

## Profile of Jaggery Producing Farmers and their Perception Regarding Geographical Indication (GI) of Kolhapuri Jaggery

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### ABSTRACT

*The Kolhapur district in Maharashtra, India, boasts a rich tradition of jaggery production dating back to the 18th century. Kolhapur is particularly renowned for its distinctive variety called Kolhapuri gul. In 1886, Chatrapati Shahu Maharaja took significant steps to establish the first dedicated jaggery market yard in the region, fulfilling local requirements and paving the way for Kolhapur's reputation as a leading jaggery producer. The region's fertile land, nourished by rivers originating from the Sahyadri Mountain ranges, provides an ideal environment for cultivating high-quality sugarcane.*

*This study on Perception of Jaggery producing farmers towards Geographical Indication (GI) of Kolhapuri Jaggery. The aim of this study was to explore the perceptions of jaggery producing farmers in the Karveer, Panhala, and Hatkanangle tahsils regarding the Geographical Indication (GI) status of Kolhapuri jaggery. The research conducted in Kolhapur district of Maharashtra in the year 2022-23. The aim of this study was to explore the perceptions of jaggery producing farmers in the Karveer, Panhala, and Hatkanangle tahsils regarding the Geographical Indication (GI) of Kolhapuri Jaggery. Data collected through interviews and collected data were organized into primary and secondary tables and subjected to statistical analysis. The study revealed specific demographics among the respondents. The majority of respondents were middle-aged with almost half having graduated. Families were typically of medium size, and respondents owned semi-medium-sized land holdings. A significant majority reported low annual income, cultivating sugarcane on small land, with considerable medium farming experience.*

*Findings showed a substantial majority with a moderate level of risk orientation and economic motivation in jaggery production. A significant portion displayed a moderate level of management and market orientation regarding the Geographical Indication (GI) of Kolhapuri Jaggery. Additionally, respondents demonstrated a moderate level of decision-making ability. The study concluded that exactly half of the respondents possessed a moderate level of perception concerning the knowledge, production processes, and benefits associated with the GI of Kolhapuri Jaggery.*

**Keyword:** Socio-economic status, Jaggery producing farmers, Perception, Geographical Indication, Kolhapuri Jaggery

### INTRODUCTION

India boasts a wealth of natural resources, especially in agriculture, and other high-value commodities. Rural communities across the country have a unique skill set, passed down through generations, in crafting high-quality products such as handicrafts, jewellery, and textiles. Recognizing the importance of safeguarding these regional treasures, India, as a signatory to the TRIPS agreement, implemented specific legislation

recognized as the Geographical Indications of Goods (Registration and Protection) Act in 1999.

Maharashtra boasts a long-standing heritage in Jaggery craftsmanship, tracing its roots to the 18th century. Notably, Kolhapur gained prominence for its distinctive variant, known as Kolhapuri gul. In 1886, Chatrapati Shahu Maharaj played a pivotal role in establishing the first dedicated market yard for jaggery, catering to the local needs. Kolhapur enjoys national and

international acclaim for its top-notch jaggery quality. While around 27 per cent of sugarcane production in the Kolhapur division contributes to jaggery making, the state-wide usage stands at a modest 11 per cent.

The world-famous Kolhapuri Jaggery stands out due to its enticing white and golden colour, unique sweetness, and aroma. Recognizing its exceptional qualities, Kolhapuri Jaggery earned its Geographical Indication Tag (GI) in 2014 through an application submitted by Kolhapur Sheti Utpanna Bazar Samiti, located at Shri Shahu Market Yard, Kolhapur 416005, Maharashtra, India. The registration for Kolhapuri Jaggery, classified under Application No: 240 within Class - 30, was approved in accordance with Sub-section (1) of Section 13 of the Geographical Indications of Goods (Registration and Protection) Act, 1999. Its renewal took place on April 22, 2023. (Source: GI Journal No. 54, 2013).

#### **METHODOLOGY**

The present investigation was conducted to ascertain the jaggery producing technology followed by the farmers in Kolhapur district. Therefore, Ex-post facto design of social research was used for the present investigation.

There are twelve tahsils in Kolhapur district i.e., Karveer, Shahuwadi, Panhala, Hatkanagle, Shirol, Radhanagari, Kagal, Bhudargad, Chandgad, Ajra, Gaganbawda and Gadhinglaj. Out of which Karveer, Panhala and Hatkanagle tahsils were selected purposively on the basis of more area under sugarcane cultivation.

A list of farmers who produces jaggery was prepared with the help of RS and JRS, Kolhapur, who conducts the training of farmers regarding improved jaggery production technologies, Shri. Shahu Market Yard, Kolhapur. From each selected village farmers were selected with the help of Talathi and Sarpanch of that, particular village. Thus, a list of jaggery producing farmers from the above sources was made on the basis of more than three years of experience in jaggery production were selected. Total sample of 120 Jaggery producing farmers were taken for study randomly. The data

from selected 120 Jaggery producing farmers were collected by contacting them directly utilizing an interview schedule.

The categorization of all independent and dependent variables were made by Garrett's ranking method (Max-Min / no. of categories) except Age, Education and Land holding the categorization of variables were made as per Government norms.

Whereas for Risk orientation and Economic motivation it was calculated with the help of scale developed by Supe (2007). This scale made up of six statements having response scale of five quantum i.e., 'strongly agree', 'agree', 'undecided', 'disagree' and 'strongly disagree' with scoring pattern of 5,4,3,2 and 1 respectively for positive statements and for negative i.e., for 5th and 6th statements the scoring is given in reversed manner. Based on the total score obtained by the respondents on risk orientation, they were grouped into three categories, by using the range method.

For Management orientation and Market orientation the scale developed by Wang, Ahmed and Rafiq (2008). The scale consists of 11 statements representing planning and production. In each group, positive and negative statements were mixed retaining more or less a psychological order of statements. The responses were recorded on 4-point continuum ranging from "strongly agree" "agree" "disagree" and "strongly disagree" with Scores of 4, 3, 2, and 1 for positive statements.

The scoring was reversed for negative statements. Based on the total score obtained by the respondents on management orientation, they were grouped into three categories, by using the range method.

Decision making ability, this variable was assessed using a scale developed by Nandapurkar (1981), where respondents responses were rated on a three-point continuum "not considered (scored 0), considered after consultation with others (scored 1), and decision taken independently (scored 2). Based on the total scores, respondents were categorized as low, medium and high using the range method.

## PROFILE OF JAGGERY PRODUCING FARMERS

This section delves into the personal, socioeconomic, and psychological characteristics of farmers involved in jaggery production, encompassing factors such as age, education, size of family, size of land holding, annual income, area under sugarcane cultivation, experience in sugarcane farming, risk orientation, economic motivation, management orientation, market orientation, decision making ability in the study area.

Table 1 indicated that, the distribution of respondents by age indicates that the majority (56.67%) were within the middle age group. Around one-third (33.33%) were categorized in the young age group, while the remaining (10.00%) belonged to the older age group. This finding confirms the results of Rangarao (2016) and Karpagam *et al.* (2019) who stated that, the majority of sugarcane growers were belonged to middle age category.

The study revealed that, (41.67%) of respondents had completed graduation degree followed by more than one fourth (28.34%) were completed higher secondary education, whereas 15.83 per cent and 08.33 per cent of respondents completed secondary and post-graduation education correspondingly, very mere (05.83%) respondents have completed primary education. No respondent (00.00%) was illiterate. Similar findings were observed with the findings of Anonymous. (2021) who stated that, the majority of Jaggery producing farmers had completed their graduation. It was noted that the majority (55.84%) of the respondents had a medium-sized family. Additionally, more than one-third (35.83%) of the respondents reported having a large-sized family, while only 08.33 per cent of the respondents had a small-sized family. These findings support the finding of Prasad (2016) who stated that, the majority of respondents had medium size of family.

The current investigation revealed that the majority (41.67%) of the respondents held semi-medium-sized land. Additionally, more than one-fourth (28.33%) had small-sized land holdings.

About 16.67 per cent and 10.00 per cent of the respondents were categorized as small and marginal farmers, respectively, while only 03.33 per cent were identified as large farmers. This detection aligns with Rangarao's (2016) research, which also indicated that the majority of respondents possessed semi-medium land holdings (ranging between 2.01 to 4 hectares). It was observed that more than one-third of the respondents (36.66%) reported low annual income (ranging from 4,52,001 to 7,14,000). Following this, exactly one-fifth (20.00%) of the Jaggery-producing farmers had a medium annual income (7,14,001 to 9,76,000). Meanwhile, 17.50 per cent and 15.84 per cent of the respondents had very low (up to 4,52,000) and high (9,76,001 to 12,38,000) annual income, respectively. The remaining 10.00% of the respondents had a very high annual income, i.e., 12,38,001 and above. This detection aligns with the findings of Anonymous. (2021) who stated that, maximum no. of sugarcane growers had medium annual income. The study uncovered that the majority of respondents (77.50%) had a small area under sugarcane cultivation, up to 3.6 hectares. Less than one-fifth of respondents (16.67%) possessed a medium-sized area under sugarcane cultivation, while only a small percentage (05.83%) of the respondents had a large area dedicated to sugarcane cultivation. These findings support the finding of Anuse (2016) who stated that, the majority of sugarcane grower had small area under sugarcane cultivation.

It was noted that the majority of respondents (46.66%) had a medium level of farming experience. One-third of the respondents (32.50%) reported low farming experience, while the remaining one-fifth (20.84%) indicated a high level of sugarcane farming experience. The finding aligns the findings documented by Karpagam *et al.* (2019) who stated that, the majority of sugarcane growers had medium farming experience. The study uncovered that more than half (59.17%) of the respondents exhibited a medium level of risk orientation. Additionally, 29.17 per cent and 11.66 per cent of them demonstrated high and low risk orientations, respectively. This finding is related with the finding of Karpagam *et al.* (2019) who stated

that, the more than half of the sugarcane growers had medium risk-taking ability.

It was noted that slightly more than half (53.34%) of the respondents exhibited a medium level of economic motivation. Additionally, 41.66 per cent of them demonstrated low economic motivation, while a small proportion, 05.00%, had high economic motivation. This finding is associated with the finding of Vijay (2017) who stated that, the great number of the sugarcane growers had medium level of economic motivation. From the present investigation, it was discovered that the majority (68.34%) of respondents exhibited a medium level of management orientation. Additionally, 24.16 per cent demonstrated low management orientation, while a smaller proportion, 07.50 per cent, had high management orientation. The results show a resemblance to those of Prasad (2016), indicating that a majority of sugarcane growers exhibited a moderate level of management orientation.

It was observed that more than half (54.17%) of the respondents displayed a medium level of market orientation. Additionally, 28.33 per cent exhibited a high level of market orientation, while the remaining 17.50 per cent demonstrated low market orientation. The current findings align with the results highlighted by Dhakad (2018), indicating that the majority of sugarcane growers maintained a moderate level of market orientation. The study revealed that the majority (41.67%) of respondents possessed a medium level of decision-making ability. Moreover, more than one-third (38.33%) demonstrated a high level of decision-making ability, while exactly one-fourth (20.00%) were identified as having low decision-making ability. The findings corresponded with Prasad's (2016) conclusions, indicating that the majority of sugarcane growers possessed a moderate level of decision-making ability.

*Table 1  
Personal, Socio-economic and Psychological status of Jaggery producing farmers and their perception regarding Geographical Indication (GI) of Kolhapuri Jaggery*

Sr. No.	Variable	Category	Frequency N=120	Percentage (%)
1	Age	Young (Up to 35 years)	40	33.33
		Middle (36 to 55 years)	68	56.67
		Old (56 years and above)	12	10.00
		Max= 74      Min= 24		
2	Education	Illiterate	00	00.00
		Primary Education (1st to 7th Std)	07	05.83
		Secondary Education (8th to 10th Std)	19	15.83
		Higher Secondary Education (11th to 12th Std)	34	28.34
		Graduation	50	41.67
		Post-Graduation	10	08.33
		Max= 18      Min= 03		
3	Size of family	Low (Up to 04)	10	08.33
		Medium (05 to 09)	67	55.84
		High (10 and above)	43	35.83
		Max= 23      Min= 03		

4	Size of land holding	Marginal (Up to 1.00 ha)	12	10.00
		Small (1.01 to 2.00 ha)	34	28.33
		Semi-medium (2.01 to 4.00 ha)	50	41.67
		Medium (4.01 to 10.00 ha)	20	16.67
		Large (Above 10.01 ha)	04	03.33
		Max= 20      Min= 0.4		
5	Annual income	Very Low (Up to 4,52,000 Rs.)	21	17.50
		Low (4,52,001 to 7,14,000 Rs.)	44	36.66
		Medium (7,14,001 to 9,76,000 Rs.)	24	20.00
		High (9,76,001 to 12,38,000 Rs.)	19	15.84
		Very High (12,38,001 Rs. and above)	12	10.00
		Range= 2,62,000   L= 1,90,000   H = 15,00,000		
6	Area under Sugarcane cultivation	Small (Up to 3.6 ha.)	93	77.50
		Medium (3.7 to 6.8 ha.)	20	16.67
		Large (6.9 ha. and above)	07	05.83
		Max = 0.4      Min = 10		
7	Experience in sugarcane Farming	Low (Up to 10 years)	39	32.50
		Medium (11 to 17 years)	56	46.66
		High (18 years and above)	25	20.84
		Range= 7      L= 03      H = 25		
8	Risk orientation	Low (Up to 16 score)	14	11.66
		Medium (17 to 21 score)	71	59.17
		High (22 and above score)	35	29.17
		Range= 05      L= 11      H = 26		
9	Economic motivation	Low (Up to 28 score)	50	41.66
		Medium (29 to 34 score)	64	53.34
		High (35 and above score)	06	05.00
		Range= 06      L= 22      H = 40		
10	Management orientation	Low (Up to 31 score)	29	24.16
		Medium (32 to 37 score)	82	68.34
		High (38 and above score)	09	07.50
		Range= 06      L= 25      H = 43		
.	Market orientation	Low (Up to 28 score)	21	17.50
		Medium (29 to 33 score)	65	54.17
		High (34 and above score)	34	28.33
		Range= 05      L= 23      H = 38		
12	Decision making ability	Low (Up to 06 score)	24	20.00
		Medium (07 to 09 score)	50	41.67
		High (10 and above score)	46	38.33
		Range= 03      L= 03      H = 12		

## PERCEPTION OF JAGGERY PRODUCING FARMERS

The data illustrated in Table 2 indicates that the perception was evaluated against three major components, including Knowledge of GI of Kolhapuri jaggery, Production of Kolhapuri jaggery (GI) and Benefits of Kolhapuri jaggery (GI).

Table 2 outlines the responses from jaggery-producing farmers regarding their awareness of Geographical Indication (GI) for Kolhapuri jaggery. A significant majority, 87.50 per cent, of them choose 'yes' to they know about GI tag. Furthermore, 84.16 per cent were know about GI of Kolhapuri jaggery, and 83.83 per cent acknowledged the potential

protection of their product as community patent known as Geographical Indication

Additionally, 81.66 per cent of respondents were informed about aware of protection of Kolhapuri jaggery under geographical indication, and 79.16 per cent were the regulations governing GI status encourages the use of Traditional Knowledge of Kolhapuri jaggery preparation, 77.50 per cent recognized the unique quality, reputation, and other characteristics associated with the geographical origin of GI products. Notably, 75.83 per cent were know that Kolhapuri jaggery has GI, no one other than this locality can produce it under the same name and helps to preserving traditional knowledge and traditional cultural expressions

Table 2  
Perception of Jaggery Producing farmers regarding Geographical Indication (GI) of Kolhapuri jaggery

Sr. No.	Particulars	No	%
<b>A. Perception of jaggery producers towards Knowledge of GI of Kolhapuri jaggery</b>			
1.	Do you know GI Tag?	105	87.50
2.	Do you know GI of Kolhapuri jaggery?	101	84.16
3.	Are you aware of protection of Kolhapuri jaggery under geographical indication?	98	81.66
4.	Do you think GI product's unique quality, reputation and other characteristics attributable to Geographical origin?	93	77.50
5.	Do you know that your product can be protected as community patent known as Geographical Indication?	100	83.83
6.	Do you know that Kolhapuri jaggery has GI, no one other than this locality can produce it under the same name?	91	75.83
7.	Do the regulations governing GI status encourages the use of Traditional Knowledge of Kolhapuri jaggery preparation?	95	79.16
8.	GI of Kolhapuri jaggery status, helps to improve your business?	86	71.66
<b>B. Perception of jaggery producers towards Production of Kolhapuri jaggery (GI)</b>			
1.	Helps to preserving traditional knowledge and traditional cultural expressions regarding jaggery making.	91	75.83
2.	Product quality has standardized.	80	66.66
3.	It increases demand of the product?	81	67.50
4.	GI tag help to identify the real products?	84	70.00
5.	GI tag Increases the area of production of sugarcane for jaggery making.	80	66.66
6.	Marketing and promotion of GI product Enhances the overall economic prosperity of producers.	82	68.33
7.	GI tag upgrades the financial gain to the producers by exporting the jaggery products.	79	65.83
8.	It helps genuine producers to avail optimum cost for their premium goods even in the competitive market.	85	70.83
<b>C. Perception of jaggery producers towards Benefits of Kolhapuri jaggery (GI)</b>			
1.	Legal protection to the product.	80	66.66
2.	It helps consumers to get Quality products of desired traits and it's assured of the authenticity.	83	69.16
3.	GI tag enhancing demand of the jaggery products in national and international markets.	84	70.00
4.	It increases the Price of the product and income	84	70.00
5.	Inspires and motivates the jaggery producers to expand their enterprises at global level.	87	72.50
6.	It increases the employment in the region.	89	74.16

regarding jaggery making Moreover, 74.16 per cent acknowledged it increases the employment in the region, while 72.50 per cent expressed that inspires and motivates the jaggery producers to expand their enterprises at global level, 71.66 per cent believed that GI of Kolhapuri jaggery status, helps to improve business. Additionally, 70.83 per cent recognized the It helps genuine producers to avail optimum cost for their premium goods even in the competitive market.

Furthermore, 70.00 per cent highlighted the role of the GI tag help to identify the real products, GI tag enhancing demand of the jaggery products in national and international markets, and it increases the price of the product and income. A notable 69.16% agreed that it helps consumers to get quality products of desired traits and it's assured of the authenticity. (68.33%), Marketing and promotion of GI product Enhances the overall economic prosperity of producers (67.50%), it increases demand of the product (66.66%), product quality has standardized and GI tag increases the area of production of sugarcane for jaggery making. (65.83%), enhanced GI tag upgrades the financial gain to the producers by exporting the jaggery products to identify the real products, GI tag enhancing demand of the jaggery products in national and international markets and It increases the Price of the product and income, 69.16 per cent It

helps consumers to get quality products of desired traits and it's assured of the authenticity, 68.33 per cent marketing and promotion of GI product Enhances the overall economic prosperity of producers, 67.50 per cent it increases demand of the product, 66.66 per cent Product quality has standardized and legal protection to the product and 65.83 per cent GI tag upgrades the financial gain to the producers by exporting the jaggery products.

## CONCLUSION

The study highlighted the profile of Jaggery-producing farmers, concluding that the majority of respondents fell into the middle age group, had education up to graduation, hailed from medium-sized families, and belonged to the semi-medium category in terms of land holding. They reported low annual income (ranging from 4,52,001 to 7,14,000) and managed small areas under sugarcane cultivation, up to 3.6 hectares. Moreover, they possessed medium levels of farming experience, risk orientation, economic motivation, management orientation, market orientation, and decision-making ability.

The observation unveiled that a substantial majority, constituting 876.50 per cent of Jaggery-producing farmers have knowledge of the Geographical Indication (GI) of Kolhapuri Jaggery.

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