The Effect of the Applying Modern and standard technology and Industryon the Quality of Iranian Produced

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Abstract: *Nowadays, tea is considered as the healthiest and the most popular drink in the world. Because of lack of using pesticides in production of green leaf, Iran's produced tea is considered as of the purest and healthiest teas in the world [1].After passing about 110 years from starting tea cultivation in Iran and although cultivation surface of tea farms has developed in this period and the number of tea making factories and the rate of produced tea have increased, but unfortunately, In spite of the fact, that tea has a long history in Iran, the knowledge of tea farmers in using the modern methods of cultivation; nursing and harvesting tea is low and requires continuous scientific and quantitative training. About 70% of tea making factories are over 45 years old and are wear out and lacks modern equipment. Old machinery and lack of production capacity of factories lead to absence of proportion of capacity of machinery with the amount of delivery green leaf at the peak of production of tea green leaf in April, May &June [2]. Special place of tea in Iranian consumers 'basket and direct occupation of more than 70,000 households in tea cultivation and production and its role and place in economy of Guilan&MazandaranProvince have doubled the necessity of performing researches to find solutions of tea problems and its qualitative and quantitative improvement. In this article, the Effect of the Applying Modern and standard technology and industry on quality of produced tea is studied. The method of this research is field study and survey has been applied for collection of information to respond to the research questions. After analyzing obtained data from questionnaire, research hypothesis was confirmed in confidence level of 95%. Therefore, it can be stated that in confidence level of 95%, Applying Modern and standard technology and industry effects on the Quality of Iranian Produced dried tea.*
Key Words:*Tea, Tea Quality, Modern and standard technology*

I. Introduction

Furthermore Iran is one of the greatest tea consumer's countries in the word. Having about one percent of world's population, it is dedicated the four percent of world's tea consumption [3].After passing about 110 years from starting tea cultivation in Iran and although cultivation surface of tea farms has developed in this period and the number of tea making factories and the rate of produced tea have increased, but unfortunately, Iran has no progress in cultivation and quality. Because of the problems that the tea industry of the country is faced, not only its quality and quantity have no position in global markets, but also internal consumers are eager to use foreign expensive tea. And that is why countries produced tea, with half of the annual consumption, is not used, and it is stored in some places so more than 50% of annual consumption is imported from abroad [4].

Iran has the special position in rural arts and agricultural product like peanuts, saffron and date, but unfortunately, it could not have a good position in the world's tea market and even in the international market. One of the reasons of falling tea industry in Iran compare with the first-grade countries in tea industry such as India, China, Srilanka. Kenya and so on can be the problems that Iran is faced with, which some of them are mentioned below:

1. After 110 years of cultivation and production of tea in Iran, the average age of tea bushes is 70 years, so their exploitation time is over and with considering the quality of produced tea; their output is in a very low range [5].
2. About, 84% of tea farms of the country are below one hectare. So in consequent of small space of tea farms and lack of financial sources of the owners, any better farming and line breeding act is impossible or very difficult [6].
3. 70% of tea making factories has old buildings with wooden primary materials. So in non-observance of security cases, it will be fired and damaged, and usually its hygiene conditions would not be good. Machinery and most of the factory's equipments are too old and out of work and because of lack of appropriateness between the production expenses and construction fee and their little income, manufacturers have no motivation for renovation the factories and buying advanced tea making equipments [7].
4. Lack of existence of required investments for replacement and renovation of machineries of factories [8].

Having established and developed research centers in tea growing areas and large complexes of tea industry and cultivation, using the results of research in the process of production and training new methods of crop improvement and seed and plant breeding to farmers and also applying the most modern tea making technology and machinery and implementing a mechanized system for the whole stages of tea cultivation and production, countries such as India, Seri Lanka, Kenya and China could proceed for performing essential and continuous changes in production stages and in addition to qualitative and quantitative rise of produced dried tea were succeeded to reduce the wage and final cost of production by applying mechanized system, pruning and tea leaf harvesting machinery and be known as one of the most successful countries in producing and exporting tea in the world. Great companies invested in the process of cultivation, industry, distribution and tea international commerce of these countries and established the best tea gardens in large measures using the most advanced technologies and emphasizing on continuous innovation and research and proceeded to produce desirable and high-quality tea commensurate with the world standards by studying the taste of consumers in various global markets.

However, tea production operations in Iran are not performed based on standard and scientific principles, and its strategies are mostly old and lack innovation. Furthermore, due to deterioration of most of the machinery and tea making equipment and lack of using a mechanized system in tea gardens, in addition to rise of production and final cost, produced dried tea does not have required quality. To solve this problem, we should promptly proceed for forming and developing research departments in tea production centers and perform vast studies in the field of modern knowledge and technology of tea making and create continuous ties with research centers of countries that are pioneered in tea industry so that in addition to achieving the advanced science and technology and their correct use in tea industry and cultivation could reach the produced dried tea of the country to its real position.

In this research with the purpose of finding strategies for increasing quality of produced tea and correct application of them to solve the existing problems of tea agro-industry of country and increase of quality and ability to compete the domestic tea with well-known foreign tea proceed to assess and analyze the impact of the Applying Modern and standard technology and industry on quality of produced dried tea of Iran and the researcher hopes that the result of research plays a small share in economic prosperity and development of tea farms and increase of production and provide necessary field for enhancing employment in all stages of tea agro-industry of country.

II. Method of Research

Descriptive-Analytical method has been applied in this research. Thus, description of status of tea cultivation and industry and identification of method of the effect of the applying modern methods of tea cultivation on quality of produced tea have been studied and analyzed. The researcher has selected the method of research based on field study and survey and performed library studies and interview with tea specialists and experts of tea cultivation and industry to collect information. To study and analyze key variables of research, he has designed a questionnaire and distributed among the samples. To define and describe variables, he has used mean index, standard deviation and column chart and t-test was used to test the hypotheses in inferential statistics.

III. Statistical Sample & Population:

Statistical population of this research are defined as the entire managers and experts of tea making factories of Guilan Province, all tea experts and specialists of occupied in Tea Organization, State Tea Researches Center and other related organizations with tea. Furthermore, the entire managers of tea making factories and experts and specialists of tea making of Lahijan City, the 2nd tea producer city in terms of tea cultivation surface and amount of production, are selected as statistical sample of this research

Table 1: of Frequency Distribution related to the Hypothesis (Applying Standard and Modern technology and Industry)

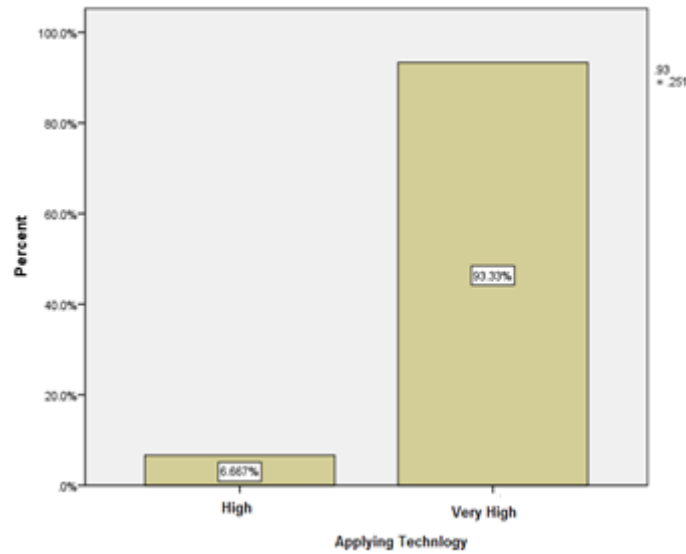| Description	Frequency	Percentage of Frequency
Very low	0	0
Low	0	0
Average	0	0
High	7	6.7
Very high	98	93.3
Total	105	100

Fig.1: Distribution of Frequency Percentage of Hypothesis(Applying Standard and Modern Technology and Industry)
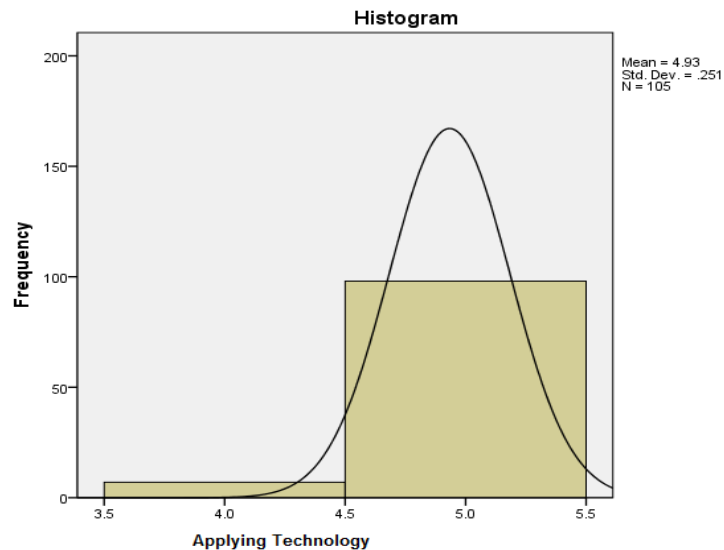

Fig.2: Test of the Hypothesis (Applying Modern and Standard Technology and Industry)

IV. Research hypothesis:

Applying modern and standard technology and industry has no effect on quality of produced dried tea.
$H_0: \mu = 3$
Applying modern and standard technology and industry effects on quality of produced dried tea.
$H_1: \mu \neq 3$

Table 2: Result of Test of Hypothesis (Applying Modern and Standard Technology and Industry)

Hypothesis	Sample Volume	Mean	Standard Deviation	Mean of Measurement Error
Applying Modern and Standard Technology and Industry	105	4.93	0.251	0.024

Table 3: Result of Test of Hypothesis (Applying Modern and Standard Technology and Industry)

Hypothesis	Calculated T	Freedom Degree	Significance level	T of Table	Deviation of Mean	Confidence interval for the mean difference from the theoretical mean	
						Low level	High level
Applying Modern and Standard Technology and Industry	78.791	104	0.000	1.9830	1.933	1.88	1.98

Formula:

$$t = \frac{\overline{x} - \mu}{\frac{s}{\sqrt{n}}} = \frac{4.93 - 3}{\frac{0.251}{\sqrt{105}}} = 78.791$$

V. Decision Making:

Considering the obtained results from the above table, since the amount of calculated t-test is larger than the t of the table, H_0 is rejected in error level of 5% and H_1 (impact of applying modern and standard technology and industry on quality of produced dried tea) is accepted. Because statistics of t is in H_1 area, it can be said that in confidence level of 95%, applying modern and standard technology and industry effects on quality of produced dried tea.

Considering the result of research and in order to remove the existing problems in tea agro-industry of country, there are some suggestions as below:

1. Pass laws to prevent the division of the tea gardens in order to make better use of advanced technology in all stages of tea cultivation, nursing and harvesting
2. Encouraging farmers and manufacturers to organize tea cultivation and production complexes and cooperatives to fulfill the following objectives:
1. Aggregating limited capitals of farmers and manufacturers to provide required capital for performing breeding and crop improvement affairs and using modern agricultural methods
2. Financial support of government from complexes and cooperative society of planting and tea industry to do agricultural modern methods and using modern and standard conversational industry.
3. Support of government for establishing sell market of dried tea in order to sell produced dried tea of complexes and cooperative society of planting and tea industry.

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