Journal of Agroecology and Natural Resource Management
Print ISSN: 2394-0786, Online ISSN: 2394-0794, Volume 2, Number 1; February-March 2015 pp. 61-64

http://www.krishisanskriti.org/janrm.html

An Analysis of Agrarian Structure and Its Impact on Economy of Assam

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Abstract—*Assam being located in the south of eastern Himalayas is divided into three natural divisions, that is, Brahmaputra valley, Barak valley and the hills. It has a total geographical area of about 30,285 square miles. The state being endowed with rich natural resources which are favourable for agricultural growth. Its agrarian system which is developing into a more market oriented system still shows very poor performance. Various reasons have been cited for lack of development of agrarian economy of Assam. Due to the frequent floods and lack of assured water availability, many farmers have adopted risk averse strategy of not using purchased inputs (Goyari 2005). Various studies suggested that the exploitation of natural resources and use of modern inputs is much lower in Assam as compared to rest of the country. Tenancy is still very rampant most parts of the state. Fixed rent in cash and sharing cropping were the major payment system. Numerous studies examined the various dimensions of Assam's agriculture and its challenges, but unable to give a concrete argument as to why this sector showed a declining trend over time. The growth of agricultural sector is poor with its contribution to the SGDP falling from 48% in 1970-71 to 22.8% in 2012-13. Thus, it leads one to the paradox of low level of agricultural growth in a state which is endowed with such rich resources suitable for agricultural growth. All the dimensions of the agrarian structure are complementary to each other. Thus it becomes very crucial to undertake a study in totality on the entire agrarian structure of Assam and its impact on the economy. Study dimensions included the performance of agricultural sector in terms of its contribution to SGDP and changes in composition of agricultural GDP over time and agricultural sector at the disaggregate level.*

1. INTRODUCTION

Assam being located in the south of eastern Himalayas is divided into three natural divisions, that is, Brahmaputra valley, Barak valley and the hills. It has a total geographical area of about 30,285 square miles out of which Brahmaputra valley consist of 72% of the total geographical area, Barak valley with 9% of the geographical area and the hills accounts for 19% of the area of the state. The two valleys are named after the two giant rivers flowing through the state *viz.* the Brahmaputra River and the Barak Among these three divisions, Brahmaputra valley is most densely populated accommodating 85% of the total population in the state. Assam is also divided into six agro-climatic zones on basis of soil characteristics, terrain, land use pattern, climate namely North Bank Plain, Upper Brahmaputra valley, central Brahmaputra valley, lower Brahmaputra valley, Barak valley and Hills.

Agricultural and its allied activities are considered to have a significant importance in the economy of Assam supporting almost 70% of the population of the state. People employed under this sector take part in these agricultural activities as farmers, agricultural laborers, and in some cases both in order to sustain their livelihood. It is a state falling neither in highly irrigated nor semi-arid tropic areas, but a region under sub-tropical humid climate endowed with fertile land, abundant water resources and heavy rainfall, besides a variety of natural resources however, awaiting its proper utilization. (Goyari 2005:2723). However, the growth of agricultural sector is poor with its contribution to the SGDP falling from 48% in 1970-71 to 22.8% in 2012-13.Thus it leads to one to the paradox of low level of agricultural growth in a state which is endowed with such rich resources suitable for agricultural growth. On the basis of the above context it is indispensible to examine whether the present agrarian structure is conducive for the agricultural development.

2. AGRARIAN STRUCTURE

Agrarian structure can be divided into two categories namely: (1) Land tenure system. (2) Land Management System (Kuhnen,1995). The agrarian system can result in the agrarian structure that prevails in a rural society. However, changes in the agrarian structure of a rural society can also lead to a change in the agrarian system. British rule in Assam resulted in a radical change in the land tenure system. They started with the system of private ownership of land. Bhadra(1979) had argued that after the independence significant changes had occurred within the agrarian structure. According to him land reforms in the post-independence period had played a vital role in changing land tenure system. It tried to alter the class structure and thus make the relationships among the new emerging classes relatively equal in economic terms. He found that there was a transfer of ownership of land to different classes. Three kinds of payment

system had prevailed in Assam: (a) Fixed cash rent system (b) Share cropping (c) fixed rent in kind. Adhiar protection Act, 1948 had tried to make this payment system more progressive by reducing the burden on the tenants however, the author argued that it was not implemented well. Thus, there was an emergence of new class within the society, and different contractual relations had emerged. He also argued that agricultural production was commercialized. Thus in context of Assam the author argues that this change in the tenurial system had altered the various economic and social relationships among the different classes to a large extent. The study should have focused on the land management aspect of the structure.

Goswami (1963) states that proportion of families with land ownership rights and who leased in land was higher. On the other hand, agricultural labourers were relatively lower. The low percentage of agricultural laborers was mainly due to the lack of opportunities in the agricultural operations especially in the slack season. The author talks about the low concentration ratio and basis his arguments on the prevalence of ryotwari system in most parts of Assam as the one of major reason behind this. The argument of low concentration low due the presence of ryotwari system of land tenure system can also be supported by the findings of study which was conducted for the whole of India by Baneerjee and Iyer (2005). Baneerjee and Iyer (2005) had argued that the distribution of land was more unequal in the regions where zamindari system was prevalent compared to non-landlord regions. Based on these results it can be justified in saying that the exploitation in Assam is much lower when compared to rest of the country. Tenancy could be found in most parts of the state. Fixed rent in cash and sharing cropping were the major payment system.

“Landholding per family and the nature of the holdings affects the economic efficiency of farming considerably.”(Goswami 1963:56). According to the agricultural labor survey 62% of the total holdings are below five acres. The study finds that one of the major constraints which an agricultural household faces is the smallness of the holding. Goswami(1963) found that the average size of the farm was relatively larger than average size of the holding among the small farm group. He justifies his arguments by emphasizing on the fact that small farm holders attempts in enlarging their farms by renting land from others. On the contrary, large land holdings were keen on renting out. Paddy which comprises of about 70% of the total cropped area is the major crop of Assam. Thus on the basis of the state surveys this study also attempts to find a relationship between the cost of production of paddy and the farm size. It argues that there is an inverse relationship between the two. The author explains this with the help of the concept of inverse relationship between yield and farm size. In other words, lower farm size leads to higher yield. This further implies that cost of production will be higher in this case due to more man days per unit land. However, it can be argued that the debate regarding the inverse relationship between yield and farm size is inconclusive as there are other factors affecting this relationship apart from opportunity cost and now with development of various markets for inputs the cost of production does not solely depend on man days.

Goswami(2012) found that if various groups are made on the basis of the size of the ownership then share of marginal holding in the total holding is highest among all the groupings. Indeed the share has actually gone up over the years. In terms of area, while the share of marginal holdings had increased from 22.15% in 1971-72 to 44.42% in 2002-03, those of all other but the small categories had come down over the same period (Goswami 2012). Even in the case of operational holding the share of marginal holding has gone up considerably. The main factor contributing to the growing share of marginal holdings can be attributed to the increasing population pressure and decreasing size of the land due to inheritance. Various studies have shown that incidence of tenancy is extensive in Assam. Goswami (2012:181) has examined the incidence of tenancy and has found that most of the tenancy contracts are informal thus a full picture of the incidence of tenancy cannot be found. The study also found that tenancy contracts are usually for a short duration and this short duration of the contract is detrimental to the agricultural growth. Thus one can conclude that a proper institution is essential in order to make the agrarian structure more conducive for development.

Kuhnen(1995) and Joshi(1969) argued that the goal of a cultivator has changed from producing food for his subsistence to that of maximizing his return so that he can sustain himself as well as sell in the market. However, on the basis of the existing studies (Goswami 2012, Chand et al.), one can argue that Assam is still lagging behind when it comes to a more market oriented approach. “In order to achieve lasting increases in agricultural production it is necessary to leave the level of an economy based on self-sufficiency and enter a stage of agricultural production interlaced with the market” (Kuhnen 1995: 19). Goswami (2012: 171) studied very briefly the socio economic environment which largely determines the performance of the agricultural sector. There were in fact certain interesting findings which showed commercialization of agriculture has resulted due to the development of certain markets for services such as pump sets, power tillers. The study further states that due to these development of different dimensions of the modern agriculture have resulted in the decline of inequality among different groups of farmers (groups formed on the basis of the size of the farm operated). Thus now irrespective of whether a cultivator belongs to the group of small holdings or large holdings can use these modern technology and inputs at much cheaper rates.

3. CHANGES IN AGRICULTURE IN ASSAM:

Agriculture in the Assam is characterized by low level of productivity due to recurring natural calamities, low level mechanization, inadequate availability of quality inputs, poor soil health, low level of assured irrigation and inadequate marketing infrastructure" (Dutta, Deka 2014). One of the major challenges which farmers in Assam face is the frequent occurrence of floods. Rice is the dominant crop in Assam. Moreover, as rightly pointed out by Goyari (2005), relative effect of flood is more on rice since it is grown in the low-lying areas. The author further states that the high frequency in the occurrence if flood have led to the change in the cropping pattern and particularly among the three categories of rice.

As previously mentioned, farmers in Assam has been shifting towards commercialization of agriculture. Moreover, farmer's attempts have been on maximizing the production in order to meet the diverse family needs new market demand. Thus this implies that the process of cultivation in this era is not only dependent on traditional factors but further on many other factors outside agriculture such as prices prevailing in the input and output market etc. "A higher level of agricultural production, stimulated by the increasing demand, is the result of new technologies in agriculture, in other words, new methods of how to do it" (Kuhnen 1995: 19). Various studies have been done to examine whether farmers have adopted modern technology and inputs and whether the utilization of these inputs is efficient. Among these inputs, irrigation is one of the most vital inputs in enhancing agricultural production. "Irrigation is the means of making agriculture relatively less dependent on uncertainty of rainfall and encouraged the farmers to go multiple cropping and to adopt new farm technology with modern inputs" (Saikia:2004). Saikia(2004) also argued that Assam is situated in the heavy rainfall zone and traditional system of farming which mainly focused on single cropping was practiced. Hence the importance of irrigation was not felt by the farmers and also by the state. The author stated in his report that demand of irrigation was driven by high population growth rate, introduction of HYV seeds and improved agricultural practices. On the other hand Goyari(2008) had argued that importance of irrigation was felt due to the change in cropping pattern with summer rice and rabi crops emerging as the major crop. Thus considering the rising importance of these crops which are grown when the rainfall is scare implies that availability of irrigation is crucial and necessary. Goyari (2008) and Saikai(2004)) studied the irrigation situation in Assam and found that even though Assam has a huge potential of improving the status of agricultural production through development of irrigation the irrigation potential created is very poor. Moreover, "irrigation potential utilized had not been able to keep pace with that of the potential created". (Goyari 2008: 591).

4. USE OF MODERN INPUTS

Existing studies also showed that even though cultivators in Assam have started opting for modern inputs, technology and use of fertilizers their usage rate is far behind national average. "Due to the frequent floods and lack of assured water availability, in fact many farmers have adopted risk averse strategy of not using purchased inputs such a HYV seeds, chemical fertilizers, pesticides, etc"(Goyari 2005: 2726). This could be one of plausible reason as to why even though farmers opted for a more market oriented production with the basic goal being maximizing the returns they still has not reached the most efficient outcomes. Savapandit (2005) examined the level of consumption of fertilizers in Assam and found that Assam showed a very low level of fertilizer consumption. Savapandit(2005) argued that the main reasons for the low level of fertilizer consumption can be were fragmented holdings, risk of flood, absence of assured irrigation, high prices for fertilizers, defective distribution of fertilizers, inadequate marketing, etc.

5. CONCLUSION

Production and productivity of the agricultural sector can be increased with suitable policy measures under the existing agrarian structure of Assam. The performance of agricultural sector in terms of its contribution to SGDP and composition of agricultural GDP over time has to be analyzed. Further, how the composition changes over time and study on agricultural sector of Assam at the disaggregate level will reveal the challenges to be addressed for development of agrarian economy of Assam .

REFERENCES

[1] Agro-Economic Research Centre for North-East India (2005).Reasons For Low Level Of Consumption of Fertilizer In North-Eastern Region- A Study in Assam. Jorhat. Agro-Economic Research Centre for North-East India.

[2] Agro-Economic Research Centre for North-East India (2004).Impact Of Shallow Tube Well Irrigation on Crop Production in Assam. Jorhat. Agro-Economic Research Centre for North-East India.

[3] Baneerjee, A and Iyer, L (2005) 'History, Institutions and Economic Performances: The Legacy of Colonial Land Tenure Systems in India' The American Economic Review.95(4): 1190-1213.Bhadra, R.K (1979) 'Rural Class Struggle in Post-Independence Assam' Economic and Political Weekly.14(4): 165-167

[4] Chand, P, Mishra, A, Singh, S.R.K, Dwivedi, A P and Athare, Tusar (2014). In:Singh, Ram, NaikDivakar, Feroz S.N Agri Business Potentials in India: Experiences from Hill States. Guwahati, New Delhi: EDH Publisher

[5] Dutta, Sumi and Deka, N (2014) 'Crop Sector Scenerio of Assam: A Statistical Outlook'. In: Singh, Ram,

[6] NaikDivakar, Feroz S.N Agri Business Potentials in India: Experiences from Hill States. Guwahati, New Delhi: EDH Publisher
[7] Goswami, P.C (1963) The Economic Development in Assam. Calcutta: Asia Publishing House.
[8] Goyari, P (2005) 'Flood Damages and Sustainability of Agricultural in Assam' Economic and Political Weekly , 40(26): 2723-2729
[9] Goswami, Binoy. 2012. Economic Implications of Tenancy: A Study in Assam's agrarian Set-Up. PhD Thesis submitted to Economics Faculty of Arts, Gauhati University, Assam.
[10] Goyari, P (2008) .Scarcity In The Midst Of Plenty: Irrigation Development For Water Abundant Assam. http://publications.iwmi.org/pdf/H042922.pdf. (Last accessed on 16 November 2014)
[11] Joshi, P.C (1969) 'Agrarian Structure and Social Changes' The Indian Journal of Statistics .31 (¾): 479-490.
[12] Kannan, K.P and Pushpangadan K (1988) 'Agricultural Stagnation in Kerela: An explanatory Analysis' Economic and Political Weekly. 23(39): A120-A128
[13] Kuhnen, Frithjoh. 1995. Aspects of Agrarian Structures. http://www.professor-frithjof-kuhnen.de/publications/pdf/aspects%20of%20agarian%20structures.pdf.Unpublished manuscript.(Last accessed on 16 November 2014). to the group of small holdings or large holdings can use these modern technology and inputs at much cheaper rates.