

Attitude of the Mango Growers towards Global Gap Certification in Konkan Region

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ABSTRACT

This study was conducted to know the attitude of the mango growers towards Global Gap Certification. Study was conducted in Ratnagiri and Sindhudurg districts of Konkan region of Maharashtra state, which contributes nearly 70 per cent area under mango in the state. The Ratnagiri and Sindhudurg districts were purposively selected for the present study. Profile of the mango growers were 59.00 per cent of the respondents had 'graduation' education, 72.00 per cent of the respondents had 'medium' annual income, up to ` 5,33,115/- to 25, 86,885/-. Thus 49.00 per cent of the respondents were having 'medium' area under mango cultivation, 74.00 per cent of the respondents were having 'medium' mass media exposure. 77.00 per cent of the respondents were having 'medium' extension contact. Majority (54.00 %) of the respondents were in the 'high' market orientation category. Majority (51.00 %) of the respondents belonged to 'high' risk orientation category. Majority (53.00 %) of the respondents had 'high' economic motivation. Nearly three-fifth (58.00 %) of the respondents were in 'high' category. More than three-fifth (63.00 %) of the respondents were found in 'favourable' category of attitude towards Global Gap certification.

Key words: Attitude, certification, global gap, konkan region, mango growers.

INTRODUCTION

The importance of agricultural and agro-based products in India's export trade can hardly be over-emphasized. Agriculture sector has been providing substantial support to export development since long. The linkage of the agricultural sectors to the rest of economy is so strong that the overall performance of the Indian economy is determined by its growth. Agricultural sector continues to play a predominant role in our economy and export earnings. Since 1970s our demand for foreign exchange earnings increased to maintain the phase of import liberalization.

Mango fruit is rightly known as 'National fruit of India' and is known as 'King of Fruits'. Owing to its nutritional richness, unique taste and flavour, religious and medicinal importance. Mango is the main commercial fruit crop of our country. It is the third widely produced fruit crops of the tropics after banana and citrus. It has originated from South East Asia, the Indo-Burma region, in the foothills of the Himalayans.

Mango is the most important fruit of India. The fruit is

cultivated in the largest area i.e. 2,500.0 thousand ha and the annual production is around 18,002.40 thousand million tons, contributing 43.48 per cent of the total world production of mango.

India exports mango and mango based products to more than 80 countries, so it is an important foreign exchange earner, with an earning of Rs. 26,472.96 lakh from export of 55,585 MT of fresh fruits and Rs. 7,446.10 lakh from the export of 1,47,816 MT of mango pulp. (Source: APEDA Website January 2014) Due to successful implementation of horticulture plantation programme through Employment Guarantee Scheme linked with National Horticulture Development Programme from 1990 onwards, area under mango crop has increased at an alarming rate in Maharashtra. Currently the state is occupying an area of 482.00 thousand ha with a total production of 633.00 thousand MT with productivity of 1.3 MT/ha (India Data Indian Horticulture Database, 2013).

Food safety has become one of the most important minimum requirements for future trade with developed countries. To be part of global trade in fresh produce and

food related products it will in future require compliance to some kind of food safety assurance system. One of the GAP systems that have taken off within the European community is Global Gap. The challenge of globalizing markets is nowhere greater than in the primary food sector. Global Gap (formerly known as EUREPGAP) has established itself as a key reference for Good Agricultural Practice (GAP) in the global market place, by translating consumer requirements into agricultural production in a rapidly growing list of countries currently more than 100 in each continent.

The Global Gap standard is primarily designed to maintain consumer confidence in food quality and food safety. Other important goals are to minimize detrimental environmental impacts of farming operations, optimize the use of inputs and to ensure a responsible approach to worker health and safety.

Global Gap was originally established as EUREPGAP in 1997, and in November 2007 the name was changed to Global Gap This is a set of "Good Agricultural Practice" (GAP) standards pertaining to food safety, the environment, animal welfare, worker health and safety established by a consortium of food retailers in Europe as a system of self-appraisal certification by horticultural goods producers.

Intention of Global Gap is to change producers' attitudes towards food production by imposing a performance standard with defined criteria to follow in order to render production processes safe through the application of Integrated Farm Insurance Standard (IFA). (<http://www.Global Gap.org>).

Adoption of GAP helps promotes sustainable agriculture and contributes to meeting national and international environment and social development. The findings regarding the relationship between characteristics of the mango growers and attitude and adoption would help the planner and extension worker to probe into the situation and make them to think, plan and develop appropriate strategies for gap certification in an effective way.

Therefore, need to study on attitude of the mango growers about Global Gap certification, to study the profile of the mango growers and to study the attitude of mango growers towards Global Gap certification.

METHODOLOGY

The study was conducted in Ratnagiri and Sindhudurg districts of Konkan region of Maharashtra

state, which contributes nearly 70 per cent area under mango in the state. Out of these two districts Ratnagiri district has been declared as 'Horticulture district' by the state government. Area under mango cultivation and production of mango is higher in these districts as compared to other districts of Konkan region. So also, Mango Marketing Board is located in Ratnagiri. The Regional Fruit Research Station is located at Vengurla in Sindhudurga district. Global Gap Certified farmers are also more in these districts. Looking to these facts, the Ratnagiri and Sindhudurg districts were purposively selected for the present study. From selected districts of Konkan region one hundred mango growers certified under 'Global Gap'/'EUREPGAP' were selected.

The present investigation aimed at knowing the existing situation with regard to Global Gap Certification of the Konkan farmers. So, the 'exploratory research design' was used for this study. Dependent variable namely, attitude towards Global Gap certification A standard scale was specially developed by the researcher to measure the attitude.

The profile characteristics of the mango growers namely; education, annual income, area under mango cultivation, mass media exposure, extension contact, market orientation, risk orientation, economic motivation and scientific orientation were considered as independent variables and measured with the help of scales developed by previous researchers with due modification.

Data were collected by the investigator himself with the help of a structured interview schedule developed for the study. The data were collected from the mango growers which has Global Gap Certificate for mango. Personal interview technique was used for data collection. Before starting an interview, the researcher introduced himself and explained the purpose behind holding the interview to the respondent.

Later, the information on personal and socio psychological characteristics and attitude of the respondents towards Global Gap certification. The data were compiled and processed and the established parameters like mean, frequencies, percentages, standard deviation were used as per requirement.

RESULTS AND DISCUSSION

The important findings of profile of the mango growers are given hereunder.

Table 1: Profile of the Mango growers

Profile of the Mango growers	Respondents (n=100)	
	Number	Percentage
Education		
Secondary (8 th to 10 th)	18	18.00
Higher secondary (11 th to 12 th)	15	15.00
Graduation (13 th to 16 th)	59	59.00
Post- graduation (17 th and above)	08	08.00
Annual income		
Low (upto ` 5,33,114/-)	19	19.00
Medium (` 5,33,115/- to 25,86,885/-)	72	72.00
High (` 25,86,886/- and above)	09	9.00
Area under mango cultivation		
Marginal (upto 1.00)	01	1.00
Small (1.01 to 2.00)	08	8.00
Semi-medium (2.01 to 4.00)	29	29.00
Medium (4.01 to 10.00)	49	49.00
Large (10.01 and above)	13	13.00
Mass media exposure		
Low (up to 5)	20	20.00
Medium (6 to 10)	74	74.00
High (11 and above)	06	6.00
Extension contact		
Low (up to 5)	18	18.00
Medium (6 to 12)	77	77.00
High (13 and above)	05	5.00
Market orientation		
Low (upto 14)	19	19.00
Medium (15 to 17)	27	27.00
High (18)	54	54.00
Risk orientation		
Low (up to 15)	19	19.00
Medium (16 to 17)	30	30.00
High (18)	51	51.00
Economic motivation		
Low (up to 15)	17	17.00
Medium (16 to 17)	30	30.00
High (18)	53	53.00
Scientific orientation		
Low (up to 15)	15	15.00
Medium (16 to 17)	27	27.00
High (18)	58	58.00

It is noticed from Table 1 that nearly three-fifth (59.00 %) of the respondents had 'graduation' education, followed by 'secondary' (18.00 %), 'higher secondary' (15.00 %) and 'post-graduation' (8.00 %). None of the respondents was from 'pre- primary' and 'primary' education category. The average education of the respondents was 14th standard. The data revealed that nearly three-fourth (72.00 %) of the respondents had

'medium' annual income, while 19.00 per cent respondents had 'low' annual income and 9.00 per cent respondents had 'high' annual income. The average annual income of the respondents was ` 15,60,000. With regard to area under mango, it could be observed from Table 1 that nearly one-half (49.00 %) of the respondents had 'medium' area under mango cultivation, whereas, more than one-fourth (29.00 %) and 13.00 per cent of the respondents were having 'semi-medium' and 'large' area under mango cultivation, respectively.

While 8.00 per cent of the respondents were having 'small' area under mango and only 1.00 per cent of the respondent had 'marginal' area under mango cultivation. On an average, the mango growers were having 6.49 ha of land under mango cultivation. Nearly three-fourth (74.00 %) of the respondents were having 'medium' mass media exposure, while 20.00 per cent and 6.00 per cent of them were having 'low' and 'high' mass media exposure, respectively. More than three-fourth (77.00 %) of the respondents were having 'medium' extension contact, while 18.00 per cent and 5.00 per cent of the respondents were having 'low' and 'high' extension contact, respectively.

The data regarding market orientation indicated that majority (54.00 %) of the respondents were in the 'high' category, while 27.00 per cent and 19.00 per cent of the respondents were in 'medium' and 'low' category, respectively. Majority (51.00 %) of the respondents belonged to 'high' risk orientation category, while 30.00 per cent and 19.00 per cent of the respondents had 'medium' and 'low' risk orientation, respectively. Majority (53.00 %) of the respondents had 'high' economic motivation, followed by 'medium' (30.00 %) and 'low' (17.00 %) economic motivation.

It is noticed from Table 1 that nearly three-fifth (58.00 %) of the respondents were in 'high' category, while 27.00 per cent and 15.00 per cent of the respondents were in 'medium' and 'low' category of scientific orientation, respectively.

Attitude of mango growers towards Global Gap certification

Overall attitude towards Global Gap certification

The data pertaining to attitude of the mango growers towards Global Gap certification was measured with the help of a special attitude scale developed for the purpose. The data with respect to overall attitude of the mango growers towards Global Gap certification are presented in Table 2.

Table 2: Distribution of the respondents according to overall attitude towards Global Gap certification

Attitude (score)	Respondents (n=100)	
	Number	Percentage
Less favourable (upto 91)	18	18.00
Favourable (92 to 102)	63	63.00
Most favourable (103 and above)	19	19.00

From Table 2 revealed that more than three-fifth (63.00 %) of the respondents were found in 'favourable' category of attitude towards Global Gap certification, while nearly equal number, *i.e.* 19.00 per cent and 18.00 per cent of the respondents were in 'most favourable' and 'less favourable' category of attitude, respectively.

Attitude about specific statements wise of Global Gap certification

Table 3: Attitude about specific statements of Global Gap certification

Statements	SA	A	UD	DA	SD
Global Gap certification is a need of future	87 (87.00)	13 (13.00)	--	--	--
Global Gap certification is imperative for export of mango	92 (92.00)	08 (8.00)	--	--	--
Global Gap certification is needed for staying in GLOBAL market	93 (93.00)	07 (7.00)	--	--	--
Global Gap certification ensures food safety for consumers	88 (88.00)	12 (12.00)	--	--	--
Global Gap certification help to control environmental pollution	32 (32.00)	44 (44.00)	10 (10.00)	11 (11.00)	03 (3.00)
Global Gap certification in mango helps to reduce cost of cultivation	01 (1.00)	26 (26.00)	24 (24.00)	38 (38.00)	11 (11.00)
Global Gap certification procedure is very difficult	09 (9.00)	42 (42.00)	04 (4.00)	37.00 (37.00)	08.00 (8.00)
Procedure for getting Global Gap certification is beyond the reach for common farmers	08 (8.00)	34 (34.00)	08 (8.00)	37 (37.00)	13 (13.00)
Getting of Global Gap certification is nothing but the wastage of money	01 (1.00)	11 (11.00)	17 (17.00)	52 (52.00)	19 (19.00)
The agencies involved in GLOBAL GAP certification cheat the illiterate mango growers	01 (1.00)	12 (12.00)	07 (7.00)	46 (46.00)	34 (34.00)
Farmers having Global Gap certification are considered as progressive and respectable in the village	12 (12.00)	39 (39.00)	25 (25.00)	19 (19.00)	05 (5.00)
Procedure of Global Gap certification involves too much paper work	--	21 (21.00)	53 (53.00)	20 (20.00)	06 (6.00)
One should feel proud of having Global Gap certification for mango	60 (60.00)	33 (33.00)	01 (1.00)	06 (6.00)	--

Global Gap certification fetches higher price to mango fruits	51 (51.00)	42 (42.00)	05 (5.00)	02 (2.00)	--
The mango growers having Global Gap certification have easy access to market	43 (43.00)	38 (38.00)	01 (1.00)	17 (17.00)	01 (1.00)
Global Gap certification can be obtained only through intermediaries	--	02 (2.00)	08 (8.00)	61 (61.00)	29 (29.00)
Global Gap certification is one of the best means to facilitate mango export	79 (79.00)	18 (18.00)	03 (3.00)	--	--
The mango growers possessing Global Gap certification have to incur low expenditure on external inputs	03 (3.00)	14 (14.00)	10 (10.00)	46 (46.00)	27 (27.00)
Global Gap certification must be obtained by all the mango growers	71 (71.00)	28 (28.00)	--	01 (1.00)	--
Additional technical knowledge about mango cultivation technologies is needed to get Global Gap certification	39 (39.00)	42 (42.00)	04 (4.00)	15 (15.00)	--
Global Gap certification is an obstacle in expanding the mango market	09 (9.00)	15 (15.00)	09 (9.00)	53 (53.00)	14 (14.00)
Global Gap certification promotes balanced utilization of critical inputs	81 (81.00)	10 (10.00)	03 (3.00)	06 (6.00)	--
Global Gap certification demands use of eco-friendly management practices of mango orchard	76 (76.00)	23 (23.00)	--	01 (1.00)	--
There is least support of the government to promote GLOBAL GAP certification	10 (10.00)	63 (63.00)	02 (2.00)	19 (19.00)	06 (6.00)
Export of mango can be done without Global Gap certification	28 (28.00)	51 (51.00)	14 (14.00)	07 (7.00)	--

(Figures in the parentheses indicate percentages)

(SA: Strongly agree, A: Agree, UD: Undecided, DA: Disagree, SA: Strongly disagree)

It is observed from Table 3 that with regards to 'Global Gap certification is a need of future', 87.00 per cent of respondents 'strongly agree' and 'agree' (13.00 %) with this statement. More than four-fifth (92.00 %) of the respondents 'strongly agree' that the 'Global Gap certification is imperative for export of mango' and only 8.00 per cent of the respondents 'agree' with given statement. In case of 'Global Gap certification is needed for staying in GLOBAL market', 93.00 per cent and 7.00 of the respondents 'strongly agree' and 'agree', respectively.

Regarding 'Global Gap certification ensures food safety for consumers', it was seen that more than four-fifth (88.00 %) 'strongly agree' and 12.00 per cent of the respondents 'agree'. However, more than two-fifth (44.00 %) of the respondents 'agree' about 'Global Gap certification help to control environmental pollution', while 32.00 per cent and 11.00 per cent of the respondents

'strongly agree' and 'disagree', respectively remaining 10.00 per cent and 3.00 per cent of the respondents were 'undecided' and 'strongly disagree', respectively with given statement.

It is seen from table 3 that about 'Global Gap certification in mango helps to reduce cost of cultivation', nearly two-fifth(38.00 %) of the respondents 'disagree', 'agree' (26.00 %), 'undecided' (24.00 %) and 'strongly disagree' (11.00 %) and only one per cent of the respondents 'strongly agree' with given statement. More than two-fifth (42.00 %) of the respondents 'agree' about that 'Global Gap certification procedure is very difficult', while 37.00 per cent 'disagree', 'strongly agree' (9.00 %), 'strongly disagree' (8.00 %) and remaining 4.00 per cent of the respondents were in 'undecided' category.

It is observed that nearly two fifth (37.00 %) of the respondents 'disagree' that 'procedure for getting Global Gap certification is beyond the reach for common farmers', while 34.00 per cent 'agree', 13.00 per cent 'strongly disagree', 8.00 per cent of the respondents 'strongly agree' and undecided about that given statements, respectively. In case of 'Getting of Global Gap certification is nothing but the wastage of money', more than half (52.00 %) of the respondents 'disagree', 19.00 per cent 'strongly disagree', 17.00 per cent 'undecided', 11.00 per cent 'agree' and only one respondent 'strongly agree' with given statement.

As regards 'agencies involved in Global Gap certification cheat the illiterate mango growers', near to half (46.00 %) of the respondents 'disagree', while 'strongly disagree' (34.00 %), 'agree' (12.00 %), 'undecided' (7.00 %) and only single respondents 'strongly agree' about that given statement. Whereas, nearly two-fifth (39.00 %) of the respondents 'agree' that 'farmers having Global Gap certification are considered as progressive and respectable in the village', while 'undecided' (25.00 %), 'disagree' (19.00 %), 'strongly agree' (12.00 %) and remaining 5.00 per cent 'strongly disagree' about that given statement.

More than half (53.00 %) of the respondents were 'undecided' about that 'procedure of Global Gap certification involves too much paper work', while 21.00 per cent 'agree', 20.00 per cent 'disagree' and remaining 6.00 per cent of the respondents 'strongly disagree' about that given statement. In case of the statement, 'One should feel proud of having Global Gap certification for mango', three-fifth (60.00 %) of the respondents 'strongly agree' about that statement, while 'agree' (33.00 %), 'disagree' (6.00 %) and only one respondent 'undecided' with given statement.

It is seen also from Table 3 that more than half (51.00 %) of the respondents 'strongly agree' that 'Global Gap certification fetches higher price to mango fruits', while 42.00 per cent 'agree', 5.00 per cent 'undecided' and remaining 2.00 per cent of the respondents 'disagree' about that given statement. Further, more than two-fifth (43.00 %) of the respondents 'strongly agree' that 'the mango growers having Global Gap certification have easy access to market', while 38.00 per cent 'agree', 17.00 per cent 'disagree' and remaining 1.00 per cent each of the respondents were 'undecided' and 'strongly disagree' with given statement, respectively. It is noticed that with regard to 'Global Gap certification can be obtained only through intermediaries', more than three-fifth (61.00 %) of the respondents 'disagree', while 29.00 per cent 'strongly disagree', 8.00 per cent 'undecided' and remaining 2.00 per cent of the respondents 'agree' about that given statement.

It is seen that nearly four-fifth (79.00 %) of the respondents 'strongly agree' that 'Global Gap certification is one of the best means to facilitate mango export', while 18.00 per cent 'agree' and 3.00 per cent of the respondents 'undecided' about that given statement. About 'Mango growers possessing Global Gap certification have to incur low expenditure on external inputs', maximum number (46.00 %) of the respondents 'disagree', followed by 'strongly disagree' (27.00 %), 'agree' (14.00 %), 'undecided' (10.00 %) and remaining 3.00 per cent of the respondents 'strongly agree' about that given statement. It is clear that more than two-third (71.00 %) of the respondents 'strongly agree' about that 'Global Gap certification must be obtained by all the mango growers', while 28.00 per cent 'agree' and only single respondent was 'undecided' about given statement.

It is noticed that more than two-fifth (42.00 %) of the respondents 'agree' that 'additional technical knowledge about mango cultivation technologies is needed to get Global Gap certification', followed by 39.00 per cent 'strongly agree', while 15.00 per cent and 4.00 per cent of the respondents 'disagree' and 'undecided' about that given statement, respectively. More than half (53.00 %) of the respondents 'disagree' about that 'Global Gap certification is an obstacle in expanding the mango market', followed by 15.00 per cent of the respondents 'agree', 'strongly disagree' (14.00 %), 9.00 per cent of the respondents were 'strongly agree' and 'undecided' about the given statement, respectively.

More than four-fifth (81.00 %) of the respondents 'strongly agree' about that 'Global Gap certification promotes balanced utilization of critical inputs', while 10.00 per cent of the respondents 'agree', 6.00 per cent

'disagree' and remaining 3.00 per cent of the respondents were 'undecided'. It is seen that regarding 'Global Gap certification demands use of eco-friendly management practices of mango orchard', more than three-fourth (76.00 %) of the respondents 'strongly agree', followed by 23.00 per cent 'agree' and only single respondents 'disagree' about given statement.

It is observed that nearly two-third (63.00 %) of the respondents 'agree' about that 'there is least support of the government to promote Global Gap certification', followed by 19.00 per cent of the respondents 'disagree', 10.00 per cent 'strongly agree' and 6.00 per cent and 2.00 per cent of the respondents 'strongly disagree' and 'undecided', respectively about given statement. More than half (51.00 %) of the respondents 'agree' about that 'export of mango can be done without Global Gap certification', followed by 28.00 per cent of the respondents 'strongly agree', 14.00 per cent 'undecided' and remaining 7.00 per cent of the respondents 'disagree' with given statement.

CONCLUSION

Mango has become a cash crop for the farmers of the Konkan region. Efforts are being made at different levels to maximize the area, production and productivity of mango in Konkan region. The Global Gap standard is primarily designed to reassure the consumers about how food is produced on the farm by minimizing detrimental environmental impacts of farming operations, reducing the use of chemical inputs and ensuring a responsible approach to worker health and safety, as well as, animal welfare. GAP is a series of principles, rules and technical recommendations, with the aim of providing a safe product for direct consumption or industrial processing. Considering the scope and opportunity in the world market, there is a need to give importance to quality assurance of mango fruits. So also, there is a need to keep quality, hygienic conditions and standard residue control, so that the fruits qualify all analytical tests. The findings of the study pertaining to personal, socio-economic, communicational and psychological characteristics of the mango growers may help the agricultural development agencies to identify the prospective mango growers and to plan out strategy to speed up the adoption of GAP in mango cultivation. The study pointed out that the mango growers had differential attitude about GAP certification for mango. The concerned organizations and personnel need to intensify the efforts in that direction. It also suggests that only possessing favourable attitude about GAP certification is not enough to promote adoption and induce positive perception about GAP among the mango growers. But, it is necessary to give the actual experience

with hands on training, support of Government for certification and provide them services to practice GAP at their field condition.

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REFERENCES

Chaudhari Pooja (2014). Attitude of mango growers towards pesticides in Ratnagiri district of Konkan region. M.Sc. (Agri.) Thesis. Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth, Dapoli.

Devaraja, S. C. (2012). A study on knowledge and attitude of farmers using ICT tools for farm communication. Thesis abstract. *Mysore Journal of Agricultural Science*. 46(3): 697.

Gavade, K., Shambharkar, Y. B., Nimbalkar Monali and Chavan Shubhangi (2013). Knowledge and attitudes of grape growers about grape cultivation practices in distress prone area of Maharashtra state. *Indian Journal of Applied Research*. 3(9):174-177.

Hanjabam, S. (2014). Analysis of the profile characteristics and attitude of the farmers, extent of adoption and constraints in taking up precision farming in Kerala. *An International Journal of Humanities and Social Sciences*. 1 (2):258-289

Hobbs, J. E. (2003). Incentives for the adoption of good Agricultural Practices (GAPs). FAO consultation on Good Agricultural Practices, Rome. 1-26.

Kausadikar, K. D., Suradkar, D. D. and Narkar, G. S. (2002). Determinants of attitude towards horticultural development programme. *Maharashtra Journal of Extension Education*. 21(2): 92-93.

Kota, S. K., Tarde, V. J. and Babar, M. S. (2012). Knowledge and adoption of export oriented practices followed by the mango growers. *International Journal of Extension Education*. 8: 51-55.