

Income Augmentation in Small Farm Agriculture from Adoption of Rubber Production: Study in Northeast India

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Background

- In a bid to increase production of natural rubber, the Rubber Board of India has been promoting rubber production in non-traditional areas.
- In response, rubber plantation and production has been picked up by farmers in many parts of Northeast India
- The Northeast region constitute about 8% of area, 4% of population and 2% of GDP of India. Yet the region has significance in India for its special geo-political situation

- 70% of the region is mountainous which holds 30% of the region's population. The hill population is predominantly from aboriginal tribes, who have traditionally been dependent on shifting cultivation for livelihood.
- Promotion of plantation and horticultural crops as an alternative to shifting cultivation did not meet with much success in till the 1970s
- With changed circumstances in more recent times, rubber has been adopted with greater success
- Growth in area and production of rubber in the region exemplifies successful diversification and commercialization of its agriculture
- However, several questions regarding longer term viability and economic sustainability of rubber production in such non-traditional areas warrant attention

- What is the extent of generation of total factor income from rubber production?
- How much is the profit accruing to the producer?
- What is the rate of return from the investment in rubber production?
- Will rubber production remain viable in these new areas as the promotional support from the government will have run its course?
- Are the economics strong enough to sustain the activity through the cycles of rise and fall of price?

The study in Goalpara district of Assam was carried out in 2008 in pursuit of such questions

Specific Objectives of the Study

- To examine the growth trends in area, production and yield of rubber in Goalpara
- To find out the organizational set up and other institutional conditions in which the rubber growers of Goalpara are operating; and
- To examine the economic viability of rubber production of Goalpara in terms of current profitability and long term rate of return on investment.

Growth Rates & Growers' Profile

- The annual compound growth rate of area under rubber in Goalpara district from 1986-87 to 2006-07 was 17.5%. The growth rate of production is 19% and that of yield is 2.9%.
- About 80% of area under rubber in the districts consists of holding in the size class of less than 1 hectare
- About 80% of the rubber holdings are individually held, which account for 65% of the total area under rubber

Some Socio-economic Characteristics of the Sample Rubber Growers

Parameter	Value
Growers belonging to Scheduled Tribe/Caste communities	85%
Growers who did not complete high school education	75%
Average size of homestead land owned	0.53 ha.
Average size of crop land owned	1.11 ha.
Average size of rubber plantation	1.53 ha.

- None of the growers is exclusively dependent on rubber production for their livelihood.
- Rubber growing has resulted in diversification and enhancement of their livelihood from their respective pre-existing occupations.
- Having a side occupation has enabled the growers to cope with the risk associated with a commercial activity like rubber production

Growers' Performance

- The average yield of rubber per ha. per year is 1869 kg in case of individual growers and 1926 kg in case of group grower. These rates are higher than all-India average yield rate
- For an individual grower the profit from a one hectare rubber holding worked out to be Rs.108 thousand (equivalent to PPP\$ 11,308) per annum

Returns from Rubber

Criteria	Individual Grower	Group Grower
PBP	7.11 Yrs	7.27 Yrs
NPV	PPP \$ 60944/ha	PPP \$ 50312/ha
BCR	2.49	2.27
IRR	35.4%	30.6%

Returns on Investment on Rubber under Alternative Price Scenario

Price Scenario	PBP in years	BCR	IRR in %
At prevailing Price (Rs.86/kg) during Survey Period	7.11	2.49	35.4
At the Bottom Price (Rs.78/kg) of Last Completed Cycle	7.29	2.25	33
At the price (Rs.65/kg) Recorded in Jan, 2009	7.74	1.87	28
At the Price (Rs 36/kg) which will reduce IRR to 10%	13.87	1.04	10

Conclusion

- Rubber production has steadily emerged as an important economic activity in the study area
- This new activity have served the cause of economic empowerment at the grassroots
- Rubber production would remain economically viable and sustainable even at a price of Rs.36 per kg, a level to which rubber price has not plummeted to since November 2002.

Areas Calling for Attention

- Ambiguity about the ownership of the land on which most of the rubber plantation by groups has come up
- Dearth of institutional credit flow
- Systematic procedure of grading the rubber

Thank You