

Analysis of Primary Sector Growth in Tripura: Challenges and Recommendation

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I. Introduction

Agriculture is the bedrock of the Indian economy primarily because of the source of livelihood for about 58 per cent of India's population. Gross Value Added by agriculture, forestry and fishing is estimated at **Rs 18.53 trillion (US\$ 271.00 billion) in FY18** (IBEF). The primary sector has an important potential demand base for both industry and services sectors, in addition to being the supply base for food and raw materials. The better performance of agriculture therefore has a direct and multiplier effect across the economy.

Overall, growth in the agriculture sector **increased from -0.2% in 2014-15 to 6.3% in 2016-17** and then **declined to 2.9% in 2018-19** indicating a fluctuating growth. **Gross fixed capital formation** in agriculture has **decreased from 17.7% in 2013-14 to 15.2% in 2017-18**.

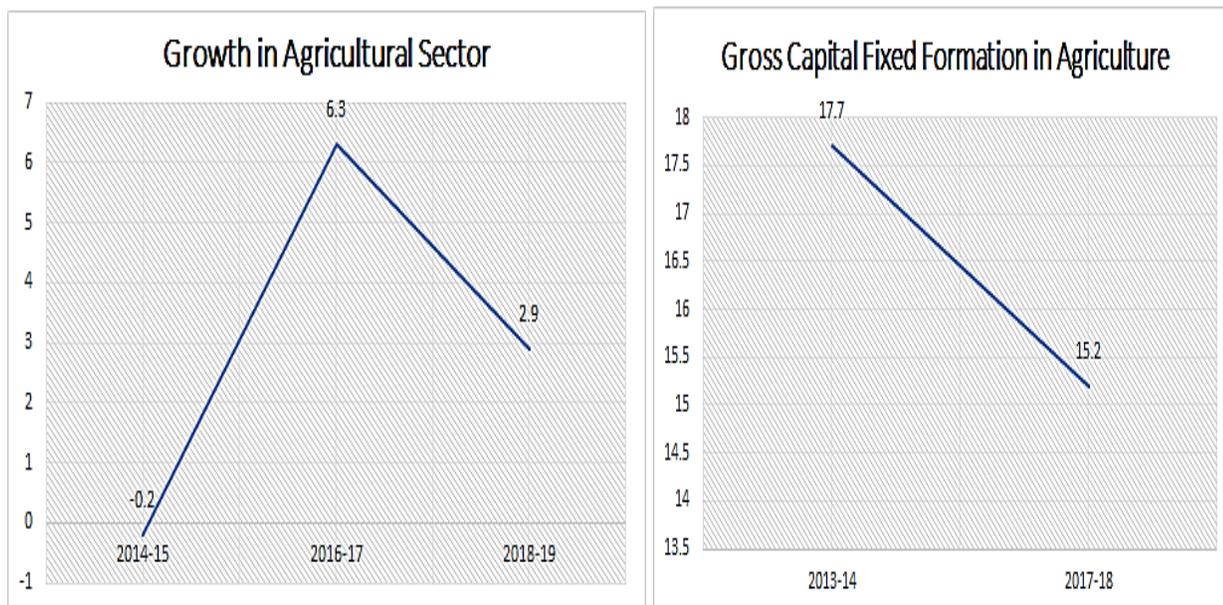


Figure 1: GVA and Gross Capital Fixed Formation (Author's Visualization)

Sectorally, the contribution of agriculture to the GVA has also decreased from 15% in 2015-16 to 14.4% in 2018-19, attributed mainly to a decrease in the share of GVA of crops from 9.2% in 2015-16 to 8.7% in 2017-18.

Unfortunately, the growth potential of *hill agriculture has remained under-exploited* due to lack of system-specific production technologies, poor infrastructure (transport, markets, processing) and underdeveloped institutions (credit, extension, information, insurance), notwithstanding the structural constraints imposed by difficult terrain, inaccessible habitations, diverse socio-cultural and agricultural typologies, and small, scattered and fragmented landholdings.

II. Primary Sector in Tripura

Tripura is a state in North-East India which borders Bangladesh, Mizoram and Assam and surrounded by Bangladesh on its north, south and west. Agriculture is the state's dominant sector which contributes 23% to the Net State Domestic Product (NSDP) as against national average of 13.9%. The total geographical area of Tripura is 10, 49,169 hectares with a net sown area of 2, 55,485 ha (25%), far below the national average of 43%.

Despite the natural conditions in Tripura being ideal for diverse patterns and varieties of cultivation like cereals, pulses and other food crops, plantation crops, and of a rich range of agricultural and horticultural crops, the primary sector still lags. Over the period of 1999-2000 to 2014-15, production of food grains increased from 5.13 lakh MT to 7.68 lakh MT. However, a steady increase in gap between requirement and production. However, according to the Tripura Economic Survey of 2017-18, the total production of rice has marginally declined to 8,10,673 MT (Provisional) in 2017-18 against 8,21,055 MT in the previous fiscal of 2016-17. The total food grain production has also marginally declined to 8,54,562 MT in 2017-18 (Provisional) from 8,59,023 MT in 2016-17 indicating how the primary sector has not been stagnating over the years.

Different reasons that has led to stagnation of Agriculture in Tripura:

1. Cultivable land

Two-thirds of the total geographical area of the State is hilly in nature and another major part comprises of Reserved Forests which creates a shortage of cultivable land. Of the 10.49 lakh ha geographical area of the state, 59.99 per cent is under forest cover and another 13.93% per cent is not suitable for agricultural activities. About 1.18 per cent of land is under tree crops and permanent pastures and not included under net sown agricultural areas which is only 24.33 per cent of the total geographical area of the state, well below the national average of 43. Moreover, about 96 percent of agriculturists are marginal and small farmers holding less than 2 hectares of land. Because expansion is not possible, modernization is the only way to increase production and productivity, but that is also happening slowly due to the lack of proper technological innovation and their dissemination in the state.

2. Irrigation Potential

Irrigation is the weakest link in the production system in the State. As against availability of our 2000 mm annual rainfall, 2.04 lakh ha groundwater reserve, the existing arrangements for extending assured irrigation facilities to the cultivating crops is only about 70,000 ha ie. 27% of the present net sown area and 15% of the gross cropped area. The issues get further aggravated due to recurrent droughts and floods occurring due to climate change and fragmentation of land holdings.

3. Access to Credit

Financial institutions need to take a more proactive role for increasing credit flow to Agriculture and Allied Sectors for more inclusive growth as the coverage under KCC and average amount of loan provided through KCC, RRBs in the state is still very low. Moreover, micro-finance institutions in Tripura have failed to provide the much-needed financial inclusion to the farmers. Increased PAR, and NPAs have made the existing banking system of NE, in particular Tripura fragile and burdened. There is still a large informal banking sector lending at an exorbitant rate. Further, access to agricultural credit is linked to the holding of land titles. As a result, small and marginal farmers which is 96% in the case of Tripura, may not hold formal land titles, are unable to access institutionalized credit.

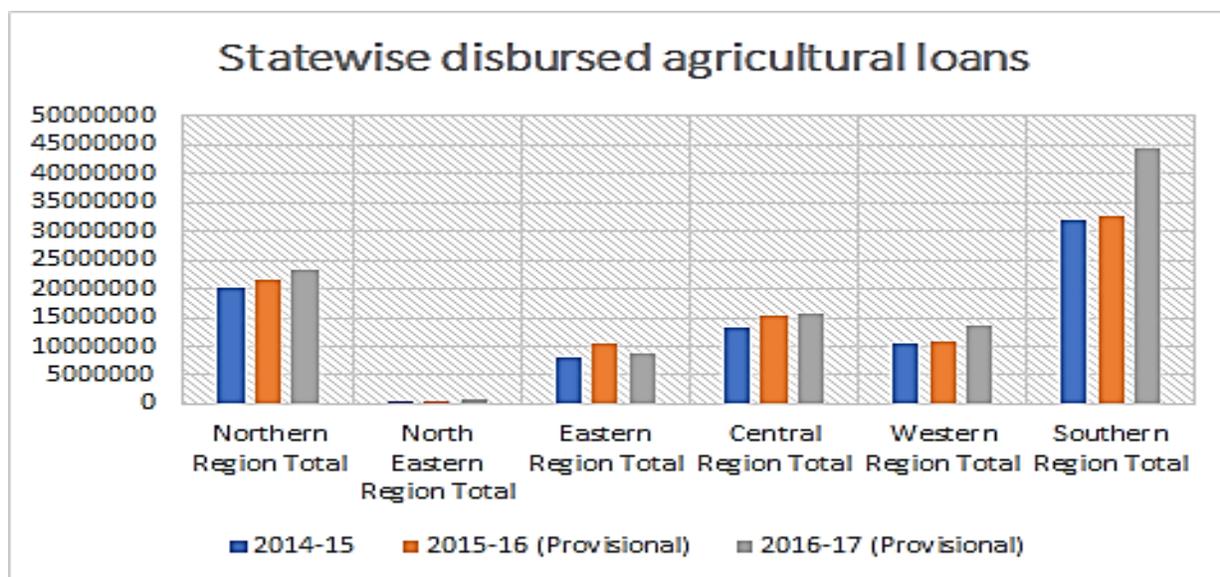


Figure 2: Agricultural Loan Disbursement (Author's Visualization)

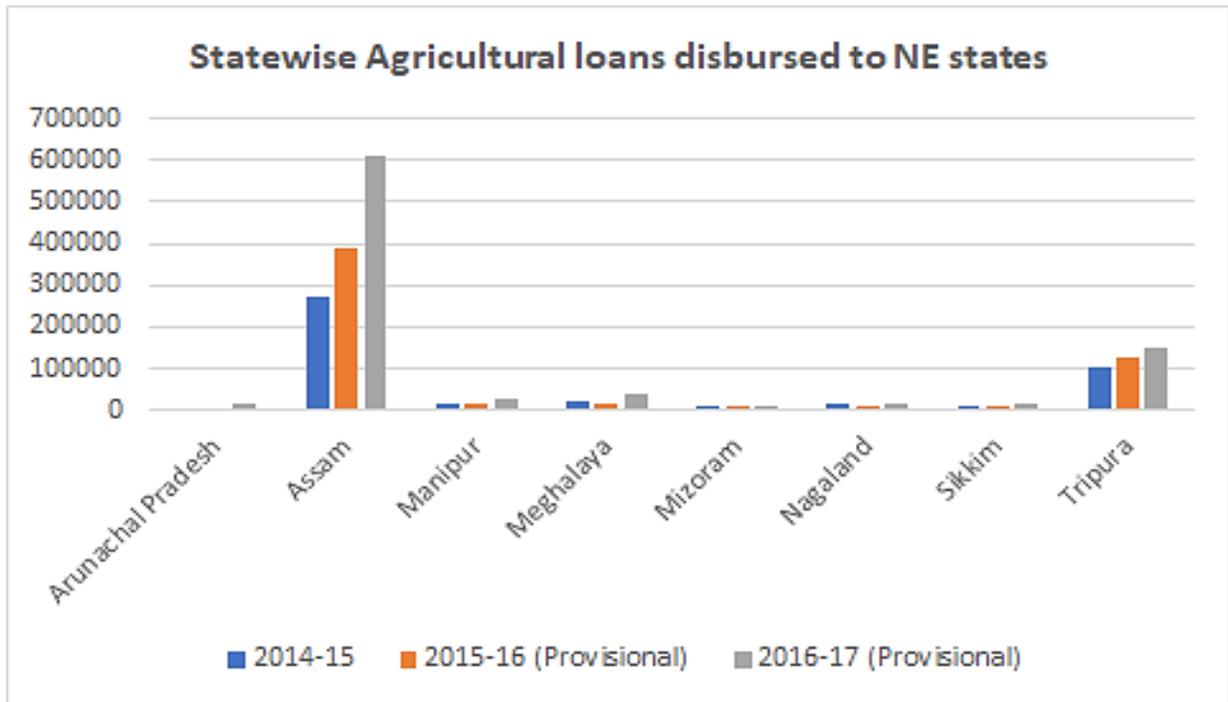


Figure 3: State wise Agricultural Loan Disbursement in North East

4. Agricultural Education & Research

Considering the difference in agricultural soil, climate, crops and cropping pattern in the North Eastern states, dedicated agricultural education, research and extension up to grass roots is very important for proper sustenance and an increase in production and productivity in agriculture. But, due to various technical reasons, research in agriculture lags behind. Technology goes directly from lab to land without prior research about their suitability to farmers. The suitability or preference of farmers or consumers are not tested beforehand. For this reason alone, many technologies have failed in spite of their scientific merit. Moreover, R&D in agriculture lags behind due to inadequate funding. This directly impacts the entire primary sector of Tripura like agriculture, horticulture and fisheries.

5. Inadequate funding for Agriculture

Major source of funding for agriculture comes from the central government which is fluctuating most of the times. The state funds are not adequate to increase the manpower to form dedicated extension machinery for efficient functioning, take up agricultural research and development and invest in agricultural infrastructure. Absence of agricultural marketing management infrastructure has resulted in a lack of marketing policies, the study of market infrastructure.

6. Farm Mechanization and Extension Services

In an agrarian economy like Tripura, where the majority of the farmers are either marginal or small landholders, extension becomes an important component in agriculture and allied sector. However, scientific cultivation still lags behind in Tripura. Issues with farm mechanization and extension are primarily due to too many stakeholders being involved in the extension services like the department of forestry, fisheries, agriculture, ICAR for North-East et al. Moreover, the departments are further limited in terms of manpower. The public extension system is the sole extension provider in the state without any presence of the private sector. Since 96% of the farmers hold less than 2 hectares of land, mechanization on fragmented landholdings gets very difficult.

7. Infrastructure deficit

The necessary agricultural infrastructures like adequate warehousing, storage, rural all-weather roads, electricity and transport which restricts the growth of the primary sector.

According to a working paper on the Status of Agricultural Markets and Value Chain in Tripura 2018, by the National Institute of Agricultural Extension Management(MANAGE) this poor infrastructure reduces the shelf life of commercial products like pineapple, jackfruit, litchi, potatoes, fish, etc compelling the farmers to go for farmgate selling of produce at a low price.

Rice is the major crop in the state but there is only one modern rice mill in the state. The infrastructural facility in the rural markets is poor and the private traders are operating in procuring agricultural produce. Of the 555 Primary Rural markets in the state, 84 are Wholesale Assembling Markets and 21 are regulated markets. Though a huge quantity of fish, meat, dry fish, and livestock is traded in these markets, there is no scientific slaughter house, frozen chamber for dressed meat and fish, cool chambers, refrigerated vans, Agricultural Extension Systems in Tripura 27 warehouses, etc. in or near the market yard.

8. Horticulture

Traditionally, Agriculture in North East, Tripura, in particular, has been as a subsistence profession generating food for household consumption. However, its potential for commercialization and growth has been ignored. Despite the high-value crops occupying a good area of gross cropped area, lack of remunerative and reliable markets, fund availability, popularization of horticultural crops and poor infrastructure restrict harnessing their growth potential. A huge shortage of technical manpower in the horticulture sector has been a major bottleneck in increasing awareness about it.

9. Rubber Cultivation

Besides Tripura is the second-largest rubber producing state in India, with 33.7% of the potential area under rubber cultivation, constraints like high cost of cultivation, low productivity, quality up-gradation, scarcity of estate inputs and fertilizer, development of skills, operational difficulties due to insufficient manpower, insufficient supply of planting materials, remoteness of planting locations & poor communication facilities limit proper commercialisation of the crop and inhibits its expansion and growth.

10. Fisheries

Fish is an important diet constituent of more than 95 per cent of the population. It is one of the states which has pledged to attain self-sufficiency in fish production bearing a direct impact to the livelihood and economy of Tripura. But constraints like genetic degradation due to the repeated use of the same parental stock for inducing breeding, lack of soil and water quality mapping, continued siltation of rivers, lack of research facilities, less training and awareness among fish farmers on scientific fish culture limit the potential of Tripura to attain self-sufficiency.

III. Recommendations

1. **In order to improve rubber cultivation**, it is recommended to evolve high yielding and stress tolerant clones through R and D. Further evolution of rubber based sustainable farming models through trials with other crops, farming practices which will increase the yield and reduce cost and suitable harvesting systems will produce better cultivation. There is an increasing need to conduct studies on diseases and environmental stresses like low temperature, high altitude through velocity of wind etc.
2. **Reviving the agricultural infrastructure** like all-weather rural roads, warehousing and storage facilities. It can be done by seeking convergence with schemes like Non lapsable pool for North East. Proper market and post-harvest infrastructure development along with focus on roads, warehouse, cold storage facilities are also required based on the need of the state, especially for fruits, diary, and dressed meat. In collaboration with Indian Railways, facilities to import and export agricultural produce through railways needs to be put in place at the earliest.
3. **Policies to develop fisheries in Tripura** should focus on education to farmers on fish culture: Usage of tools and approaches that make learning easy and practical and is successfully used by many organizations Further educate subsistence farmers to farm for profit. Fisheries department should also explore ways to strengthen research division and promote farmers participatory research to solve location-specific problems and evolve new technologies.

Moreover, categorization of farmers under a unique initiative by the Department of Fisheries was observed in categorizing of farmers based on their productivity/performance rather than the size of the pond they own. This has helped in efficient disbursement of technology to the rightful people.

4. Producer aggregates: An organized value chain system does not exist in Tripura yet. The state is yet to become self-sufficient in the majority of the agricultural produce, and in such a condition, the focus of policy and extension is still on increased production and productivity. Trained extension personnel can be properly trained so they can facilitate the farmer producers into forming groups to produce and market their products in and outside the state with value addition. Line department and NABARD in the state has worked on creating producer aggregates in the form of Self Help Groups, Producer Organizations, Producer Associations, Farmers' Clubs, etc In horticulture, flower Producer Organisations and Vegetable Growers Associations were formed but disbanded soon due to weak leadership development and conflict management. Similar trends are observed in fisheries as well. A total of 37 fishermen aggregates were formed by the Fisheries Department, of which none are functional as reported by the study on the status of Agricultural Markets and Value Chain in Tripura 2018.

5. For Improving mechanization and extension services

- Skill and technical development of the manpower and improving their documentation skills
- Dedicated extension mechanism: A dedicated extension mechanism is needed in the state in line with that of Rubber Board, for efficient technology adoption and dissemination
- Training programs need to be conducted to create awareness among the extension personnel on how to increase market orientation and also act as a facilitator in connecting various national and international agencies with the state department for increased export of high value products.
- Convergence between line departments is essential to provide a platform for technology dissemination and sharing of good practices that exist within sectors but are not being replicated as they are not getting highlighted.

6. For access to institutional credit, digitization of land records shall be initiated for availing a revolving credit like Karnataka's e-bhoomi. Moreover, a risk sharing model shall be developed to share the risks between farmers and the government.

IV. Discussion

There is a global demand for being less protectionist in the areas of domestic and international economic policy making where economies of scale and size are opening up their markets for higher integration with chances of doubling export income. This trend of globalisation has been picked up by low- and middle-income countries who are now participating more towards value chains while exposing their marginal income enterprises to higher shocks making them unstable and more dependent on foreign direct investments (FDI) for growth and profits (Nathan and Kelkar 2000). Indian economy has become a key participant in this global growth story while rapidly driving industrialisation for its agrarian situation that has been suffering from decline in real wages for a decade now. Share of agriculture which is a major share in the primary economy has progressively declined to less than 15% in the last ten years with an average of 4 to 10 % loss in crop output post-harvest depending on the various States respectively (Singh, 2017). While there are several distresses to the agricultural situation in India like low productivity and shortage of farm credit, fair remunerative prices are one of the biggest concerns that can be solved by increased linkage and participation in value chains, better market reforms and most importantly shed the long lasting regulatory reforms that are prevalent in India. Thus for a way forward to sustainable economic growth States government should focus actively on export promotions and linkage of smaller producer organisations into large scale units. It is important that primary sectors are not seen in isolation, but as an ecosystem where allied institutions are also eligible participants. To sum it up for the North-eastern States specially Tripura the political will should be in reforming the primary structure than promoting secondary non-seasonal employments, a skilled workforce is an asset to such growth stories and the North-eastern regions can be champions in such a success story.