Geographical Indications and Farmers’ Welfare Role of State in Strengthening Governance

N. Lalitha,* Soumya Vinayan†

One of the strategies suggested for doubling farmers’ income is a diversification towards high value crops like horticulture and spices, sugarcane etc. Under the geographical indication (GI) system of protection in India, a number of fruits, vegetables, spices and flower varieties have been registered. Some of the products have export incidence as well. While opportunities like brand building, value addition and export potential present in a number of horticultural crops, there exist issues of concern too. Some of the unique GI protected varieties encounter threats from natural, climatic factors and human practices and the area of production under these crops have witnessed reduction. Governance in the form of code of practices for different crops and technical guidance to adopt such practices could be imparted under programmes like ‘My Village My Pride’ to the different farmer producer organisations. Public sector involvement in providing guidance to adopt product standards and value addition at the place of origin would significantly help in increasing farmers’ income.

Key words: geographical indications, agriculture, code of practices, farmers’ income, Basmati rice

Agriculture is an important livelihood activity that combines economic, ecological and cultural practices in a holistic manner. In India, agriculture is a major economic activity for a sizeable population; its dwindling share in the gross domestic product of the country is a concern for the policy makers. According to the consumption expenditure data of National Sample Survey Office (NSSO), 22.5 per cent of the farm households at all India level have income below the poverty line. The low and fluctuating farmer income causes distress for farmers and also force farmers to leave farming which could have serious impact on the future of agriculture in the country (Chand, 2017). In order to address these issues, the Government of India has set a goal to double the farmers’ income by 2022-23 and variety of strategies within and outside the agriculture sector are being discussed. Strategies discussed within agriculture

* N.Lalitha (lalithanarayanan@gmail.com) is Professor at Gujarat Institute of Development Research, Ahmedabad, India. She has research interest in issues related to intellectual property rights particularly in the areas of patents and geographical indications.

† Soumya Vinayan(soumyavinayan@gmail.com) is Assistant Professor at Council for Social Development, Hyderabad, India. Her research interests include economics of textiles and economics of intellectual property with emphasis on the use of geographical indications.

This article is carved out of a larger study on Agricultural GI Registered Products in select states of India, and the authors gratefully acknowledge the Indian Council of Social Science Research, New Delhi for the financial support.
include diversification towards high value crops (HVC) and increase in the area under fruits and vegetables by five per cent every year. Strategies outside agriculture include improvement in the real prices realised by the farmers (Chand, 2017).

Diversification towards HVCs is a viable strategy given the fact that the rising per capita income and changes in life styles indicate that the demand for nutritive and quality products has been increasing. Importantly for fruits, vegetables, pulses and livestock products, the income elasticity is positive and has become very high in India (Acharya, 2015). Further, compared to the 77 per cent gross cropped area (GCA) occupied by staple crops such as cereals, oilseeds and pulses which contributed 41 per cent of the total output, HVCs occupied 19 per cent of the GCA and contributed almost the same to the total output (Chand, 2017).

This paper, taking the case of few of the horticultural products protected so far under geographical indications (GI) in India, examines the opportunities and issues that confront the farmers in improving their incomes. Contextualising the legal framework of GI in India in the present section, the next section of the paper details the type of agricultural products protected so far under GI. This is followed by a detailed discussion on the opportunities the use of GI provides for; and the succeeding section discusses the issues that farmers encounter. The next section that follows lists a few governance and institutional mechanisms to promote GI in the country and the last section provides the conclusion.

India focused its attention on GI after the bitter battle involving the patents on Basmati rice filed by an US company. The patents sought for Basmati and granted to the US rice development company Rice Tech in 1997 “included a claim to 90 per cent of the rice’s germ plasm and traditional varieties cultivated in India” (Mulik & Crespi, 2011, p. 3). This raised serious concerns about riding on the reputation of Basmati rice traditionally grown in the Indo-Gangetic plain spread across India and Pakistan. It indicated that the superior quality of the Basmati rice cannot be entirely “due to a combination of cultivated varieties, climate and pedological conditions and local cultural practices of North India and Pakistan” (Marie-Vivien 2015, p. 18). Based on the volume of evidence provided by Indian government against the patent as well as various trademarks such as Texmati and Kasmati filed by Rice Tech in the UK and US, Rice Tech eventually withdrew its claims. The use of Indian style Basmati rice in its product along with graphic representation of Taj Mahal clearly indicated that Rice Tech was indeed trying to ride on the reputation of Basmati (Marie-Vivien, 2015, p.19). In fact, the study by Mulik and Crespi (2011) indicate with the entry of Rice Tech varieties, the distinctiveness of Indian Basmati rice in major export markets of UK and Kuwait fell, while it did not make much difference in other markets such as the US and Canada where there was little premium for Basmati. India, in the aftermath of the Rice Tech controversy had to engage in bitter legal battles across 351 cases in India and 211 cases abroad (in 2013) to protect the denomination of Basmati at a whopping cost of ₹ 7.62 crore. Mulik and Crespi (2011) further opine that such costs could have been avoided had India registered Basmati as a GI earlier. In fact, one of the main arguments which Rice Tech raised in its favour was that the word Basmati was not protected as a GI for rice cultivated on the Indian
sub-continent and hence could be designated for aromatic rice cultivated anywhere in the world (Marie-Vivien, 2015, p. 19).

Realising that besides Basmati there are several unique rice varieties and that every region in India has unique products to offer – whether agricultural, handicraft, textile or food stuff, a property regime that would be best suited for the ‘regional products’ where geography was the core aspect became the need of the hour. Moreover, as a signatory to World Trade Organization it became clear that under Trade Related Intellectual Property Rights Agreement (TRIPS) unless protected under national law, GI cannot be granted reciprocal protection in other countries.

It is in this context, adopting the public law approach, The Geographical Indications of Goods (Registration and Protection) Act, was introduced and passed in the Parliament of India in 1999 and came into practice in 2003. Section 2(e) of the Act defines the term “geographical indication” as:

an indication which identifies such goods as agricultural goods, natural goods or manufactured goods as originating, or manufactured in the territory of a country, or a region or locality in that territory, where a given quality, reputation or other characteristic of such goods is essentially attributable to its geographical origin and in case where such goods are manufactured goods one of the activities of either the production or of processing or preparation of the goods concerned takes place in such territory, region or locality, as the case may be. (The Geographical Indications of Goods (Registration and Protection) Act, 48 of 1999)

GIs as a collective right can function as an effective branding strategy as it encompasses information regarding quality of the product, which the producers may use to inform the consumers (Hirczak, Moalla, Mollard, Pecqueur, Rambonilaza, & Vollet, 2008). With its strong association with the French word terroir, GI can serve as a developmental tool, since, any effort to promote the demand for the GI product would benefit the producers and contribute to the economy of the region. Terroir as defined by the European Commission, in fact, recognises the intersection between geography and human factors by emphasising that “Only land, climate and expertise of the local people can produce the product that lives up to its name” (italics as in original)(as quoted in Dominte, 2015, p. 106). In the event of free riding on the reputation of the product by producers outside the region, the ‘genuine’ producers could suffer not only losses but also become disincentivised to produce the high quality produce which may also be costly to produce. This would lead to welfare losses to producers and consumers. Several studies have indicated that adoption of GI has led to increase in welfare of the producers. Notable among such studies on GIs from India is Jena and Grote (2010) on adoption of GI for Basmati rice. They found that adoption of GI for Basmati rice led to increase in margins of the producers and higher returns for certified (organic) GI Basmati than non-certified rice though; not as high as the alternative crop (sugarcane in this case). Nonetheless, studies from across the world have also indicated that the welfare gains for small scale producers depend on several factors: cohesion between existing economic, social, natural and cultural assets, mobilisation and collectivisation
of producers with emphasis on quality, coordination and monitoring of quality which pre-supposes a governance mechanism, production practices and the institutional mechanisms to encompass preservation of natural resources, synergy between producers and other extra-local actors both in public and private sector including tourism (Gerz & Dupont, 2006, p. 86). Studies on willingness to pay for GI protected agricultural products reveal that consumers are willing to pay a higher price because they were distinct and of good quality (Seetisarn & Chiaravutthi, 2011; Datta, 2010; Vinayan, 2015; Rose & Umesh, 2012).

It is in this context, we proceed to analyse the opportunities registered agricultural GIs offer the producers and consumers to tap the economic gains of use of GI.

**GI protected agricultural products**

As of July 2017, 252 products were protected with GI Registry. Out of this, 82 were agricultural/horticultural products. Maharashtra leads the rest of the States in the total number of registered agricultural products (24 out of 82) closely followed by Karnataka (16) and Kerala (11) (Table 1). Thus, these three states account for 62 per cent of total agricultural products registered in the country. Assam and Uttar Pradesh (3.9 per cent each), West Bengal (5.2 per cent) and Tamil Nadu (6.5 per cent) account for additional 20 per cent of total agricultural products registered. Himachal Pradesh, Rajasthan, Arunachal Pradesh, Tripura, Sikkim, Mizoram, Manipur, and Uttarakhand have one agri GI each and Punjab, Haryana, Himachal Pradesh and Jammu and Kashmir together hold the Basmati GI.
<table>
<thead>
<tr>
<th>S. No</th>
<th>State</th>
<th>No. of agricultural products</th>
<th>Total No. of GI products</th>
<th>Per cent of agricultural to total</th>
<th>Name of the products</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Karnataka</td>
<td>16</td>
<td>35</td>
<td>45.7</td>
<td>Coorg orange, Mysore betel leaf, Nanjanagud banana, Mysore jasmine, Udupi jasmine, Hadagali jasmine, Monsooned Malabar arabica coffee, Monsooned Malabar robusta coffee, Coorg green cardamom, Devenahalli Pomello, Appe midi mango, Kamalapur red banana, Byadagichilli, Udupi mattu gulla brinjal, Bangalore blue grapes, Bangalore rose onion</td>
</tr>
<tr>
<td>2</td>
<td>Kerala</td>
<td>11</td>
<td>23</td>
<td>47.8</td>
<td>Navara rice, Palakkadan matta rice, Pokkali rice, Wayanad jeerakasala rice, Wayanad gandhakasala rice, Kaipad rice, Malabar pepper, Alleppey cardamom, Vazhakulam pineapple, Central Travancore jaggery, Chengalikodannendran banana</td>
</tr>
<tr>
<td>3</td>
<td>Maharashtra</td>
<td>24</td>
<td>30</td>
<td>80</td>
<td>Mahabaleshwar strawberry, Nashik grapes, Nashik valley wine, Kolhapur jaggery, Nagpur orange, Ajara Ghansal rice, Mangalwedha jowar, Jalna sweet orange, Sindhudurg &amp; Ratnagiri Kokum, Waghya ghevada, Navapur tur dal, Vengurla cashew, Lasalgaon onion, Waigaon turmeric, Solapur pomegranate, Sangli raisins, Jalgaon brinjal, Beed custard apple, Purandar fig, Bhiwapur Chilli, Ambemohar Rice, Dahanu gholvad chikoo, Jalgaon banana, Marathawada kesar mango</td>
</tr>
<tr>
<td>4</td>
<td>Tamil Nadu</td>
<td>4</td>
<td>24</td>
<td>16.7</td>
<td>Ethomozhhy coconut, Virupakshi hill banana, Sirumalai hill banana, Madurai mali</td>
</tr>
<tr>
<td>5</td>
<td>West Bengal</td>
<td>3</td>
<td>11</td>
<td>27.3</td>
<td>Laxman bhog mango, Khirsapati (Himsagar) mango, Fazli mango,</td>
</tr>
<tr>
<td>6</td>
<td>Uttar Pradesh</td>
<td>3</td>
<td>21</td>
<td>14.3</td>
<td>Allahabad surkha, Mango mallihabadi, Kalanamak rice</td>
</tr>
<tr>
<td>7</td>
<td>Assam</td>
<td>3</td>
<td>4</td>
<td>75</td>
<td>Assam karbi anglong ginger, Tezpur litchi, Joha rice of Assam</td>
</tr>
<tr>
<td>8</td>
<td>Gujarat</td>
<td>2</td>
<td>9</td>
<td>22.2</td>
<td>Bhalia wheat, GirKesar mango</td>
</tr>
<tr>
<td>State</td>
<td>No. of States</td>
<td>No. of Products</td>
<td>GI Product Code</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------</td>
<td>-----------------</td>
<td>-----------------</td>
<td>-------------</td>
<td></td>
</tr>
<tr>
<td>Odisha</td>
<td>2</td>
<td>14</td>
<td>14.3</td>
<td>Ganjam kewraooh &amp; Ganjam kewra flower</td>
<td></td>
</tr>
<tr>
<td>Nagaland</td>
<td>2</td>
<td>2</td>
<td>100</td>
<td>Naga mirch, Naga tree tomato</td>
<td></td>
</tr>
<tr>
<td>Meghalaya</td>
<td>2</td>
<td>2</td>
<td>100</td>
<td>Khasi mandarin, Memong narang</td>
<td></td>
</tr>
<tr>
<td>Andhra Pradesh</td>
<td>2</td>
<td>13</td>
<td>15.4</td>
<td>Guntur sannamchilli, Banganapalle Mangoes</td>
<td></td>
</tr>
<tr>
<td>Himachal Pradesh</td>
<td>1</td>
<td>6</td>
<td>16.7</td>
<td>Kangra Tea</td>
<td></td>
</tr>
<tr>
<td>Arunachal Pradesh</td>
<td>1</td>
<td>1</td>
<td>100</td>
<td>Arunachal orange</td>
<td></td>
</tr>
<tr>
<td>Tripura</td>
<td>1</td>
<td>1</td>
<td>100</td>
<td>Tripura queen pineapple</td>
<td></td>
</tr>
<tr>
<td>Sikkim</td>
<td>1</td>
<td>1</td>
<td>100</td>
<td>Sikkim large cardamom</td>
<td></td>
</tr>
<tr>
<td>Mizoram</td>
<td>1</td>
<td>1</td>
<td>100</td>
<td>Mizochilli</td>
<td></td>
</tr>
<tr>
<td>Manipur</td>
<td>1</td>
<td>1</td>
<td>14.3</td>
<td>Kachai lemon</td>
<td></td>
</tr>
<tr>
<td>Punjab, Haryana, Delhi, Himachal Pradesh, Uttarakhand, and parts of western Uttar Pradesh and Jammu &amp; Kashmir</td>
<td>1</td>
<td>1</td>
<td>100</td>
<td>Basmati rice</td>
<td></td>
</tr>
<tr>
<td>Uttarakhand</td>
<td>1</td>
<td>1</td>
<td>100</td>
<td>Uttarakh and Tejpata</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>82</strong></td>
<td><strong>207</strong></td>
<td><strong>39.6</strong></td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

Note: The total of 207 takes into consideration only those States which have registered some agricultural products with GI. Some States have no agricultural products registered with GI. If those States are included the total goes up to 252. It may be noted that this total excludes logos and foreign products registered with GI Registry.


A quick look at the description of the GI protected products indicate that it consists of HVCs namely 32 fruits (39 per cent), 13 spices (16 per cent), 13 foodgrains (16 per cent), six each beverages and vegetables (seven per cent), five flowers (6.5 per cent), four others (5.2 per cent), two dry fruits, and one pulse variety.

Further break down of the broad agricultural GIs indicate the following HVCs: Fruit GIs consist of different varieties of oranges (six), banana (five), mango (eight), pineapple (two), grapes (two), lemon (two) and one each of coconut, strawberry, litchi, custard apple, pomegranate, fig, guava and chickoo. The different constituents of spices are: chilli (five), cardamom (three), ginger (one), pepper (one) kokum (one), tejpata (one), and turmeric (one). There are 11 rice varieties and one variety of wheat under the foodgrains. Of the one varieties of flowers, four are varieties of jasmine. Four tea and two coffee varieties (GI for processing) constitute the beverages segment. Of the six
vegetables that have got GI, two each are onion and eggplant varieties, and one each for tomato and beans.

**Opportunities**

*GI for brand building of value added products*

(i) **Appe midi mangoes**

GI for this variety is based on the name of the fruit and not on the location. This special variety of mango grows on the beds of Aghanashini, Betdi and Sharavatirivers in Karnataka and is most suitable for making pickles. The uniqueness is that the pickle made of this variety stays fresh for nearly four years. This specific feature provides an opportunity for the pickle industry in India. Pickles are used as taste enrichers and hence used widely in all States of India. While the marketing strategy has traditionally been based on the brands that sell pickles, strategies could henceforth be based on the unique mango. Further, value addition possibilities at the point of origin would benefit the region itself.

(ii) **Vazhakulam pineapple**

The Mauritian variety of Vazhakulam pineapple is resistant to pests and diseases and is grown as an intercrop in rubber plantations covering 12,000 hectares and producing 300 tonnes of pineapple (Basheer, 2016). Because of limited shelf life of 10 days, export opportunities for raw pineapple are restricted and 90 per cent of production is consumed as fresh fruit but there are opportunities for value addition. Keeping this in mind, the pineapple farmers association organised a pineapple fest in February 2016 to attract different stakeholders. Vazhakulam pineapple GI is owned by Nadukkara Company and Kerala Agricultural University. After Nadukkara Company failed to pay the working capital loan it was taken over by the Kerala government. The unit which has the capacity to process 70 tonnes of fruit every day did not even process 200 tonnes in 2015, since the pineapple producers were not selling to the unit fearing default in payment by the company. Other than this company, few small units process low-grade pineapples. Further, as pineapple season coincides with that of other fruits prices tend to crash; consumers tend to opt for cheaper alternatives (Philip, 2016). Hence if appropriate cold storage and value addition facilities are created, market for the product would improve.

(iii) **Madurai malli (jasmine)**

Economic returns through value addition in the jasmine flower segment are already being realised by the Madurai malli farmers. Its value in perfumery is recognised and is in demand. Majority of the jasmine grown across 900 acres in Madurai is used in garlands for ceremonies, weddings and so on and the rest of the 489 tonnes annual yield are used for extraction by the global fragrance and spa industry. Madurai malli is demanded by brands like Channel, No.5 and Dior J’adore, personal-care products such as Lush, Kama Ayurveda and Goodearth and high-end pan masala like Rajnigandha (Kapoor, 2014). These opportunities have contributed to the increased demand for this product with very limited shelf life.
Export of agri products from India

India has an established export market for products like fresh fruits, vegetables, rice, wheat, horticulture and value added products like mango pulp (Table 2).

Table 2: Export of select agri products and percentage share of top five countries in total quantity exported from India (metric tonnes)

<table>
<thead>
<tr>
<th>Mango Pulp</th>
<th>Basmati rice</th>
<th>Fresh grapes</th>
<th>Wheat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saudi Arabia (32.6)</td>
<td>Saudi Arabia (23.5)</td>
<td>Netherland (32.5)</td>
<td>Bangladesh (55.1)</td>
</tr>
<tr>
<td>Netherland (9.3)</td>
<td>Iran (17.2)</td>
<td>United Kingdom (11.5)</td>
<td>Nepal (19.3)</td>
</tr>
<tr>
<td>Yemen Republic (8.4)</td>
<td>United Arab Emirates (15.1)</td>
<td>Russia (8.8)</td>
<td>United Arab Emirates (16.1)</td>
</tr>
<tr>
<td>Kuwait (6.9)</td>
<td>Iraq (10.4)</td>
<td>United Arab Emirates (8.4)</td>
<td>Taiwan (2.4)</td>
</tr>
<tr>
<td>United Arab Emirates (6.6)</td>
<td>Kuwait (4.5)</td>
<td>Saudi Arabia (5.2)</td>
<td>Malaysia (1.2)</td>
</tr>
<tr>
<td>Total (128866)</td>
<td>Total (4045796)</td>
<td>Total (156218)</td>
<td>Total (618020)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Floriculture</th>
<th>Fresh vegetables</th>
<th>Mango</th>
<th>Onions</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States (23.0)</td>
<td>Nepal (31.9)</td>
<td>United Arab Emirates (55.0)</td>
<td>Bangladesh (20.9)</td>
</tr>
<tr>
<td>Germany (10.1)</td>
<td>Pakistan (17.4)</td>
<td>Nepal (22.8)</td>
<td>Malaysia (20.3)</td>
</tr>
<tr>
<td>United Kingdom (9.8)</td>
<td>United Arab Emirates (13.2)</td>
<td>United Kingdom (4.1)</td>
<td>Sri Lanka (16.6)</td>
</tr>
<tr>
<td>Netherland (8.4)</td>
<td>Sri Lanka (6.0)</td>
<td>Saudi Arabia (3.9)</td>
<td>United Arab Emirates (14.1)</td>
</tr>
<tr>
<td>United Arab Emirates (6.7)</td>
<td>Malaysia (5.0)</td>
<td>Qatar (2.8)</td>
<td>Nepal (5.8)</td>
</tr>
<tr>
<td>Total (22519)</td>
<td>Total (699600)</td>
<td>Total (36329)</td>
<td>Total (1201245)</td>
</tr>
</tbody>
</table>


Top 5 countries listed here account for 60 per cent of the total exports in each category. Already some of the GI products like Alphonso and Gir Kesar mango, Bangalore rose onions, Nashik grapes and Bangalore blue grapes have an export market, though we do not know the exact export share of the GI certified products. With established, authenticated practices to ensure quality and traceability, more GI products could be exported.

Bangalore rose onion is preferred in the export market for its pungency. However, for the purpose of exports, the onion should be of 28 mm in diameter and should have a single bulb. As not all the harvested products match this specification, only a certain percentage qualifies for export and the rest of the harvest is offloaded in the domestic market (Naidu, 2002). Failure to achieve such specifications could be affecting the chances to widen the market for small producers. As the export and domestic market prices are different, farmers do not recover their cost of cultivation when they sell in the latter alone. In order to avoid such losses, control mechanisms and evolving code of practices are very essential.
**Agro tourism**

GI agro production centres can become crucial tourist attractions leading to positive impact on the local economy if promoted appropriately. The interaction between GI products and local tourism is very well utilised in organising cultural events or gastronomic itineraries in the European context like cheese museum, saffron festival, wine and olive-oil celebrations, coffee museum showcasing Columbian coffee traditions and so on (Vandecandelaere, Arfini, Belletti, & Marescotti, 2010). Some of the tea estates in Nilgiri and Darjeeling offer home stay for tourists providing them the unique experience of staying and participating in the tea plucking operations. The orange festival in Meghalaya around the orange harvesting season is another example. Several of the horticultural and spices production centres with natural scenic beauty provide significant opportunities to develop tourism around the GI production paths.

**Issues of concern**

Pests, diseases and reducing area under cultivation are the major issues before the agricultural products generally and GI protected agro products are not an exception. However, such products that are firmly anchored in an area due to climatic reasons and resources endowment face the threat of becoming extinct because they cannot grow in all regions.

(i) Reducing area due to pests, diseases, climatic and human factors

Between 1995 and 2004, less rainfall, prolonged hot season, repeated white fly attack and reducing water tables resulted in reducing the area under orange in Nagpur division from 60000 ha to 30000 ha. The intense heat in 2010, where the temperature hovered around 48 degrees for a week, resulted in 1.76 and 2.9 million trees dying in Nagpur and Wardha districts respectively. This led to an all-time low yield of the orchards of the region yielding only 20 per cent fruits (Pallavi, 2012). Nagpur mandarin is one of the best in the world. Production of this fruit crop in central and western part of India is increasing every year (National Horticulture Board, n.d.). Mrig bahar crop (monsoon blossom) which matures in February-March has great potential for export, since arrivals of mandarin fruit from international market is very less during this period. The area under Coorg orange, grown mostly among the rich coffee plantations is steeply declining as many coffee estates removed the orange trees following a rise in the price of coffee. Virus attack on the orange trees and the use of chemical plant protection methods are other reasons for their reducing number.

The area under Kamalapur red bananas which is known for its rich nutrients and low sugar content is reducing and is said to be cultivated only in 50 acres of Kamalapur taluka of Gulbarga district. As this variety of banana tree grows very tall, the likelihood of farmers suffering loss due to strong winds/rains is very high (‘New Findings’, 2013). Hence, only a few farmers cultivate this plant. So the chance of this variety becoming extinct grows by the day.

Sholapur that is the leading producer of pomegranates was another victim of drought and insufficient rains affecting lives of several farmers who had switched to pomegranate
cultivation (Yadav, 2016). The unique appe midi mango discussed earlier is becoming scarce due to the illegal felling of these trees in their natural habitat. Efforts to grow 5000 appe midi mango trees in 50 different locations by the Karnataka forest department for nearly 25 years have not borne any fruit (Chetan, 2015). Three GI products, namely, the Nanjanagud banana, Mysore mallige (jasmine) and Mysore betel leaves have almost become extinct in Karnataka. The area under Nanjanagud banana was reported to be only 30 acres due to widespread panama wilt disease. The high labour cost involved in harvesting Mysore mallige and Mysore betel leaves have also made farmers shy away from these products.

The details here show that production areas of some of the unique varieties are shrinking and efforts need to be taken to check the natural causes and the human practices.

(ii) Pesticide residues

Maldaha mangoes of West Bengal, which are much sought after in the export markets of Europe and United Arab Emirates (UAE) face a threat due to the relatively high pesticide residue content. The Ministry of Climate Change and Environment, UAE, had expressed its concern and as a result requires that each consignment to be accompanied by the phytosanitary certificate regarding the levels of pesticide residue and these tests need to be carried out by any Agricultural and Processed Food Products Export Development Authority (APEDA) certified laboratory. As evident from Table 2, UAE tops the list of mango exports from India with 55 per cent share in total quantity that is exported. Hence, India cannot afford to ignore the concerns of UAE. In 2014, the EU countries placed a ban on mango exports from India. This ban was withdrawn in 2015 after satisfactory corrective measures were undertaken. Despite that, the export of Maldaha mangoes shrunk from 63,500 tonnes in 2011-12 to 43,000 thousand tonnes in 2014-15 (Sarkar, 2013). Instances like the above ban by a major importing country would adversely affect the brand image and export of such products from the country. With as many as 32 fruit varieties in the GI list, some of which are also exported specifying and adhering to the plant protection standards and post-harvest handling would significantly boost the trade.

(iii) GI logo

The ISI mark on any product informs the customer that the product is of prescribed standards. In contrast, even after a decade of enforcement of GI Act, in India, there exists no common logo for all the GI products. This is one of the reasons for the limited awareness of its importance. Logos act as an important bridge in mitigating information asymmetry between sellers and buyers. In Thailand, all the GI products have one common logo, which is easily recognised by the consumers as an indicator of quality and uniqueness (Jaiborisudhi, 2011). Some farmer producer associations have registered their logo with the GI registry that distinguishes a particular brand from the other and not so much as a GI product.
(iv) Lack of distinctness

In the enthusiasm to file the maximum number of GI applications, states often tend to file products that show limited uniqueness or products that are widely grown. Most often the ‘uniqueness of the product is blurred’ and not clear in the statement of case as for instance in the case of pineapples, oranges (memong narang is an exception), which calls for more scientific rigour in seeking GI registration (Soam & Hussain, 2011). Additionally, at the time of seeking GI registration, the farmer associations need to be very clear or strategies should be made indicating the ways in which the GI certification would be utilised. If there are no significant differences in the uniqueness among products, then the price difference across products cannot be clearly established.

(v) Lack of infrastructure facilities

A hike in the import duty by the government of Bangladesh, a major importer of mangoes from India, had totally dried up the market for Malda mangoes in Bangladesh. With the abundant production, prices fell below the cost of production affecting the farmers adversely. Though Malda and Murshidabad were identified as mango and litchi exporting zones by government, adequate infrastructure has not been created (Maitral, 2013). Hence, the farmers were not able to restrict the supply and release it at a time when the prices are stable. Price crashes in perishables have become common in India due to lack of on-farm storage and lack of scientific method to extend shelf life. Harvest and post-harvest losses for major food commodities was estimated at ₹ 92651 crore during 2013-14 (Chand, 2017).

Governance and institutional mechanisms to promote GI

In order to utilise the opportunities and address the issues of concern, it is essential that there are effective governance systems delivered by appropriate institutions. Such initiatives would ensure that GI certification does stand for uniqueness and quality. In the following paragraphs the essentials are detailed.

(i) Prevalence of control mechanisms in Thailand

Thailand, like India, has a number of agricultural products registered with GI; hence, some of the initiatives taken there would be useful for India. In order to popularise the concept of GI, the government of Thailand promotes ‘one province one GI’ principle to identify unique products from every region of the country. Further the Thai government has established (1) control mechanisms for traceability and (2) certification from the accreditation bodies for the GI product. For each product, a manual is developed for production and the method for tracing the origins. The Department of Intellectual Property (DIP) has a memorandum of understanding (MoU) with the Department of Thai Industrial Standard Institute (TISI) and National Bureau of Agriculture Commodity and Food Standard (ACFS). The MoU means that these agencies work for the development of control systems in Thailand. Once the systems are developed, DIP validates the specifications and inspection methods. TISI and ACFS accredit the control body that comprises of both internal and external control (Lalitha, 2016). At the top of the control body is the GI Board.
These mechanisms ensure that the GI products of Thailand are of good quality and traceability can be ensured. Such measures adopted in the case of jasmine rice of Thailand have resulted in producers receiving a premium price. In India, the GI application process requires that the applicant mention, in the application itself, the type of quality control mechanism and the inspection body that would implement the same. However, most of the applications mention that the ‘inspection body is proposed to be set up or being formed’ and accreditation of the inspection mechanism is yet to begin. If production standards are followed to ensure quality and traceability, GI products would earn credibility in the market place and in international trade.

(ii) **Code of practice**

Code of practice (CoP) is a set of measurable voluntary practices for the production of GI product which every producer should comply with. There are several examples that are prevalent outside India. The CoP regarding production practices in the case of GI of Kintamani coffee of Bali, Indonesia include specification regarding density, shade, varieties, fertilisation, pruning, pest or disease control and plantation diversification. CoP regarding processing methods include: sorting of red cherries and time between harvest and processing, cherries floating and pulp removing, fermentation time, washing and drying, storage, hulling and sorting, roasting and packaging (Vandecandelaere et al., 2010, p.54). Fulfilment of the CoP of Kintamani coffee depends on three levels of control by (1) farmers (2) producer group and (3) the collective organisation called Community for Geographical Indication Protection, which comprises of producers and processors.

In case of India, the statement of case provided for each of the product can be considered the CoP (Naidu, 2014). A typical statement of case in the GI registry contains the following: name of the applicant, address, list of association of persons, type of goods, specification, nature of GI, description of goods, GI area and production map, proof of origin and method of production, uniqueness, inspection body, and other related information. Going through the different statement of cases it is observed that there has been no uniformity in the presentation of cases and a few important aspects like packing and transportation, labelling rules and control/verification system are not detailed which are essential to create an edge over competing products. Particularly in the case of the agricultural products CoP matters a lot, since internal competition between producers would lead to new producers not adhering to any CoP but capturing the market based on reputation.

Two kinds of guarantee system for agricultural products are possible in India. One is the third party certification system that is very expensive and more suitable for farmers with large farms as it involves lots of paper work. The other is the participatory guarantee system (PGS) available for small organic producers, formulated by the Ministry of Agriculture, Government of India.

Under PGS,
a system of open, formalized and scripted group appraisals is carried out by at least three farmers from the local group. Consumers, members of the local Panchayat (a national system of local governance) and local religious leaders are invited and may even be required as regionally appropriate. At least one member of the inspection team has to be literate. The scripted nature of the appraisal is necessary with minimally trained inspectors to ensure complete physical checks of the farm and equally importantly, to verbally re-confirm that the farmer understands organic growing practices and what they are committing to. (Khosla, 2007, p.12)

The use of the local farmers as part of the peer appraisal groups helps in considerable social control. Under PGS, any farm that tests positive for pesticide residue means that the entire group gets suspended. Such a check encourages the farmers to help each other and address the issues collectively. Further under PGS, the entire farm of the farmer gets certified, which increases the marketability of the different products. Once the farmers with PGS are familiar with adopting and adhering with certain standards, then they may slowly progress to adopting the certifications by third parties.

In this context, it is important to draw attention to the fact that of the 82 agricultural products that are registered with the GI registry, nearly 40 per cent of the applications have been filed by the farmer producer organisations (FPOs). Some of the progressive FPOs may move toward setting standards of production for their product under PGS or evolve similar standards.

(iii) Authorised users

An important lacuna in the GI registration in India has been the lack of registration of the authorised users (AU) of the GI product.

Although the law provides for registration of AU, no producer was registered with the GI registry until April 2010. This was the case even when the GI application mentioned the names of producers. Since then, some AU have been registered, but the law was not enforced for seven years. (Marie-Vivien, 2015, p.209)

The GI Act of India provides registration of the GI, which is known as Part A and the registration of AU of the GI known as Part B. Any person, claiming to be the producer of the goods in respect of which a GI has been registered may apply in writing for registering him as an AU of such GI. Registration of AU is essential to take any action against infringement of GI.

The sui generis system of GIs in India provides a fairly detailed definition of the producer which suggests the role of the multi-stake holders in any GI product. A producer in the case of agricultural goods includes those who are engaged in production, processing, trading or dealing. As the definition of the AU in the case of agricultural product is very vast, appropriate identification and listing of the AU will restrict the free riding on the reputation of the product by others.
The AU list, is available for Naga *mirch*, Navara rice, Palakkad *matta* rice, Kangra tea, Pokkali rice and almost all the products from Maharashtra. While Maharashtra has taken a lead in this aspect too, such initiatives are still not noticeable in other States. Implicitly the level of GI awareness is indicated by the very limited registration of AU. Majority of the agricultural products have renewed their GI registration but without yet registering their AU.

Thus, equally important is the fact that all the producers of the said product are identified and the geographical area is clearly defined. According to the GI application, Madurai malli covers the areas of Madurai, Virudhunagar, Theni, Dindigul and Sivagangai districts (Vandhana, 2013). However, the plants raised in the Mandapam and Thangachimadam areas also produced the famous Madurai malli and these farmers were not included in the GI. Farmers from Mandapam region, who raised the issue at a farmers’ grievance meeting, said it was unfortunate that farmers who raised them were left in the lurch (Scott, 2013). Since the GI registration involves products associated with a specific region, the GI registry should advertise the notice for opposition for GI application in the local vernacular papers instead of publishing it only in the GI journal. As the GI journal is online, it might not get the due attention from all the interested stakeholders and there is a possibility that the key stakeholders are not aware of the GI filing and the area specified.

(iv) Setting up of specific body for the promotion of GI products

One of the weaknesses of the Indian GI filing system is the limited awareness about GI among the policy makers at the state level and the consumers. In majority of the cases GI brand is not highlighted while selling the product. Unless, there is a dedicated authority that looks after the filing and post filing activity, the potential of GIs may not be realised. But in India so far, there is enthusiasm to file the product with the registry. Filing itself involves considerable effort in forming the association, providing historical documentation to establish the association of the product and the region etc. Yet, only the post filing activities will take GI to its logical use potential and provide benefits to the producers.

The Central government launched the scheme My Village My Pride (MVMP) in 2015, under which the scientists of the Indian Council of Agricultural Research will adopt a village each and implement best farming practices and government policies. MVMP could be an ideal tool to actively promote GI products of the villages. In this context it is worth looking at the successful One Tambon One Product (OTOP) concept of Thailand which focuses on the sustainable development of local communities. OTOP is actively promoted by the Ministry of Interior for Community Development, Ministry of Tourism and Ministry of Industries of Thailand (Jaiborisudhi, 2011).

The main objectives of OTOP are to: 1. create employment and increase income as a whole for each community that participates in the project; 2. strengthen local knowledge; 3. promote human resource development; 4. reinforce strength and self-reliance in each community participating in the project; 5. and promote creativity among each community participating in the project (Jaiborisudhi, 2011, p.15). A typical OTOP product uses very low level of technology.
Self-help groups (SHGs) working in the communities with chosen products register themselves through online as a potential OTOP. Community development workers working in that area work with the community to evaluate the product for quality, knowledge, capacity and the level of support required to make the final product. Based on their inputs the necessary support is given by the government. A village development fund is provided for each village for various developmental projects. Within that, funds are earmarked for the OTOP projects too. Depending on the size of the contribution by the SHGs and their requirement for funds, government support is provided from the village development fund. In order to inculcate quality consciousness among the OTOPs, products are identified based on the number of stars (*). A product with 5 stars indicates the best quality and product with 4 stars indicate the next best quality and so on. The success of this programme may be gauged by the fact that exports under Thai OTOP programme reached a value of US$102.5 million in 2003 which was just US$ 2 million a year earlier when OTOP was newly established (Abdourrahmane & Sukhabot, 2014, p. 55).

In the Indian context, the MVMP can identify the FPOs working with GI products and provide technical guidance to formulate product standards and for value addition. Both these would create positive returns to the farmers.

Conclusion

GI registration reveals that specific regions of most states of India have unique agricultural products, which are produced in limited areas with households depending on them for the livelihoods. This paper highlighted the opportunities and issues of concern for the farmers and also detailed a few of the areas for better governance. Role of the government in GI is very important, as it is a collective intellectual property rights of all the producers. The products represent the cultural heritage and the natural resources that are used by the producers in the process of production are common resources.

The Ministry of Agriculture has now been appropriately renamed as Ministry of Agriculture and Farmers Welfare. While it requires the involvement of the government at various levels, particularly involvement of the local governments would be very helpful. As most of the products are produced in limited regions, local governments along with the farmer associations could serve an useful role in the implementation of GI in the following aspects:

1) identifying the precise area under GI and the actual producers;
2) governing the status of the natural resource involved in the production of the GI thus in maintaining the biodiversity of the region;
3) being watchful about the free riders on the reputation of the GI product;
4) getting the targeted funds under various schemes for the promotion of local products;
5) popularising the PGS and in promoting marketing strategies to name a few.
GI is a powerful rural development tool, but requires a variety of support ranging from getting legal protection for the product to positioning the quality product in the market. Various policy tools available with the Central and State government, can be reoriented towards promoting the GI products and the farmers’ welfare.

References


