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# Commercialization of Indigenous Health Drinks as Geographical Indications

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A survey under United Nations Conference on Trade and Development project in 25 states of India identified promising indigenous drinks that merit protection as Geographical Indications (GI) including 'nannari' from Andhra Pradesh, 'kokum' from Western Ghats and 'burransh' from Uttarakhand. These are obtained from roots of *Hemidesmus indicus,* fruits of *Garcinia indica* and flowers of *Rhododendron arboretum,* respectively. Manufacturing procedures involving application of community traditional knowledge, and ethno-medicine properties are scientifically documented.

Product acceptability by the retailers and consumers is high; hence companies would be willing to invest in such products. Here, one of the important issues to be addressed is benefit sharing with traditional knowledge holders and alleviation of their socio-economic condition. Producers are unorganized and dispersed with seasonal employment and are not known outside restricted area. Therefore, can GI be a platform for product and market development addressing socio-economic issues?

The products have a sufficient niche market since per capita fruit juice consumption in India is only 20 ml. Market demand is expected to increase from 27.4 to 64 billion rupees by 2020 with 8.9 per cent market growth, with 65 per cent market share restricted to South India. In such a scenario, can registered GIs accelerate the growth through market penetration? The study offers solutions/models for GI registration and business strategy with sustainable rural livelihood development.

**Keywords**: Geographical indication, health drink, IPR, traditional knowledge

The paper analyses socio-economic and business perspective of three traditional juices i.e. nannari, kokum and buransh. In all three products there is a significant element of indigenous knowledge of the community in terms of creation of the product and identification of medicinal properties. Most of the producers are agriculturists and possess a high level of technical and entrepreneurial skill and have ventured into new production systems for additional livelihood and income thereof.

Nannari (*Hemidesmus indicus)* also known as 'sugandhapalu' in Telugu belongs to family Asclepiadaceae reported to have several medicinal properties. It is demulcent, diaphoretic, diuretic in nature and is prescribed for rheumatism, urinary and skin diseases.[1] In Andhra Pradesh, 'nannari sherbet' a drink, is produced from roots of sugandhapalu found in Chittor and foothills of Alagarmalai and Ezhumalai.

Kokum (*Garcinia indica)* belongs to family Clusiaceae, it is a common tree found in tropical rain forests of Western Ghats from Konkan to southwards in Mysore and Coorg in Karnataka and Wyanad in Kerala. Dried rind of fruits is used for making several recipes including the popular 'solkadhi'. The fruits are steeped in sugar syrup to make 'amrutkokam', a health drink 'kokam sherbet' to relieve sunstroke.[2] Kokam is reported to have antioxidant properties[3] and is also reported to be antihelmintic, cardiotonic, anti-obesity, anti-ulcer, etc.

Buransh juice is obtained from red color flowers of *Rhododendron arboreum,* a tree of family Ericacea available in the state of Uttarakhand. The juice is one of the important ethno-medicine used by 'Raji tribal' community in Uttarakhand[4]; jelly from petals is used in diarrhea, dysentery, cold and cough.[1]

The producers of these products are spread over different kinds of geo-climatic situations in South Western, Central and Northern India but a high degree on commonality prevails in terms of the following:

- Longstanding natural forest based production system
- Disintegrated producers and individualistic business approach
- Unique product with strong geographical link and localized consumption
- Involvement of indigenous technical intelligence

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A study was therefore designed to analyse the socio-economics of producers and identify a market strategy for establishing an organized industry with benefit sharing to the community in lieu of their intellectual contribution to the product. For instance, ETH, Zurich has adopted an approach integrating ecological, economic and social aspects to develop a comprehensive sustainability label for food and beverages.[5] In terms of comprehensive product development, registration of Geographical Indications (GI) is the most pertinent community intellectual property tool in the country. The study envisages information generation to strengthen GI portfolio of products under investigation. A hypothesis is that GI can provide a platform to organize the producers and means to create a win-win situation for the producers, traders and consumers.

## Methodology of the Study

A socio-economic approach was followed to collect data through reconnaissance survey conducted at Mangalore (Karnataka), Chittor (AP) and Almora (Uttarakhand) during 2008-2009. During the survey, 175 family members of 45 producers, 30 institutional stakeholders from government and non-governmental organizations, 15 traders and 15 consumers were interviewed using specially designed questionnaires for each group. The respondents were chosen through preliminary secondary information so that proper representation from a diversified group was maintained.

## Analysis of Results

### Socioeconomic Milieu

Average age of family members of producers was less than 26 years with education level among family members of producers being fairly high. Families spent 35 per cent of their income on education (Fig. 1) and 26 per cent of family members were students. On the other hand, 46 per cent family members worked as unpaid family workers or engaged in household duties (large number of females in this category); 42 per cent were unskilled, 49 per cent acquired skills within the family and the rest by formal training; males being more skilled.

Agriculture was main source of earning contributing 32 per cent of the income, followed by trading (Fig. 1). Land and buildings valued 82 per cent of total household assets, whereas, machinery and implements constituted only 4.8 per cent. The producers were mainly small farmers or landless rural people who had taken up additional enterprises seasonally for short durations of time (Table 1). Also, since 80 per cent of the enterprises were sole proprietorship; employment seasonality was of particular interest.

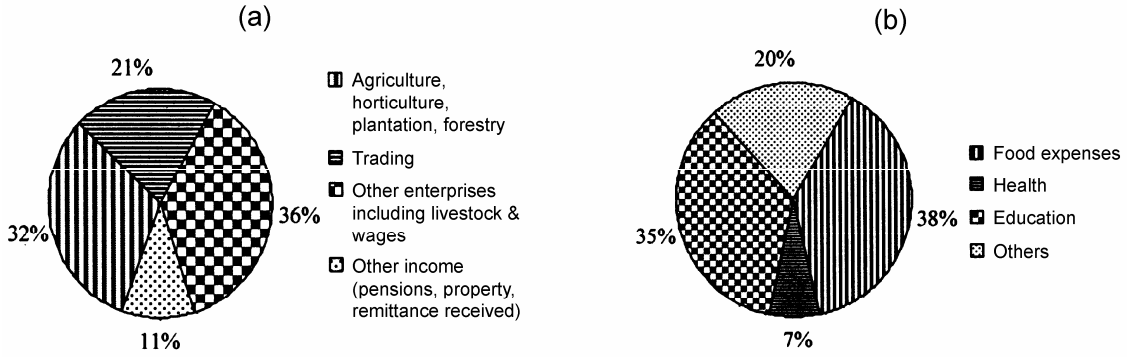


Fig. 1 – Income expenditure pattern of producers (a) Net annual income, (b) Monthly expenditure

Table 1 — Seasonal activity schedule of producers (based on frequency of respondents)

| Product | Activity | Jan | Feb | Mar | Apr | May | June | Jul | Aug | Sept | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nannari | Production | 1 | 2 | 4 | 4 | 4 | 3 | 2 | 2 | 2 | 1 | 1 | 1 |
| sherbet | Sale | 2 | 3 | 4 | 4 | 4 | 2 | 2 | 1 | 1 | 1 | 1 | 2 |
| Kokum | Production | 3 | 3 | 4 | 4 | 3 | 2 | 2 | 1 | 1 | 1 | 1 | 1 |
| juice | Sale | 3 | 4 | 4 | 4 | 3 | 2 | 2 | 2 | 1 | 1 | 1 | 1 |
| Buransh | Production | 1 | 2 | 3 | 4 | 4 | 4 | 4 | 3 | 2 | 1 | 2 | 2 |
| juice | Sale | 1 | 2 | 4 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

Codes: (1-No activity, 2-Lean activity, 3-Normal activity, 4-Peak activity)

**Production System**

Producers collected raw material and prepared the product on their own, despite difficulties like harvesting kokum from tall trees, and restricted access to raw materials in all the three cases. In terms of packaging, although 58 per cent producers did not express any problem, fact remains that 66 per cent producers used commercially non-viable packaging like glass bottles, plastic can and polythene. Grading was another weak area, where 15 per cent producers did not grade and 70 per cent used physical traits only.

Besides, 42 per cent producers did not carry out inspection and quality control, only 23 percent did it at processing and grading level, whereas the remaining carried it out at raw material level only. More than 96 per cent producers followed production procedures that have been learnt in the family, and only 6 per cent reported production code from government or NGO. Two third institutional stakeholders endorsed the view of producers regarding lack of formal inspection and quality assurance mechanism.

**Marketing System**

Approximately 48, 36 and 16 per cent producers sold through retailers & consumers, middlemen and wholesalers respectively. Only 11 per cent producers bargained collectively, while, 58 per cent bargained individually and 25 per cent agreed to price offered by the purchaser. About 69 per cent producers felt that their income from sale of product is average, with potential to increase. Here, financial assistance was not the major issue because more than 75 per cent producers felt the need for better marketing and access to quality inputs and machinery, observed to be major production constraints. Almost all producers were willing to go for GI registration and pay the fees for the purpose, anticipating that GI will provide effective solution. With a GI tag, majority of the producers expect up to 10 per cent enhanced premium, a view fully endorsed by consumers and traders (Fig. 2). More than two-third consumers purchased these products for their traditional character although, about 30 per cent consumers suggested improvement and innovation in the quality, assured availability and adequate publicity.

**Supply Chain and Competition**

Average input cost of all the producers was Rs 28.3 per litre, with an average sale price of Rs 45.7 per litre. Institutional stakeholders believed that price increment in the supply chain was 12.4 per cent at producer level, 23.7 per cent at middlemen level, 17 per cent at wholesaler level and 20.3 per cent at retailer level. As per the supply chain increment data from stakeholders, the retailer's cost of the product worked out to be Rs 54.8 per litre. About 79 per cent producers experienced no competition for the product, while institutional stakeholders and traders took a broader view with 60 per cent experiencing competition.

About 85 per cent institutional stakeholders saw bright future for the product with maximum suitability for the domestic market in the country. At present, 84 per cent of product is consumed within the area of origin. For a strong supply chain with competition resilience, half of the institutional stakeholders suggested product improvement, one third suggested good publicity, and remaining demanded a suitable policy.

## Commercialization Mechanism

**Source-sink Dynamics**

The 'source–sink' principle of ecology could well explain the business strategy for commercialization of these products. The major players in commercialization are (i) primary stakeholders i.e., producers and (ii) key stakeholders i.e., industry, research institutions and government departments. Each of these stakeholders are subject to favourable situations, namely, source and fragile situations, namely, sink. The translocation of some high quality elements from source to sink would yield a system of interest. In this approach, the traders and consumers would also play important role in decision making.

A large number of producers' family members do not possess any skills, and those who possess skills

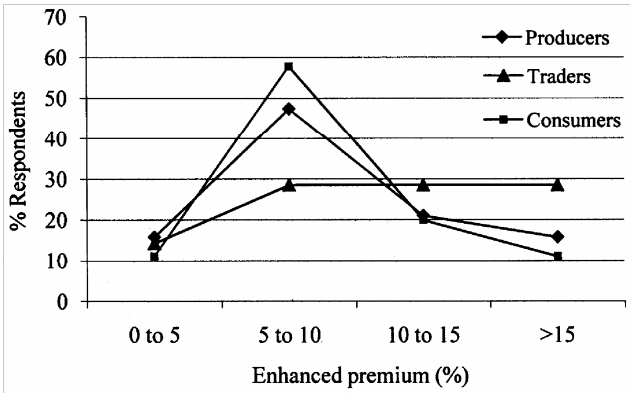


Fig. 2 – Post registration enhanced premium expected by producers & traders and willingness to pay by consumers

have attained them within the family. Also, a significant number of family members are not engaged in income generation activity. But tendency towards education and learning is fairly high among them. Being of young age and mostly sole proprietorship enterprises, imparting training to them would be a 'source'. Majority of producers are agriculturists taking product enterprise as an added or extra activity displaying entrepreneurial characteristics but the intensity of engagement is unsatisfactory. Their activity schedule can be made busier with introduction of commercial packaging and quality trait grading activities. Producers must also be encouraged to increase household assets in terms of machinery and implements. Through policy initiatives and direct interventions, the key stakeholders must take up technical responsibilities related to product, process and inspection procedures to maintain the standard and quality.

#### GI as Platform for Grouping and Labeling

None of the interviewed producer is member of any formal organization; therefore to take GI registration in its true spirit, the producers need to be organized into Commodity Interest Groups (CIG). The CIG can be a trigger for collective bargain, better marketing services and access to assured availability of quality raw material and other inputs.

Traders and consumers demand quality, and therefore, 73 per cent consumers try to obtain genuine products by (i) purchasing from authorized shops, and (ii) distinguishing trade labels. According to the study results, forecasted demand of the product in the country is good (Fig. 3) but since raw material is forest based, industry commercialization is not possible without involving existing producers. Nevertheless, scope for the revenue for the industry is commendable in the existing supply chain. The expected premium as registered GI by the producers and traders perfectly matches with the willingness to pay by the consumers. As per a survey conducted by EU in 1999, 43 per cent people are willing to pay a 10 per cent premium on GI products.[6] This is further substantiated by the findings of Sophie *et al.*[7], concerning the willingness of consumers in Europe and US to pay premium for the products from developing nations on the basis of dietary recommendations and GI label. Commercialization can take place only with the appropriate government policy measures as has happened in case of indigenous drink 'coca-colla' in Bolivia, where a change in policy resulted in expansion of land for coca cultivation.[8]

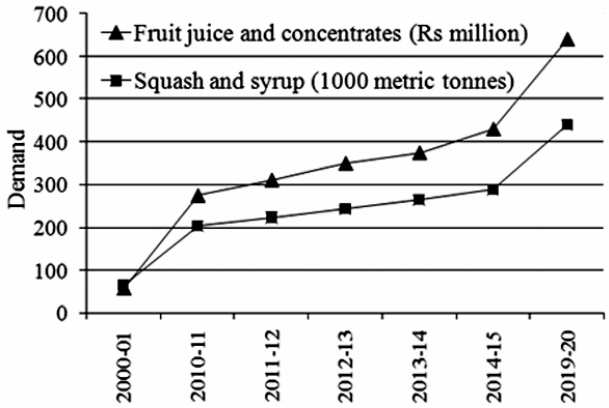


Fig. 3 – Past and future demand of fruit juices in India
Source: Intecos-CIER India Agristat Database

## GI Policy Implications: Lessons from Registered GIs in India

#### Agri-Products *Terroir*

The study of registered GIs reveals the lack of conceptual understanding and scientific rigour in defining uniqueness of the product. For instance, in case of French wines, the elements of *terroir* include soil, climate, topography and associated plants growing in the vicinity, which impart uniqueness and specialty to the product. However, in case of Indian agricultural products, this aspect needs to be redefined on the basis of two major components i.e., geographical link and reputation link. The geographical link could be established with *terroir* but reputation link would be *terroir* plus other factors. Product specialty must be the outcome of geographical factors, while uniqueness or product distinctiveness may be the outcome of geographical and other non-geographical factors in combination or exclusively due to the latter. Uniqueness is not always the product specialty e.g. a pink coloured rice grain may be unique, but does not impart rice with special flavour, taste or wonderful cooking qualities, which means that it may be a general or value added trait. Uniqueness means: distinctive, one and only, have no like or equal; it is a comparative statement encompassing similar products. Specialty on the other hand means: not general, exceptional, extraordinary, value added trait over other similar products; it is an absolute statement within the product. A

Table 2 — Specialty and unique properties of selected products

| Product | Specialty | Uniqueness |
|---|---|---|
| Pokkali rice | Organic nature | Symbiotic cultivation with prawn |
| Navara rice | Medicinal properties | Shape, colour and size of grain |
| Darjeeling tea | Organoleptic characteristics | Rare flavour |
| Assam tea | Malty flavour and bright liquor | Processing by traditional method of rolling |
| Makhana (not registered as GI) | Nutritive qualities including low cholesterol | Product in unique in itself |

comparison (Table 2) of the following registered GIs with respect to these two parameters will provide more clarity.

Scientific rigour in defining uniqueness is another major issue. In some cases, it has been completely overlooked like in case of 'Allahabad surkha', where the statement in GI Journal no 19, 'flesh whitish sometimes pink', would totally confuse consumers. In case of 'Naga mircha', the statement 'it is known as the hottest chilli on earth' is not a scientifically established truth. Lot of research initiatives are required to establish the uniqueness of the agricultural products. For example, from the consumers' point of view, what is the scientific basis of characterizing products? And whether competent authority approves that particular justification?

Both specialty and uniqueness must be given equal emphasis because when consumers are aware about specialty, they lay more emphasis on uniqueness as a decision making criterion for purchase. At this moment, this information is completely missing in most of the registered agricultural GIs in the country.

#### Ownership and Profit Sharing

By the month of February 2011, there were 152 GI registrations, of which 43 (28 per cent) were agricultural and allied products; implying that agricultural products lag behind in terms of GI registration. However, the UNCTAD study by NAARM[9] clearly indicates that consumers are more willing to pay a premium for agricultural products as compared to non-agricultural products. The basic concept of the GIs lies in integrating the community for a cause and building confidence among them as owner of a brand, leading to profit sharing. But in actual practice, this purpose has been defeated by and large as evident from the following examples:

- Tea and spices in general are registered by public supported boards
- Mysore silk has been registered by a State Government supported corporation
- For Basmati rice, the earlier application was from an NGO 'Haryana Heritage Trust', which cannot be said to 'represent the interest of producers' and later from a Central Government body called 'APEDA'
- The application for Jamnagar petrol/diesel was put up by a private company 'Reliance'

In case of products of 'Common Property Resources' nature such as the traditional juices, special efforts are required to establish a mechanism for networking of producers and also cornering of premium as the registered GI owners.

## Conclusion

Nannari, kokum and buransh are reputed drinks claimed to have several medicinal properties, but are presently produced and consumed locally. Even as their commercial potential as health drink is very high, these are produced in a non-professional way as extra livelihood activity by unskilled, highly unorganized and dispersed community of agriculturists or landless rural people. Social, business and scientific rigour is required to organize these products into commercially viable ventures through GI portfolio so that atleast a moderate amount of generated revenue percolates down to the organized indigenous producers and bring them honour of being proprietors of intellectual property.

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