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AN EMERGING RURAL ENTREPRENEURSHIP IN ASSAM: MULTI-CROPPING WITH TEA

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Abstract
Discovery of tea is undoubtedly a silent boon for the people of India and it was the British who played the most crucial role in establishment and advancement of Tea Empire in Assam. Assam, the bastion of corporate sector tea plantation witnessed still another relatively new phenomenon since the latter half of 1970s when common farmers of rural areas in some Upper Assam districts started tea cultivation in their small holdings. The emergence of small tea farmers in the agro-based economy of Assam has heralded a new era of agricultural revolution throughout the state and has paved the way for rural industrialization and entrepreneurship development in the state. This revolution has triggered experiments among the small tea growers for various crop combinations with tea, thereby giving rise to the concept of multi-cropping with tea in small holdings. The practice of multi-cropping which grew spontaneously with the farmers of Assam without any training whatsoever is found to be a just and profitable business venture to augment their income. As of now, multi cropping with tea has emerged as a very popular farming model of rural Assam and is gradually shaping the form of a culture.

Introduction

Multi-Cropping Concept

Multi-cropping or multiple cropping, in essence represents a philosophy of maximum crop production per unit of land by producing several crops within one calendar year by maximizing the use of solar energy and other natural resources. Intercropping is one of the potential multiple cropping systems which is suitable for small farmers with sufficient labour supply. Intercropping signifies growing of two or more crops simultaneously on the same piece of land along with the main crop. The intercropping is considered as one of the potent means of increasing the income as it is expected to help in better utilization of resources and ensures higher return per unit area per unit time (Pandey et al., 1981).

Multi-cropping is a very natural phenomenon with ecology sanctity. Wheels of civilization have rolled out single plant cultivation for multi-facet activities like greater food security, crop diversification, trade etc. Micro economic concept of multi-cropping by the small tea growers has become a blitz due to their knowledge legacy of local ecology and environment. It is certainly a value addition to business.

What is Tea

Tea is the most ancient non alcoholic beverage that man has been enjoying and is the most popular drink consumed throughout the globe. It is a highly heterozygous and out-breeding plantation crop with most of its morphological, physiological and biological descriptors showing continuous variation and high plasticity (Richards, 1966; Banodyopadhyay & Das, 2008).

The word 'tea' is derived from the word *tay* in the dialect of Amoy in China and *Chae* is supposed to has been derived from the Cantonese word *Chah* (Baruah, 2003). The scientific description as well as nomenclature of tea dates back to the early part of 18th century defining three varieties of tea as outlined below:

a) The China Tea : *Camellia sinensis (L)*
b) The Assam Tea : *Camellia assamica (Maston)*
c) The Cambodia Tea: *Camellia assamica Sub sp. lasyocalyx (Planch. M.S.)*

Multi-Cropping with Tea

In tea plantation, there seems to have ample scope of multi-cropping and it is also reported by many scientists. For instance, inter-cropping tea with rubber in Sri Lanka allowed the generation of income from tea and reduced unemployment during unproductive period (5 to 6 years) in young rubber plantations and during periods when tapping could not take place. These planting systems reduced the limiting effect of shade on tea yield. Cost would be recovered after 6 to 7 years with the economic life span of the plantation being 25 years (Yogaratnam & Iqbal, 1998). In the field of multi-cropping, Deka (1999) took up an experiment on mixed cropping of tea with areca-nut and betel-vine (*Piper betle, L.)* and found that economic return obtained from tea, areca-nut and betel-vine was much higher than mono-cropping of tea which was evident from a gross return of Rs.1,54,625.00 per hectare against Rs.98,890.00 per hectare in mono-cropping of tea. This gross return might be more with the introduction of black-pepper (*Piper nigrum*) instead of betel-vine, because, black-pepper has high cash value as compared to betel-vine. Therefore, tea, areca-nut and betel-vine or black-pepper as a mix-crop combination bears a lot of expectation.

A Silent Boon for India

Discovery of tea is undoubtedly a silent boon for the people of India and it was the British who played the most crucial role in establishment and advancement of Tea Empire in Assam. With due experimentation in the field of culture and manufacture of tea in Assam proving successful, commercialization of tea was transferred to the hands of private entrepreneurs of British origin by the ruling British Government and subsequently the Indian tea industry became a strictly capitalist industry controlled by white imperialists i.e., the British.

In the very beginning, tea plantation was started on high-land covering a huge area, for which, labour was conscripted from different parts of India and garden inputs were purchased from Calcutta (now called Kolkata) and tea gardens of India assumed the shape of islands insulated from local society and economy under the aegis of British. In this context, history also revealed that the British planters actively discouraged Indian natives from competing with them in tea business and the pioneering Assamese tea planter *Moniram Dewan*, a notable figure of *Ahom* royal family and also a well known freedom fighter suffered as he dared to defy the British by setting up two gardens in Jorhat district of Assam, namely *Chenimora* (presently Chinnamora) and *Chenglung* (presently Seleng) (Borthakur, 2011).

At present, India has an estimated area of 5.79 lakh hectare of land under tea cultivation [Directorate of Economics and Statistics (DES), 2010]. Owing to certain specific soil and climatic advantages, cultivation of tea in India is confined only to the Brahmaputra valley and Barak valley of Assam, North-Bengal plains of Dooars, Terai in Darjeeling hills, Tamilnadu, Kerala and Karnataka in South India. The other tea growing areas include Arunachal Pradesh, Bihar, Himachal Pradesh, Uttaranchal, Meghalaya, Mizoram, Nagaland, Orissa, Sikkim and Tripura where the area under tea cultivation shows a grim picture.

Indian tea industry was once the leader in all aspects of quantity, quality and price – and is now the second largest producer of tea in the world accounting for 28 percent of the global output and 14 percent of international trade (The Economic Times, 2012). Since independence, tea production in India has grown over 250 percent showing an increasing trend in production from 285 million kilogram in 1951 to 981 million kilogram in 2009 and 988 million kilogram in 2011 of which less than 211 million kilogram was exported. India also commands 11 percent share of global tea export and is the fourth biggest exporter of the brew which stands at 1729 million kilogram annually (Department of Industries and Commerce (DIC), 2010a). The per annum net foreign exchange from tea export is around Rs.1847 crore over the last few years. The variety of tea offered by Indian tea industry is from Orthodox to CTC (Crush, Tear and Curl) and Green tea; from aroma and flavour of *Darjeeling* tea to the strong *Assam* and *Nilgir*i tea.

India happens to be the second highest consumer of tea in the world consuming as much as 815 million kilogram of the country's total tea production, the per capita consumption being730 grams, at present. As it stands today, tea deserves the national status and should be crowned with the tag 'National Drink of India' because its penetration is in the range of 96-99 percent in Indian households.

Tea industry in India has also a unique position as the largest employer in the organized sector and is the single largest employer of women in the country and significantly 50 percent of its workers are women. At present, this labour intensive industry employs directly 1.1 million workers and generates income for another 10 million people of the country. It also supports a number of ancillary industries in the country and contributes appreciably towards the central and state Governments' exchequers. Statistics reveal that the total turnover of Indian tea industry, at present, is Rs.1290 billion, with a total of 1692 registered tea manufacturers , 2200 registered tea exporters, 5848 registered tea buyers and 9 auction centers (DIC, 2010a). At the same time, India is the first country to introduce e-auction system in primary marketing of tea in 6 auction centers of the country which has replaced the 173 years old manual auction system of the industry.

Assam, the Heart of India's Tea Industry

Assam, the major North Eastern state of India is recognized as the heart of India's Rs.1.5 billion tea industry having world's largest tea growing region with native tea plants. Assam is located in between the 89° 42′ E to 96° E longitude and 24° 8′ N to 28° 2′ N latitude and is endowed with favourable climatic and geographical conditions like high precipitation, as much as 250 mm to 300 mm rain during the monsoon period and the daytime temperature of 103º F creating a green house like effect of extreme humidity and heat quite ideal for growth of tea cultivation in a wide range in Assam. At present, Assam has estimated 3.22214 lakh hectare of land under tea constituting 55.60 percent of all India coverage. (DES, 2010). The tea growing areas of Assam are Upper Assam and parts of Central Assam in Brahmaputra valley and Barak valley.

The commercial cultivation of tea in Assam was started in the year 1835 with setting up of a few numbers of tea nurseries in different places of present Dibrugarh and Tinsukia districts of Upper Assam under the supervision of Charles Alexander

Bruce. The experimental plantation was also initiated in the same year at Chabua region of Dibrugarh district (Barua, 2000). Gradually large area under tea cultivation is coming up and the entire Upper Assam districts viz., Dibrugarh, Tinsukia, Sivasagar, Jorhat and Golaghat are grown up as major tea pockets of Assam in particular and India in general. Assam tea is manufactured specifically from the plant *Camellia sinensis var assamica*. In the international market, the brand name 'Assam' represents a black tea which is being sold as 'breakfast tea'. Besides black tea, Assam also produces green tea and organic tea (black tea and green tea) in smaller quantities.

Today, tea industry in Assam is the mainstay of state's economy with a production of 499.97 million kilogram of tea in 2009 (DIC, 2010a). This industry also generates employment to 5 lakh permanent workers and 5 lakh seasonal workers. Another 10 lakh people are indirectly dependent on this industry for employments and services. Because of the enormous popularity among the consumers and significant contribution to state's exchequer, Government of Assam declared tea with the coveted tag 'State Drink of Assam' with effect from 22nd November, 2011 which is certainly a big job to give Assam a right status and special identity in international front.

Towards Rural Entrepreneurship

Assam, the bastion of corporate sector tea plantation witnessed still another relatively new phenomenon since the latter half of 1970s when common farmers of rural areas in some Upper Assam districts started tea cultivation in their small holdings. The advocate of this new concept was late Soneswar Bora, the former minister of Agriculture and Co-operative of the Government of Assam during 1970s. According to [Directorate of Tea (DT), 2001], the commercial cultivation of small tea was initiated in the year 1978 in Golaghat district of Assam. History also recorded the existence of the first tea farm established in 1950 in Kheremia region of Tengakhat block of Dibrugarh district owned by Sri Lokendra Bhattacharyya (DIC, 2010b). Soon after, more and more farmers came up in this unorganized sector of Assam tea industry and from the later part of 1970s, a gradual spurt was noticed. At present, there are 64,465 small tea growers in 14 major surveyed districts of the Brahmaputra valley of Assam (DIC, 2010a). It is important to note that according to the Tea Board of India and Small Tea Growers Advisory Programme (STAP), a person or group having 10.12 hectare or about 75 bigha (1 bigha = 14400 Sq.ft.) of land under tea is treated as small tea grower. On the other hand, the Govt. of Assam considers farmers with a holding-size less than 4.0 hectare as small tea grower (Gogoi,1999).

The small tea farms are heavily located in five concentrated districts of Upper Assam viz., Dibrugarh, Tinsukia, Sivasagar, Jorhat and Golaghat constituting 94 percent of state total. Among all the districts, Dibrugarh district records highest growth (19160) followed by Tinsukia district (18595) and together they account for 55 percent of total small growers of the state (DIC, 2010a). Presently, small tea cultivation is percolated down even to the non-conventional districts of Assam, like, Kokrajhar, Nalbari, Kamrup and Morigaon in addition to other districts viz., North Lakhimpur, Udalguri, Sonitpur, Dhemaji, Darang, Cachar, Karbi Anglong, Nagaon, Barpeta and Dhubri.

Small tea gardens are usually set up in the neighbourhood of big agency houses. Being late comers, these growers always do not find high land for tea cultivation. Availability of suitable land being a limiting factor for expansion of this highly remunerative enterprise, some of the farmers initially resorted to uprooting of existing areca-nut, orange, paddy, bamboo, sugarcane, citronella etc. cultivations. Soon, small holdings of tea bushes could be witnessed even in ceiling surplus land, grazing land, forest land, or in encroached Government land. However, a significant number of farmers were seen to be cultivating tea either in their existing areca-nut (*Areca catechu*) and/or orange (*Citrus × sinensis*) gardens, which has gradually become a common practice in many districts where fallow high land is not available for cultivation of tea. Considering the present trend in the state, it is certain that more and more area will be brought under tea by the common farmers in near future.

During the boom in the tea industry in the late nineties of the twentieth century, the price of green leaf even touched the level of Rs. 22.00 per kilogram in some pockets of Upper Assam and no-one received less than Rs.12.00 per kilogram throughout the Dibrugarh and Tinsukia districts of Assam. This spurt in green leaf price was very lucrative and prompted a sizeable number of Assamese villagers who traditionally used to cultivate areca-nut and orange in large scale in their farm-land started planting tea seedlings together with areca-nut and/or orange. Thus, during the late nineties of twentieth century, in the practice of multi-cropping, majority of the planters introduced tea as a second crop in their already existing areca-nut and/or orange gardens.

At this juncture, it was also realized that such profit may not sustain in the long run unless the limited land of the farmers are utilized to the maximum and therefore, some foresighted small tea growers who did not initially resorted to multi-cropping

practice, thought of some alternative ways to augment their income through the utilization of their existing plantation area and the concept of multi-cropping thus got materialized once again through plantation of some other cash crops in their existing tea plantation. Eventually, gradual fall in the price of green leaf due to the depression in tea industry during the early part of 21st century was a shocking event to the small tea growers of Assam. Thus, in order to get rid of such malice, cultivation of crops like black-pepper and betel-vine were also taken up together with tea. Still other crops like lime (*Citrus aurantifolia*), lemon (*Cirtus limonium*), sweet-lime (*Citrus limettioides*), goose berry (*Ribes uva-crispa*), pomelo (*citrus maxima*), pears (*Pisum sativum*), coconut (*Cocos nucifera*), agar (*Aquilaria malaccensis*) and fan palm (*Livistona chinensis*) were also introduced on experimental basis in a very limited extent by a handful of planters in their existing tea plantation.

It is also observed in many cases that inter-planting of tea in areca-nut plantation increases the yield of areca-nut. This is obviously due to the fact that areca-nut palms, which are otherwise not properly taken care of by the common farmers, receive care along with tea in respect of nutrition, drainage, fertilizer and other management practices (Deka, 1999).Thus, multi cropping with tea has emerged as a very popular farming model of rural Assam and is gradually shaping the form of a culture. This practice of multi-cropping which grew spontaneously with the farmers of Assam without any training whatsoever is found to be a just and profitable business venture to augment their income; but as a sizeable number of small growers are yet to initiate multi-cropping, the problem of slashing green leaf price still poses a serious threat to them. Therefore, multi-cropping with tea can be adopted as a new and viable model by such growers. Thus, the emergence of small tea farmers in the agro-based economy of Assam has heralded a new era of agricultural revolution throughout the state and has paved the way for rural industrialization and entrepreneurship development in the state. This revolution has triggered experiments among the small tea growers for various crop combinations with tea.

At present, the total land coverage by the small tea growers of Assam is around 1,17,000 acre and about 60.04 percent farmers of Assam are marginal having holding size less than one hectare, while 22.6 percent of the holdings are between 1 to 2 hectare. Out of the total small tea growers, majority of them (59,717 nos.) have land holdings less than 3 acre (DIC, 2010a). Although small in size, these small tea farms have been in practice of cultivation much above the break-even level, thereby indicating the fact that small tea gardens are economically viable (Saikia et al., 2003). Presently, the small tea industry of Assam contributes a sizeable amount of green tea produce which is 25 percent of state's produce and 14 percent of country's overall produce (DIC, 2010a).

Hiccups

Nevertheless, it is a sorry state of affair that in spite of their sizeable contribution to the state economy of Assam, this agro enterprise has been facing harsh realities in their endeavour towards prosperity. As it stands today, the small tea field may be considered satellite green leaf production center for the factories of existing tea estates or newly developed bought leaf factories. The small entrepreneurs as they emerge today are subordinate to the richer estate houses or bought leaf factories with a most disadvantageous position so far as the pricing of green leaf is concerned. The collectivized small tea growers of Assam are on the fringe of this position until and unless some cooperative factories like that of one located at Charaipung are brought into full operational form (Taparia, 2003).

Majority of the small tea growers sell green leaf to the local agents who in turn sell the same either to bought leaf factories or to the big agency houses. In the absence of any established pricing mechanism, the big manufacturers and bought leaf factories fix the price of green leaf at their own advantage and this appears as a great setback to the small tea cultivators. The recent drastically slashing down of green leaf price to Rs. 5.00 from Rs. 20.00 per kilogram in October, 2011 has appeared as a mighty blow to the small tea growers of the state. The outburst of this apathy could be visualized in the recent past through the disheartening scene of throwing thousands of kilogram of fresh green leaf by the wretched growers on the highways of Brahmaputra valley of Assam as a mark of protest.

Conclusion

Though the farmers experience diverse constraints in varied degrees, for their survival and existence as a small player in the agro-industrial sector of Indian economy, it could be quite possible to co-ordinate and integrate all the agencies related to cultivation of tea either on large scale or on small scale for the betterment of the farmers and for the overall prosperity of this lucrative trade. Moreover, this business is quite a good means to solve the burning unemployment problem of the state, since it has diverse provision for self employment, employment of workers and wage earners, scope of business for agro-chemicals and fertilizers, green leaf careers, bought- leaf factories and different tools and machineries. This industry generates direct employment to around 1.2 million people over the state. Given the proper utilization of land resources through ideal crop population, the practice can generate commendable income for the small tea growers.

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