovered to be generally unaware of son tra products and their health benefits.

IV. Strategy for son tra marketing

To address the aforementioned issues and improve son tra producer incomes, a thorough marketing strategy which stimulates demand and ensures sustainable supply and distribution of son tra fruit is needed. The strategy should focus on the following aspects:

- Improving product quality and diversity - fresh fruits grading, price differentiation, product quality improvement (planting materials, cultivar, management techniques), brand development, packaging etc.
- Optimizing son tra sales: collective marketing
- Identifying strategic markets for son tra - provincial markets, high-demanding markets, processors
- Product promotion through relevant channels and PR tools, communication on health benefits, product safety, poster leaflets, and events.

1. Improving product quality and diversity

i) Improve quality though better cultivar and better planting material

To improve fruit quality, a son tra variety study which characterizes tree-to-tree variation in fruit traits should be combined with the development of vegetative propagation techniques to capture superior traits and the creation of cultivars. The development of these superior cultivars should also be supplemented with a well-organized seedling production and distribution system that facilitates access of smallholder farmers to high-quality planting materials. Grafted seedings could be used to improve the quality of son tra fruits and generate early income for Hmong farmers. Results from ongoing AFLI project trials testing for the quality of grafted seedlings yielded from 30 select mother trees should serve as the basis for future son tra clonal development.

Raising awareness of son tra producers about the advantages of using high-quality seedlings, especially grafted seedlings, for high yield and fruit quality is also necessary. This could be achieved by establishing small-scale nurseries nearby son tra planting areas to reduce seedling costs and incite farmers to use quality seedlings.

ii) Improve son tra quality through better tree management

To ensure stable yield and high fruit quality, proper management practices should be applied. In addition to improving son tra cultivars and planting materials, farmers should be trained on tree management to enhance their ability and willingness to adopt proper techniques. Results from AFLI's ongoing trial in Long He communes on son tra pruning and pest control through a producer groups should serve as a reference for the design of future management interventions.

Furthermore, the quality of existing son tra plantations can be enhanced through top-grafting, a practice commonly used in the region with other fruit species such as mango and longan.

iii) Product diversification

Since consumers prefer ready-to-use products, diversification of processed son tra products could potentially increase market demand, thus reducing the future risk of oversupply. Due to safety standard requirements, as well as living conditions and knowledge level of Hmong people, processing at household level should be simple and limited to drying accompanied by strict quality controls and adequate promotion.

A study on product development combined with consumer preference should be carried out to match son tra varieties with end-user preferences. This should build on current findings, which indicate that for traditional processing, yellowish, aromatic and sweet fruit are preferred; for wine production, bitter fruits; and for tea and juice production, sweet fruits.

With increasing production, large-scale processing is crucial to ensure a sufficient uptake of son tra fruits. This mandates close involvement of the private sector and political incentives.

Furthermore, fruit grading, packaging and labelling with clear geographical identification could enhance consumer's trust, enabling the distribution of son tra fresh fruit in formal retailer networks such as supermarket and shops.

2. Optimizing son tra sales through collective marketing

Organising son tra producer groups for collective selling could reduce overall operation costs by increasing farmer price negotiation power, providing sufficient and regular supply and optimizing transportion expenses. With consideration towards cultural customs and geographical proximity, it is suggested that each village establish one producer group led by a somone with a business mind-set and proven leadership skills. Group members should be committed to collective selling and well-trained on when and how to harvest, grade and package products.

Creating market linkages between producer groups and potential markets could also be a suitable strategy. Though given the limited market knowledge of Hmong producers, these market linkages should initially be facilitated by a third party, then later by group leaders.

3. Strategic markets of son tra

Bypassing the network of collectors and traders could result to higher incomes for son tra producers, but since Hmong farmers do not travel far from their land, selling points (e.g. to wholesale sellers, traders, and retailers in north-western provinces) could be the first target market for producer groups. The connection with provincial markets would be easier for Hmong group leaders to establish than in Hanoi city. In future cost-benefit assessments of market linkages, close attention should be paid in calculating travel costs farmers incur relative to their marginal increase in selling price. Furthermore, incentive policies from provincial authorities could develop linkages for potential long-term buyers and producers like emerging son tra processors.

Direct market linkage is not compatible in some contexts, and therefore should not be treated as a universal intervention. For instance, in big cities like Hanoi, farmers are already linked directly to the market, but are unable to sell their unprocessed fruit products because consumers demand ready-to-use products.

4. Product promotion, communication

Communication strategies targeting large-scale buyers of NTFPs and improving overall national awareness could significantly stimulate market demand for son tra products. These and other activities to raise buyer awareness about son tra and its health benefits; and create general interest and demand for son tra should be supported by local government agencies using provincial funds designated for the promotion of agricultural products. Initial supplementary funds could be mobilized by NGOs, then later from son tra producer groups.

Advertisements on mass media outlets (e.g. television, radio, and newspapers) and web platforms (e.g. Facebook and blogs), as well as leaflets and posters at events related to ethnic minorities in the Northwest could effectively disseminate information about son tra.