

# How Good Manufacturing Practices (GMP) Shapes the Selling Price of Ceylon Tea

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**Abstract:-** Ceylon tea is a one of most popular beverage all over the world after the water. Now a day people demand for healthy and safe food even though price is high in healthy food. Then they move to the quality food. Therefore, product quality certification is the most important point for that situation. Then Sri Lankan food products should be lined with international standard to facilitate the international trade. However, majority tea factories were not gone for any certification level. A study was conducted to identify the effect of GMP on selling price of Ceylon tea. Multi-stage proportion sampling method was used to evaluate GMP by using pre-tested questionnaire, informal discussion and field observation in all represented administrative regions. Independent sample *t* test recognized selling price and GMP are significantly different in 50% of GMP value ( $t=2.471$ ,  $P< 0.05$ ). When GMP value was less than 50%, the average selling price recorded as Rs. 373.43 and Rs. 404.19 average selling price could be achieved when higher GMP value ( $\geq 50\%$ ). According to the result, above 50% GMP value was reflected higher price. Therefore, all tea factories must maintain GMP level with above 50%

**Keywords:** Ceylon Tea, GMP, Sri Lanka, Tea Factories

## I. INTRODUCTION

Ceylon tea is higher demanded and one of the most popular beverages in global. Therefore, tea industry was acquired significant economics influence for tea producing countries such as Kenya, Sri Lanka, India and China (Gunathilaka and Tularam, 2016). However, global tea production is 5,173,471 MT and the global consumption is 4,764,000 MT in 2014 (ITC, 2015). Furthermore, in 2015 Sri Lanka tea production was 328.96 m/kg but only 307 m/kg of tea was exported (Sri Lanka Tea Board, 2015). Ceylon tea has a market share of 10% in the international sphere, and one of the world's leading exporters with a share of around 23% of the global demand gain from Tea Packets, Tea Bags, Tea in Bulk, Instant Tea, Green Tea, Flavored Tea, etc., (Perera, 2016). It is satisfactory level. But in future Ceylon tea may be facing with a big challenge. Because when increase of living stand of tea consumers, they demand for high quality safe food. Therefore, tea industry has to follow the international standard to meet the consumer satisfaction in order to keep the higher demand for Ceylon tea.

Food safety and quality assurance of food is increased competitiveness of the food producing companies which meet in national market and international market demand (Holleran,

Bredahl and Zaibet, 1999). Therefore, many institutions have introduced many system certifications based on Food Safety and Quality Management such as Good Manufacturing Practices (GMP), Good Hygienic Practices (GHP), ISO 22000; standard set by the international Organization and Hazard Analysis and Critical Control Point (HACCP).

GMP is one of special food safety system certification in tea industry. Because it design to minimize the hazard and enhance the quality of the product in each and every step through the manufacturing process in tea such as leaf standard, withering, rolling, roll breaking, oxidation, drying, cleaning, shifting and hygienic condition and building structure of tea factory are considered for evaluation of GMP. Ultimately it affects to final product quality. However, GMP is the part of overall HACCP certification and ISO 22000 certification. Therefore GMP is a key requirement for tea industry (Lokunarangodage, Wickramasinghe and Ranaweera, 2016).

System certification is important factor for tea factories when capture the international market. As examples, European Union (EU) and Japan introduce standard which apply to food safety, quality, agricultural chemical and all residuals in all food product including imported products from other countries. However, majority factories haven't any certification, even though they fulfilled the requirement for certification. They haven't enough knowledge about system certifications. The study was designed to identify the effect of GMP for selling price and quantity of tea in tea factories in Sri Lanka. Increment of price of tea through the improvement of GMP was main objective of this study. The study was designed to investigate advantage of achieving of GMP for all tea factories in Sri Lanka to gain maximum profit via increment of selling price and quantity. The study was focused to motivate all tea factories to establish GMP for all tea factories in Sri Lanka in order to capturing the international tea market.

## II. METHODOLOGY

Seven administrative regions recognized by Sri Lanka Tea Board were selected namely, Bandarawela, Matugama, Gampola, Galle, Matara, Ratnapura and Hatton. Multi-stage proportion random sampling method was used in this study. Accordingly, 35 factories were selected from every region by selecting factories from each region as 5% representing in

whole population. The study was used primary data and secondary data. The primary data were collected by administering a pretested structured questionnaire for each factory of selected sample. Informal discussion also was carried out with persons who have better knowledge of the factory manufacturing process and method of handling of green leaves of tea until end of product of tea. Field observation of area which was build the selected tea factories and process line of tea also was formed another method of primary data collection of this study. A major source of secondary data consisted reports issued from statistical and promotion division in tea board.

The significant difference between GMP based on Food Safety and Quality Management (FSQM) and sales price were evaluated by independent sample t-test and the descriptive statistics based on the representative sample data. The data of manufacturing process line against the GMP requirement where qualitative data was converted to percentage of each section among total evaluation. Those values obtained from field observations. Descriptively GMP requirement was calculated by dividing the data of GMP in to two categories by considering the cut of point of GMP value.

### III. RESULT AND DISCUSSION

Middle pricing and long-term system maintaining will help to catch the market and long-term cash flow by developing food safety management system (Lokunarangodage, Wickramasinghe and Ranaweera, 2011). Moreover, higher quality tea can achieve higher demand from importing countries. According to result of the study, the cutoff point of 50% in GMP was shown significant different with selling price (Figure 1). The above 50% of GMP value have significant influence to higher selling price (Rs. 404.19). But below 50% of GMP value was given lower selling price with Rs. 373.43.

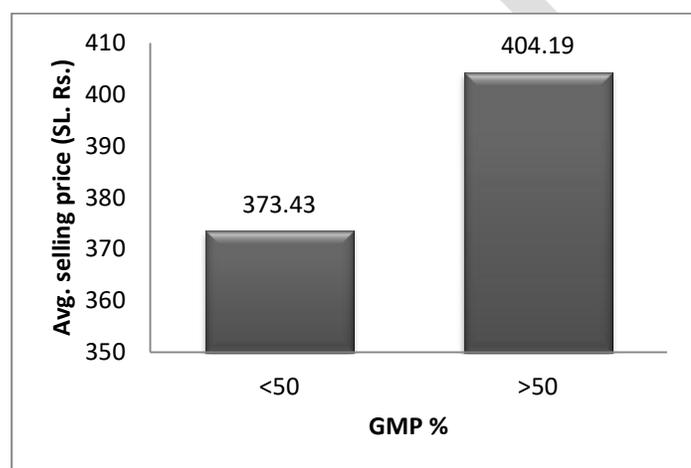


Figure 1: Effect of GMP value on selling price of tea in tea factories.

This figure shows significant gap between two average selling price respects to the two GMP values. Poor quality tea caused to decline price of tea in the market (Prasad, 2015). However,

that different may be caused to maximize the profit of the tea factories.

According to the independent sample *t* test recognized selling price were significantly different with GMP in 50% of GMP value. Selling price and GMP significantly different in 50% of GMP value ( $t=2.471$ ,  $P< 0.05$ ). By observing the results, increment of GMP affect for higher selling price of tea. Finally, the tea factories should achieve at least 50% of GMP for increment of selling price and capture the huge market share from the international market. Most of tea factories have not gone for any certification level such as ISO 22000, HACCP, and GMP. Because of they have not clear idea about important of certification level with the uplift quality of tea. They believe it only increases the cost of production of tea. This study exposed that important of GMP with respect to selling price. Furthermore, that increment of GMP level affected to level up the standard of Ceylon tea.

This study revealed that when factories increase GMP can gain more profit for the tea industry. Then GMP shows significant impact to selling price. Not only that, it directly affect the quality of tea. Hence government want to implement the policies to maintain the tea factories above 50% GMP value to enhance the quality and price of Ceylon tea. The tea factories owners must want to motivate for achieve the certification level.

### IV. CONCLUSION

The increment of GMP level directly affect to the selling price of Ceylon tea. Then tea factories must maintain their tea factories at least 50% GMP value to gain higher selling price. The above 50% GMP value may influence the profit maximization for Ceylon tea. The tea factories owners should motivate to consider GMP level up to the satisfactory level. It must implement as policy by government.

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