

AN EXPLORATORY STUDY OF SOCIO-ECONOMIC CHALLENGES OF JASMINE FLOWER CULTIVATORS AND TRADERS OF SOUTH INDIA WITH SPECIAL REFERENCE TO POST GEOGRAPHICAL INDICATION

Vidya Suresh^{1,*}, Mustafa Kan² and Satyanarayna Rental³

¹College of Banking and Financial Studies, PO Box 3122, PC 112, Muscat, Sultanate of Oman; ²Kirsehir Ahi Evran University, Agricultural Faculty, Department of Agricultural Economics, Kirsehir-Turkey; ³Bharathidasan Institute of Management, Tiruchirappalli, India

*Corresponding author's e-mail: vidhusuresch@gmail.com

The paper aims to highlight the distinctiveness of a Geographical Indication (GI) tagged product from South India, called 'Madurai Malli', meaning Jasmine flower. Also, understand the socio-economic challenges of Jasmine cultivators and traders in their day-to-day life. The purpose was to uncover their plight whose traditional occupation and livelihood had been the cultivation of Jasmine but presently are on the verge of shunning it. The paper uses grounded theory with exploratory approach consisting of open-ended questions. These questions formed basis for in depth interview for fifteen respondents. An expert group discussion was conducted using the snow-ball approach with stakeholders representing the *Madurai Malli* supply chain at various levels. The data was complemented by documentary photographs taken during the field visit. Though *Madurai Malli* was recognized with GI, the paper provides empirical insights about support expected from the State concerning the supply chain management of *Madurai Malli*. This support includes regulating the minimum support price of the produce, cold logistics, and temperature-monitored warehousing facility. Cold logistics and supply chain is an essential infrastructure needed for maintaining the freshness and value of perishables. Jasmine farming is slowly sinking on its commercial importance partly due to urbanization and also due to lack of support from the State as well as the Central Government. The paper throws light on implications for the progress and growth of an indigenous product's supply chain that can improve the socio-economic status of traditional occupations such as cultivation, warehousing, and retail sale of Jasmine, extending the use of GI and raising awareness on producers and consumers. The study results may not be generalized due to its chosen approach. Researchers, therefore, are encouraged to test the proposed schemes further. However, the work can be extended to other perishable products which are of similar kind but different regions. This research is a wake-up call for policymakers who can implement a better scheme for the community involved in *Madurai Malli* cultivation and trade, thereby restore their livelihood as well as the occupation. This paper fulfils an identified requirement to study the effect of GI tag on Jasmine flower.

Keywords: Floriculture, geographical indication, *Madurai Malli*, Jasmine flower, shelf life, Supply chain, marketing, refrigerated logistics

INTRODUCTION

Geographical Indications (GI's) are defined in Section 3 of Article 22.1 of Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement as "*indications which identify a good as originating in the territory of a member, or a region or locality in that territory, where a given quality, reputation or other characteristic of the good is essentially attributable to its geographical origin*" (World Trade Organisation, 2016). GI regulation is based on the premise that historical, human, and geographical characteristics of a region with a unique identity impart a unique character to goods produced there (Rangnekar, 2002; Arhankumar *et al.*, 2013; Phondani *et al.*, 2014; Dinesh 2014; Negi *et al.*, 2017; Bhaduria 2017; Chaudhary *et al.*, 2017; Kan and Kan, 2020). The economic and social advantage that GIs would attach to nations have made them believe that it is a 'sleeping beauty

IPR' (WIPO, 2007). Everywhere in the country, semi-urban and rural societies have industrialized unique and exclusive products based on the collaboration between traditional skill and knowledge. This includes selection, processing, production, socio-cultural settings, and regional environmental conditions such as the soil, weather, quality of air and the likes (World Bank Report, 2004). Therefore, a word may qualify for GI protection by evoking a specific territory, without itself being the maiden name of the territory (www.iprsonline.org). India passed its GI Act in 1999 and devised its Geographical Indications of Goods (Registration and Protection) rules in 2002, which became mandatory from September 2003. The country is additionally one of the co-signers of the General Agreement on Tariffs and Trade (GATT) negotiations (Uruguay round) and a founder member of the World Trade Organization (WTO) (Kasturi, 2006). As a Government policy instrument, GIs do have quite a positive

influence towards the sustenance, protection, and development of indigenous knowledge as well as skill which in turn is a means for generating income and livelihood (Rangnekar, 2004; Kan and Gülçubuk, 2008; Kan and Gülçubuk, 2012; Rose and Umesh 2012; Phondani *et al.*, 2013; Dinesh 2014; Chaudhary *et al.*, 2017; Kan and Kan, 2020). One of the key purposes of the Indian Government is to boost trade through the development and creation of a niche market for GI products. Another objective is to offer a legal structure and policy to protect consumers from fake products and simultaneously warn producers from the unfair competition (Kumar and Srivastava, 2017). These two objectives would consistently enhance rural and urban skill development, job opportunities, and sustenance of livelihood. GI tags are issued in India as per the Geographical Indications of Goods (Registration and Protection) Act, 1999. This tag is issued by the Registry of Geographical Indication that falls under the Department of Industry Promotion and Internal Trade, Ministry of Commerce, and Industry. This department is also actively involved in promotion and marketing of GIs (Soam and Hussain 2011; Vinayan 2015; Acharya 2015). Figure 1 provides a detail of GI registered product across all the states in India over a period of time. It is evident that the first registration of GIs began in the financial year 2004-05 after the Geographical Indications of Goods (Registration & Protection) Act, 1999 was implemented and came into force during September 2003. The Geographical Indications Registry has a total of 370 GIs registered in India as of March 2021 (<https://ipindia.gov.in/registered-gis.htm>, March 2021).

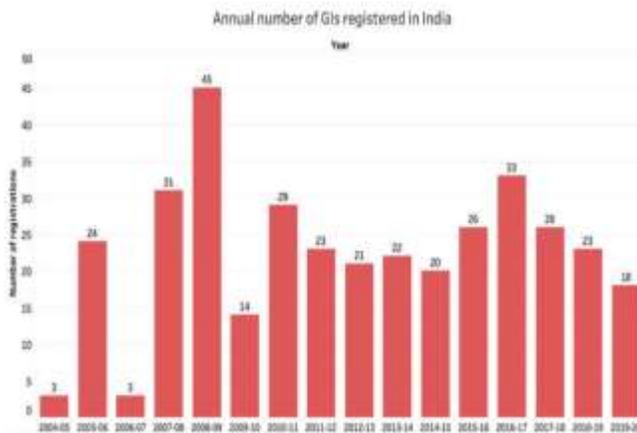


Figure 1. Annual number of GIs registered in India (Factly, 2019)

A product that gets a GI tag is a Government property and it belongs to stakeholders of that product. This GI product cannot be assigned, passed on or even mortgaged. The GI tag is lawful and useable for ten years from the date of registration. It can be renewed on payment of a fee. Any entity/individual not pleased with the quality of the produce

or decision can file an appeal to the intellectual property appellate board (IPAB) within three months of the registration. It has the ability to eradicate information asymmetry and thereby expose traders or producers who sell products that are low quality and below standards at the same price. However, this unscrupulous practice of trading duplicate products using the name of GI tagged products is pervasive in both the Indian and international markets. This often fetches better prices coupled with increased sales. This happens as consumers are unaware of these kinds of malpractices (Kasturi, 2009).

Loureiro and McCluskey (1995) also pointed out this issue and found that less popular and low-quality products earn small or insignificant returns. For example, in India, Kancheepuram handwoven silk sarees (Indian attire for women) is well recognized and popular. This GI tagged saree has many fake and cheap substitutes sold in the market. These damages the brand name of product, producers as well as the consumers of Kancheepuram sarees who take pride in wearing it. Various researchers, therefore, argued that sheer GI registration is not adequate for maximizing commercial benefits unless and until it is supported by quality maintenance mechanism and promotional drives by the respective state or even central Government (Soam and Hussain, 2011; Philip, 2016; Phondani *et al.*, 2016; Kan *et al.*, 2016; Negi *et al.*, 2018).

Considering the above, the primary objective of this research paper is to provide the uniqueness of *Madurai Malli*, which is GI tagged product of the Tamil Nadu, India. Tamil Nadu is at the second order in terms of number of GI registered product in India with 35 products in its sleeve (Fig. 2). Of the 35 products tagged as GI in Tamil Nadu, *Madurai Malli* is one among them. Secondly, the purpose is also to understand the challenges faced by stakeholders of *Madurai Malli* in their day-to-day life and business. Despite having a GI tag, the traders and farmers or say producers choose to exit this traditional business. Official data, though, illustrate a healthy trend in the production of *Madurai Malli*, the realism is the cry for support from State.



Figure 2. Number of registered GIs in India by the States (Factly, 2019).

About Jasmine flower with reference to Madurai Malli:

Flowers are an important part of our societal life and they are seen in almost every occasion in India (Braun *et al.*, 2009; Phondani *et al.*, 2016). Floral beautification and decoration add grace to the marriage as they signify joy, happiness, love, and affection. In Indian marriages, the exchange of garlands between bride and groom signifies the natural circle of spirituality and protection. Flowers have generated regular sustained demand in worship places, festivals, and hairdressing for ladies. It is utilized for receiving the guests, worship of gods, cosmetics items for brides, and even for the memorial services. Floriculture has turned out to be a profitable business and has been announced as "Sunrise Industry" by the Indian Government (Biswas, 2013; Phondani *et al.*, 2014; Phondani *et al.*, 2016). Indian weather with light rains, moderate winter, and appropriate sunlight even during the heavy rains provides a good opportunity for growth of flowers and the industry is blessed with skilled human resources and association of traders (Joulain, 2008).

Jasmine being one of among the essential fragrant flowers that are cultivated mostly in a moderate climate (Kirton, 2004). The saga of Jasmine can be noticed in ancient literature from Afghanistan, China, Persia, Egypt, and Spain. Certain varieties of Jasmine are identified as the national flower for Paraguay and Pakistan. The varieties of Jasmine commonly used in India are *Jasminum Sambac* (*Gundu Malli or Madurai Malli*), *Jasminum auriculatum* (*Mullai*), and *Jasminum grandiflorum* (*Jathi Malli/Pitch*) (Braun, 2009; Ambika, 2012; Arhanthkumar *et al.*, 2016).

The former two are grown for garden-fresh flowers whereas the later for industry requirements to produce perfumes. In the

earlier period, Jasmine was grown for social requirements and artistic desires, but currently, it has become an independent commercial cultivation. Strings/garlands of *Madurai Malli* are utilized commonly by South Indian women folk for its aroma and to enhance their beauty. It is also linked with improved lactation in feeding mothers and postponed ovulation in women (Aswini *et al.*, 2011).

Therapeutic uses of Jasmine extracts include mild anaesthetic, anti-inflammatory (Jia *et al.*, 2008), antioxidant (Tsuchiya *et al.*, 1992; Umamaheswari, 2007), disinfectant, antiviral (Zhao *et al.*, 2009) and boost immunity properties. It is also used for healing skin diseases like heats and vesicles (Heuberger and Ilmberger, 2010) or medicinal and aromatic plants (Arhanthkumar *et al.*, 2013; Bagade and Metha, 2014; Purohit *et al.*, 2016). It produces a feeling of exuberance, confidence, and offers chilling and relaxing effects. It is a natural and pure aphrodisiac (Hongratanaworakit, 2004, 2010; Tanida, 2008; Hongratanaworakit, 2010; Purohit *et al.*, 2016).

Tamil Nadu was one among the leading producers of Jasmine in the country with an annual output of 77, 267 tons from a cultured area of 9360 hectares and was in a second position in India in the area under flower cultivation (0.27 lakh ha) as well as production of loose flowers (3.13 lakh tons) in the year 2012-13 (Guledagudda, 1996; Jyothi, and Raju, 2003; Ambika, 2012; Sarka, 2016). These harvested *Madurai Malli* were then exported to Singapore, Malaysia, Sri Lanka, and the Middle East. Also, they use special packaging techniques for exporting with a shelf life of 72 hours (TNAU Agritech Portal: Export Packaging Technology for Jasmine, 2014).

The major regions contributing to Jasmine cultivation in Tamil Nadu are Dindigul, Salem, Madurai, Tirunelveli, Tiruchirappalli, and Virudhunagar (Ambika, 2012). However, during past decade the data from Tamil Nadu are not favorable. Data collected from various Indian horticultural databases (Table 1) shows that the area and production of flowers in India have grown over the years in States like Andhra Pradesh and Maharashtra. However, there was a sluggishness in the yield of the flowers in major contributors, that is, Tamil Nadu and Karnataka. Early research by Singh and Kaviarasan (2010) published in the Ministry of Agriculture and Cooperation, Directorate of Economics and Statistics, also emphasized the stagnation of flower production in Tamil Nadu.

Loose flowers in Tamil Nadu are produced in an area of about 32,400 hectares with the production of 3,13,535 Million Tonnes (Jasmine, Chrysanthemum, Marigold, Rose, Crossandra and Nerium) (farmers' association, Madurai). Cut flowers are produced in an area of 700 ha with a production of 12,900 MT of cut stems per annum. Jasmine covers an area of 15,584 ha with a production of 1,42,397 tonnes contributing a major share to the floriculture trade (farmers' association, Madurai). Tamil Nadu ranks first among the flower producing states of India. It occupies 25% of the country's flower production. Cut flowers are cultivated in

Table 2. Jasmine flower cultivation area in major districts of Tamil Nadu (2017-18).

Districts	Total Flowers		Jasmine area		Share of Jasmine area in total flowers (%)
	Area (ha)	Share in total (%)	Area (ha)	Share in total (%)	
Thirunelveli	1596	6.23	1267	11.93	79.39
Erode	1437	5.61	1061	9.99	73.83
Madurai	1658	6.47	1220	11.48	73.58
Thiruvallur	1134	4.43	800	7.53	70.55
Thiruchirapalli	927	3.62	503	4.74	54.26
Krishnagiri	2552	9.96	754	7.10	29.55
Salem	2097	8.19	576	5.42	27.47
Vellore	1878	7.33	492	4.63	26.20
Thiruvanamalai	1620	6.33	391	3.68	24.14
Combatore	781	3.05	158	1.49	20.23
Dindigul	3499	13.66	703	6.62	20.09
Dharmapuri	2133	8.33	400	3.77	18.75
State	25610	100.00	10623	100.00	41.48

Source: Various issues of Season and crop report, Tamil Nadu

Hosur, Nilgiris, Kodaikanal (both upper and lower Palani hills) and Yercaud of Shevroyan hills. The Jasmine of Madurai got its entry into Geographical Indications Registry on January 16, 2013 (Vandhana, 2013; Arhantkum *et al.*, 2014). The GI application for *Madurai Malli* was jointly filed by the farmers' Association and *Kurinji Vattara Kalanjiam* of DHAN Foundation, Madurai (Ramnad farmers seek GI tag for their 'Madurai *Madurai Malli*' plants, 2013). This is the second GI tag for Madurai after '*Madurai Sungudi*' (cotton sarees with tie-dye/*bandhani* type designs). Madurai District is one of the leading producers of Jasmine in Tamil Nadu, with 1220 Hectares of land being used in 2013-14 for farming jasmine, which is 73.58 percent of the district's total flower cultivation during (Table 2).

Though Jasmine is cultivated within the south Asian region, the topographical conditions in down South India have some specialties making the Jasmine of this region distinct. '*Madurai Malli*' has around six to nine petals and is white in color with green shine, especially when plucked from the plant in the morning. The length of the stalk or tail is that the same because the petal of the flower and is additionally bulky. This feature makes it easy for the weavers to tie the flower closer, which is not possible with other flowers also as Jasmine from other districts.

MATERIAL AND METHODS

The objective of the study was to identify the effect of GI tag on stakeholders of *Madurai Malli*. The stakeholders include association, farmers, and traders. The study was organized in two stages: the first stage consisted of data collection from secondary sources like the office of floriculture and statistics of Tamil Nadu; several issues of the season and crop report of Tamil Nadu and issues of Indian horticulture database. Further, data were collected from the association office. The second stage included direct individual interviews with

stakeholders, which comprised of traders, farmers, and association members. There were 1586 farmers growing Jasmine flowers that is *Malli* in Madurai with a total land area of 4000 acres (status as on 25-28 September 2015, interview with association president of *Madurai Malli*). A convenient sampling was applied to interview farmers. Out of 100 farmers, only 15 responded to the complete interview. These farmers were interviewed during their meet held at the Madurai district. This type of population can be termed as "hard-to-reach" populations (Goodman, 2011). Sometimes, respondents during the interview might not be comfy in taking up certain questions and may hesitate to come out with issues they were facing (Baruch, 1999; Baruch and Haltom, 2008). Johnson and Owens (2003) attribute the drop in response to problems related to confidentiality, privacy, and sometimes general skepticism. We had to stretch the second phase with one more sequence of personal interviews using the snowball technique to reach traders, association members, farmers, and street vendors of *Madurai Malli*. The snowball sampling method is technically popular to deal with such kind of data collection issues. This method of sampling is undertaken when a qualified respondent shares an invitation with other respondents akin to him in credentials defined for the population (Berg, 2006; Scott, 2013; Murphy *et al.*, 2013; Naidu, 2014; Lalitha and Vinayan, 2018). Thus, the second phase was extended with one more round of personal interviews using the snowball technique to reach association members, traders, street vendors, and farmers of *Madurai Malli*.

The study has used Annual Compound Growth Rate (ACGR or CAGR) to calculate the yield of *Madurai Malli* for Madurai as well as Tamil Nadu (Bante *et al.*, 2016). The data was collected from various publication of Agriculture Statistics, Assistant Director of Statistics, Madurai, and the land records from the association office in Madurai. But major limitation of this method is that if you have negative observation(s) then

you cannot use it. For calculation, following exponential function was fitted.

$$Y = aB^t$$

$$\text{Log } Y = \text{Log } a + t \text{ Log } B$$

Where, a = constant, B = Regression coefficient

$$\text{Compound Growth Rate (\%)} = (\text{Anti log } B - 1) \times 100$$

t = time period in years from 2001 to 2020

RESULTS AND DISCUSSION

Initially, the Compound Growth Rate (CGR) was calculated based on the information from secondary sources. However, the CGR has been calculated by a few studies. The results are similar to Prakash and Muniyandi (2014) as the recorded secondary data is usually the same for the periods. The yield of *Madurai Malli* vis-a-vis Tamil Nadu (Table 3) represents that area under agriculture increased till 2003-04, but subsequently, it had been steady after a steep decline during 2004 in Tamil Nadu whereas in Madurai it has been increased (551 to 1429 hectares from 2000 to 2013). Thus, the CGR is estimated at 7.40 percent per annum. The production of *Madurai Malli* had been increased from 4270 tonnes to 13047 tonnes from the year 2000 to 2013, with an annual CGR of 8.89. There was a slight increase in productivity during 2006-07 and a noticeable increase from the year 2009 to 2013 (7.85 to 9.13 tonnes per hectare). During the snowball interview period, we found that there was a disparity in the information available with the secondary published sources and the data available with the association. The statements with the association show a declining trend in *Madurai Malli* production during the current year, and there was a fear of further decline. The discrepancy may be because statistical figures represent the past year's yield, and the first-hand information available with the farmers is of the current year.

Table 3. The yield of Jasmine in Madurai Malli (tonnes/hectares).

Year	Tamil Nadu	Madurai
2001-02	9.93	7.75
2002-03	9.65	7.75
2003-04	9.49	7.75
2004-05	7.80	7.75
2005-06	7.75	7.75
2006-07	7.75	7.90
2007-08	7.75	7.75
2008-09	7.75	7.75
2009-10	7.75	7.85
2010-11	7.75	9.13
2011-12	7.75	9.13
2012-13	7.74	9.13
2013-14	8.74	9.14
2014-15	9.70	9.15
2015-16	10.56	9.16
2016-17	11.00	9.17

2017-18	11.23	9.18
2018-19	11.50	9.19
2019-20	12.35	9.19

Source: Calculated by author by referring office of the Assistant Director of Statistics, Madurai

According to Karthikeyan, association president, one acre of land may possibly produce 3500 flowers, but due growth in the real estate business coupled with continuous increase in the price of land, cultivators are keen in selling off their land rather than tilling it. Of the 82 respondents, almost 70% of the cultivators reported water scarcity and lack of labours. The average price of *Madurai Malli* ranged from 130 to 150 INR/kilograms, but the lowest price a farmer makes from this business is only 70 INR/kilograms. Farmers expect State to introduce Minimum Support Price (MSP). Centre and State administration had been extending its support through National Bank for Agriculture and Rural Developments (NABARD) and other rural and urban banks for agriculture. Farmers and traders in this business were raising money through a gold mortgage and finances from relatives and friends. None of the respondents availed a formal loan or any facility from nationalized banks. However, 35% of the farmers accosted private banks for a loan.

There are three types of consumers for the produce, namely, domestic, wholesale, and exports. Almost 90% of the respondents were involved in catering for domestic requirements like wedding and temple decoration and traditional festivals and hair decoration for women. N. Jegatheesan, president of Tamil Nadu Chamber of Commerce and Industry, said:

“Three years before, fifteen tonnes of Madurai Malli used to be delivered at the flower markets every day between February and November, and currently it has been reduced to nearly 30%. We are trading less than 10 to 12 tonnes a day (Vandhana, 2013). The decrease has happened slowly and gradually. The peak season is between April to August; Owing to its delicate and perishable kind and high seasonal yield, the price drops to INR10 per kilograms during peak, and this is the lowest possible price of the season. When the harvest is low, the price raises, and this happens during the Tamil months of Aippasi (October and November) and Thai (January and February).”

Farmer Mr. S. Chinnakanthasamy Naicker, who cultivates *Madurai Malli* on two acres at *Muruganeri* said:

“Occasionally, flower producers and traders mix other Jasmine flowers of inferior quality with Madurai Malli for export. This reduces the fragrance. Lately, due to the GI tag, this kind of contamination has come down. People are aware of outcomes like serving a punishment in jail. We are not happy with fluctuating prices. The price fall during peak is very worrying. We are not even able to cover up our logistic costs with the money we get from our produce. The State must do a bit to stabilize it”.

Association president Karthikeyan and his group of farmers further added:

“Jasmine are often cultivated in various sorts of soils like sandy loam or clay but grows alright during a sandy loam of excellent quality. Mild summer with sufficient water supply is ideal for cultivation. Depending on the weather and quality of soil, sowing and irrigation ought to be done. Usually, first irrigation is done instantly after planting and subsequent irrigation with an intermission of 8-10 days. Two to three ploughing is required based on weeds present in the land. Tilling is followed by digging of pits at a size of 30 cu.m. The first weeding is carried out following 20-25 days of planting, and the same is done once in two to three months. Plants are cut by removing all earlier season’s shoot, including the dead and unhealthy ones. Flowering starts after six to seven months of planting. Full-grown healthy closed buds are hand-plucked ahead of sunrise. After six months of plantation and frequent care, we get a yield. During the first year, 775 kilograms of flowers are gained, and the yield increases to 2200 kilograms in second; 2700 kilograms in the third year and 3800 kilograms per acre roughly from the fourth year onwards. A plant lasts up to 15-17 years. Branches or shoots are cut from the Jasmine plants in Madurai and are taken to Rameswaram (163 kilometers from Madurai, a town in South India) for primary care and nurture. We once again buy it from there. Intensive care is given for about three months after purchasing the shoots. Jasmine needs a balanced amount of rain and sunlight for the duration of these three months. Once the Jasmynes are nurtured, they give us a yield for 15 to 17 years with an average of 2000 to 3000 shoots per acre.”

Almost fifty five percent of the respondents were cognizant of the GI tag (Fig. 3) and its significance. They said, the tag would eliminate adulteration when exported. Most of the vendors whom we interviewed said:

“Madurai Malli can be woven easily by anybody with a few days of practice. They are sturdy and come up with a long floral stalk. Compared to other types of Jasmine, the buds of Malli open late on. The petal staining also is delayed. These features are sufficient to make its shelf life long and user-friendly. It is trendy in the whole of Southern region of India.”

According to M.P. Vasimalai, Executive Director of DHAN Foundation, the GI tag shall strengthen *Madurai Malli’s* uniqueness in the global market and preserve the biodiversity of Madurai as well as the entitlements of Jasmine cultivators (Vandhana, 2013).

Answering to the question on GI tag, S. Aravindan, secretary of Madurai Malli Farmers’ Association, said:

“GI for Madurai Malli will provide us legal protection, and fake producers would be afraid to use the name due to fear of penalty”.

Other significant findings from the second phase of the research:

1. Despite receiving the GI tag, *Madurai Malli* also undergo enormous price fluctuations during the festival seasons, religious occasions, weddings, parties, and other celebrations. The enormous price fluctuations occur in the peak season (from April to August). When the yield is high, the price drops, and when the yield is low, the price shoots up.
2. The price fluctuates within 24 hours. The prices are high when the flowers are fresh in the morning, and the prices are low in the evening; this affects the farmers as well as the sellers with high intensity in their profit margin.
3. Most of the farmers and sellers engaged in jasmine flower cultivation/selling lacks in special packaging techniques to increase the shelf life and overcome the short-term price fluctuations.
4. Cold logistics and supply chain is an essential infrastructure needed for maintaining the freshness and value of perishables. When the flowers are transported to other districts, majority of the flower’s freshness is lost in transportation due to the lack of integrated cold chain logistics.
5. Agents or traders expect State’s assistance for warehousing facility, whereas cultivators expect minimum procurement price.
6. On the whole, all stakeholders expect support in enhancing the sustainable supply chain management that is temperature-controlled warehousing, cold logistics, and regulating the minimum price of the produce.
7. The uncertainty due to improper monsoon, credit crunch, the rise of constructions, and non-availability of minimum support price has forced some farmers to sell their lands.





Figure 3. Some glimpses of activities in Jasmine market during survey.

Conclusion: The GI registration alone is not sufficient to maximize commercial gains unless the potential of GI was not realised and highlighted to add more value to the product. Nevertheless, integrated efforts should be made by the stakeholders to support the farmers/sellers/traders in order to regulate the cooperation in the supply chain of ‘*Madurai Malli*’ to further utilize the benefits of the GI tag. Also, proper technical guidance should be provided to farmers to improve the shelf life of the product as they are perishable nature. The study results are not generalized due to its chosen approach. However, the work can be extended in this field to explore further opportunities for ‘*Madurai Malli*.’ Therefore, researchers are encouraged to propose the presumptions concerning supply chain management practices of floriculture.

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