AGRIALLIS
Science for Agriculture and Allied Sector: A Monthly e Newsletter
Volume 2 – Issue 12
Online ISSN: 2582-368X
www.agriallis.com

ECONOMICS RELATED TO TEA (*Camellia sinensis*) SECTOR- AN OVERVIEW

Article Id: AL202123

[1]Abhijit Das* and [1]R.R. Mishra

[1]Department of Agricultural Economics, Dr. Rajendra Prasad Central Agricultural University, Pusa, Bihar 848125, India

Email: aviplusavi@gmail.com

Tea is one of the world's hottest beverages. It is known as the queen of beverages and is an evergreen perennial crop. All over the world Tea is grown in more than 32 countries covering an area of more than 2.5 million hectares. In 2017 India's share in world tea exports was 12.9 percent (203.86 million kg) out of the total export of 1578.56 million kg (Tea Statistics, Tea Board India, 2018). The major tea growing areas in India are concentrated in Assam, West Bengal, Tamil Nadu and Kerala. Other areas where tea is grown to a small extent are Karnataka, Tripura, Himachal Pradesh, Uttaranchal, Arunachal Pradesh, Manipur, Sikkim, Nagaland, Meghalaya, Mizoram and Bihar. Assam is the largest producer of quality tea in India, contributing about 51.90 percent of the country's total tea production. During the year 2017, out of a total area of 480.20 thousand ha and production of 983 million kg, Assam alone accounted for 282.10 thousand ha of area and 657.24 million kg of production, constituting 58.72 per cent and 56.11 per cent of area and production respectively (Tea Statistics, TeaBoard India, 2018). The area, production and productivity of tea in different states of India are given in Table 1

Table 1: Area, production and productivity of tea in different states of India (2016 -17)

Sl. No.	State	Area ('000 ha)	Production (m kg)	Productivity (kg/ha)
1	Assam	282.10 (58.72)	657.24 (56.11)	2330
2	West Bengal	115.08 (19.80)	236.39 (23.98)	2059
3	Tamil Nadu	80.46 (13.90)	160.51 (16.29)	1998
4	Kerala	37.15 (6.45)	55.98 (5.68)	1506
5	Tripura	8.98 (1.55)	7.86 (0.80)	877
6	Bihar	2.01	1.08	548

Volume 2 – Issue 12
Online ISSN: 2582-368X
www.agriallis.com

		(0.35)	(0.12)	
7	Uttaranchal	1.57 (0.31)	0.25 (0.03)	146
8	Himachal Pradesh	2.35 (0.39)	0.77 (0.11)	329
9	Manipur	1.32 (0.21)	0.12 (0.02)	82
10	Sikkim	0.19 (0.04)	0.08 (0.009)	423
11	Arunachal Pradesh	2.57 (0.45)	5.84 (0.62)	2273
12	Nagaland	1.89 (0.40)	0.19 (0.01)	100
13	Meghalaya	0.56 (0.11)	0.25 (0.03)	459
14	Mizoram	0.65 (0.12)	0.07 (0.007)	115
15	Orissa	0.21 (0.05)	NA	NA
16	Karnataka	2.14 (0.37)	5.18 (0.51)	2423
	Total	**480.20 (100)**	**983.00 (100)**	**995**

Source: Tea Statistics, Tea Board India, 2018

Figures in the parentheses indicate percentages

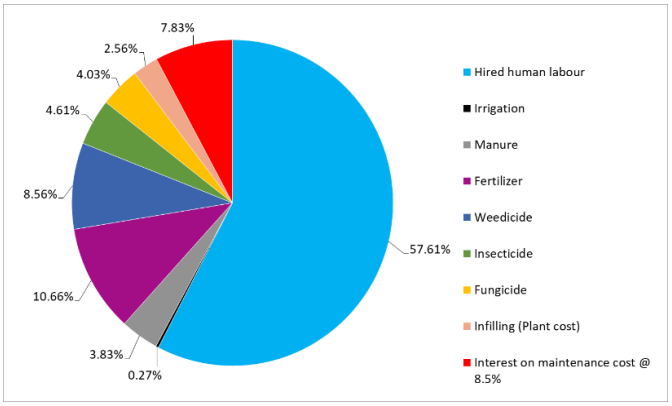
The tea industry is an important foreign exchange earner and provides a sizeable amount of revenue to the state and central exchequers. India exports around 180 million kg of tea every year. Total net foreign exchange earned by the Indian Tea Industry per annum is around 1847 crore (Tea Statistics, Tea Board India, 2017). For this economic study, the cost of cultivation of tea leaf and value chain aspects have been considered.

Cost of cultivation

An attempt was made to work out establishment cost incurred in setting-up of a tea plantation. The analysis revealed that for lower-small, medium-small and higher-small tea growers, there were Rs. 166968.14, Rs. 213965.24, and Rs. 223473.87 per hectare, respectively. Out of the various cost items, the cost of planting materials or cuttings (Rs. 77741.00 per hectare) occupied the first rank, and it alone contributed for 38.58 per cent of the total establishment cost. Next in importance was charged for hired human labour, which amounted to Rs. 30696.68 per hectare and its share in total establishment cost was 15.23 per cent. Cost of irrigation pump set occupied the third rank, and it constituted 13.38 per cent

Volume 2 – Issue 12
Online ISSN: 2582-368X
www.agriallis.com

(Rs. 26966.66 per hectare) of total establishment cost. Cost of weedicides was another important item of cost, occupying the fourth rank, and it constituted 13.13 per cent of total establishment cost. The sample tea growers had to spend a substantial amount (Rs. 9035.35 per hectare) on purchase of insecticide which was considered essential for the development of healthy tea plantation and accounted for 4.48 per cent of total establishment cost. Organic mulch in the form of water hyacinth, shade plants, manures, fungicides, et cetera were other less important items of expenditure in total establishment cost (Fig 1).



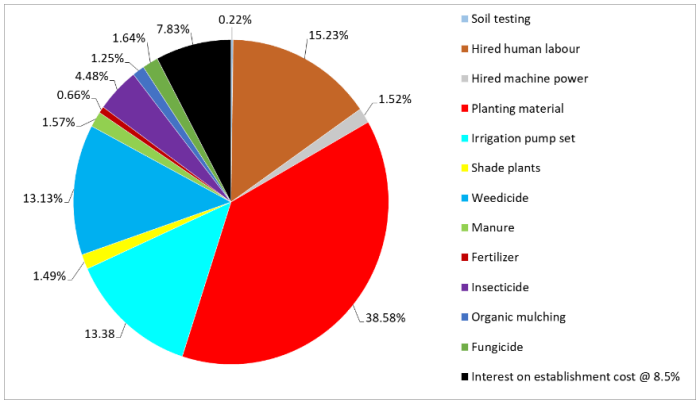


Fig 1: Share of different items to total establishment cost Fig 2: Share of different items to total variable cost

The total variable cost involved in running a small tea plantation amounted to Rs.138551.14 per hectare. Out of this, charges for hired human labour were Rs. 79823.95 per hectare. Hired human labour alone accounted for more than fifty per cent (57.61 per cent) of the total variable cost. It emerged as the most important item of variable cost. The cost of fertilizer was Rs. 14773.13 per hectare and was next to charges for hired human labour. It constituted 10.66 per cent of total variable cost. It was closely followed by an interest in maintenance cost, which was estimated at Rs. 10854.24 per hectare constituting 7.83 per cent of the total variable cost. The cost of weedicide occupied the third position in order of importance. It amounted to Rs. 11861.51 per hectare and its share was 8.56 per cent in the total variable cost. Some not so important items of variable cost were the cost of insecticide, cost of fungicide, cost of manures, et cetera (Fig 2).

The total fixed cost involved in running a tea plantation amounted to Rs. 7054.74 per hectare. Establishment cost alone accounted for more than half of the total fixed cost, i.e., Rs. 4029.38 per hectare (57.12 per cent). It was the most important item of fixed cost.

Volume 2 – Issue 12
Online ISSN: 2582-368X
www.agriallis.com

Depreciation on implements and machinery was estimated at Rs. 2289.40 per hectare and was next to charges for establishment cost. It constituted 32.45 per cent of total fixed cost. Interest on fixed capital was also a substantial amount with a share of 9.90 per cent among various items of fixed cost. It was followed by land revenue, which was estimated at Rs. 36.84 per hectare constituting 0.52 per cent of total fixed cost.

The examination of efficiency parameters of tea cultivation indicated that yield (tonne per hectare), gross return (Rs. per hectare), net return (Rs. per hectare), benefit-cost ratio and cost of production of green tea leaves (Rs. per tonne) per hectare of tea plantation were 28.59, 483639.68, 338033.80, 3.30 and 16916.39 respectively.

Value chain analysis:

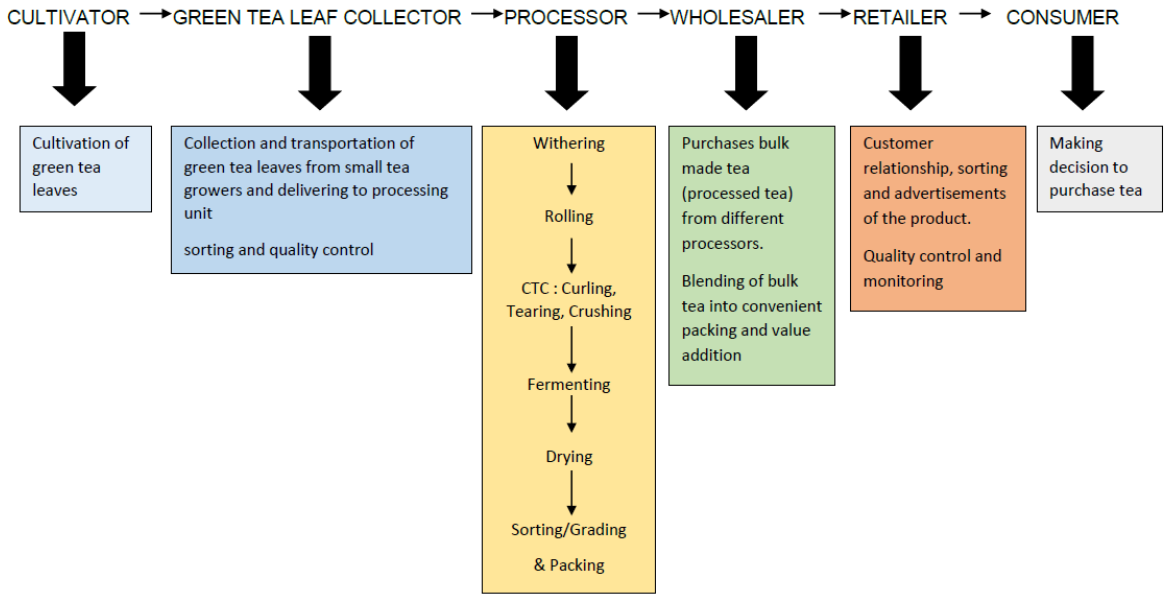


Fig 3: Role of different actors in the tea value chain

The analysis of value chain in tea production revealed that the highest value addition took place at Industry level, where the cost of value addition was Rs. 129.18 per kilogram followed by wholesalers (Rs.35.92 per kilogram), retailers (Rs. 17.80 per kilogram) and green leaf collector (Rs. 3.20 per kilogram). The reason for highest value addition at industry level was that the processors had to bear the cost of electricity, firewood, repair of machines, generator and lorry maintenance, taxes, wages, packing, brokerage, loading and unloading, warehousing and agent's commission. For producing 1.00 kilogram of made tea, processors had to buy 4.00 kg of green tea leaves. In that way, the cost at processing unit became very

Volume 2 – Issue 12
Online ISSN: 2582-368X
www.agriallis.com

high. The analysis also revealed that the net income of small tea growers and green leaf collectors was Rs. 2.63, Rs. 1.86 per kilogram of green tea leaves respectively and for processors, wholesalers and retailers it was Rs. 20.00, Rs. 2.50 and Rs. 4.00 per kilogram of made tea, respectively.

Conclusion

The study reflects that tea cultivation is labour intensive practice and it contributes more than 50 per cent to the total establishment cost, and when we focus on variable cost; it shows that cost of fertilizer plays an important role. In value chain analysis, it is clear that producers price in consumers rupee is very very less, and the maximum profit gainer is the processor. Therefore, some policies are required for the betterment of tea grower in terms of both cost of cultivation and value chain

- Policies should be formulated to supply plant protection chemicals, fertilizers, machinery and implements to the small tea growers at subsidized rates through the State Agriculture Department.
- The government should also announce the minimum support price for tea like other commercial crops.
- Financial assistance and credit facilities should be provided by the government to the small tea growers to establish tea processing plants on a co-operative basis or under private ownership.
- The small tea growers should come forward collectively to form co-operatives and thus make their smaller lots into a bulk so that they can realize the remunerative prices for their produce.
- The small tea growers should provide higher wage rate to the workers during the peak plucking season to maintain the plucking intensity. Otherwise, the workers could move to the large tea estates.

References

Abdul, H. (2007). Study on cost of production, pricing of green leaf, and the relationship of small tea growers (STG) with bought-leaf factories (BLF) and auction centres. Sustainable Livelihood for Small Tea Growers and Workers in India, Centre for Education and Communication (CEC):1-33

Volume 2 – Issue 12
Online ISSN: 2582-368X
www.agriallis.com

Adhikari, K.B., Regmi, P.P., Gautam, D.M., Thapa, R.B., and Joshi, G.R. (2017). Value chain analysis of orthodox tea: evidence from Ilam district of Nepal. *Journal of Agriculture and Forestry University*, 1:61-68

Arya, N. (2013). Indian tea scenario. *International Journal of Scientific and Research Publications*. 3(7):1-10.

Borah, K and Das, A. K. (2015).Growth of small tea cultivation and economic independence of the indigenous people of Assam. *International Journal of Research in Social Sciences and Humanities*. 1(5).82-93

Directory of small tea growers of Assam. Department of Industries & Commerce. Government of Assam. 1:1-552

Government of Assam. Sonitpur district. www.sonitpur.gov.in/

Indian Tea Association. An institute of Trust and Assurance. www.indiatea.org

IndiaAgronet.com. Tea plantation guide | Tea cultivation. www.indiaagronet.com>tea

IndiKosh. Sonitpur. www.indikosh.com/dist/300966/sonitpur

Tea Board India (2001) Under Ministry of Commerce & Industry. Government of India. www.teaboard.gov.in