

**DIVERGENCE OF COCONUT PRODUCTION, A SMALL SCALE ENTERPRISE IN  
RAHA AREA AT CENTRAL BRAHMAPUTRA VALLEY ZONE OF ASSAM, INDIA**

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**Abstract**

The study was carried out on farm level information pertaining to the year 2014-15 in Raha Agricultural Sub Division, Nagaon district of Assam. A total number of 5 villages were randomly selected within 5 km radius from Raha circle office. Seventy two farmers were selected who have more than 4 bearing coconut plants. The analysis of information from the study pointed out that the farmers are traditional one in terms of coconut cultivation. They dispatched 70 % of their marketable nuts to the local traders. By selling marketable nuts the maximum income earned (Rs. 5700/farm/year) in Rahachaki village. It is estimated that production may be doubled if farmers adopt improved package of practices for cultivation. The overall increase of coconut production in the locality may be expected to be 80.31% over the existing situation. There might be highest 93.50% improvement in Rahachaki village followed by Durgajan (84.50%). It may be concluded that there are vast scope for increasing coconut production and develop small scale enterprises.

**Keywords:** Coconut production, Improved Package of practices, Small scale enterprise

**Introduction**

The production of the most of the plantation crops in Assam are considerably low in comparison to those grown in other parts of India. Apart from tea plantation coconut, areca nut, banana, citrus, pineapple are main fruit crops occupying total area of 15.47 lac hectares; out of which coconut covers 20,000 ha producing 1350.6 million nuts with productivity of 6,753 nuts/ ha. In India as a whole cultivated area is 20.88 lac ha producing 20439.61 million nuts. Tamil Nadu among the states positioned first in area (4.65 lac ha) as well as production (6887.58 million nuts) with productivity of 14,812 nuts/ha (Coconut Development Board, India, 2015-16).

India more particularly Assam is facing a burning problem of population explosion. For these it is very important to plan to increase the production and productivity of various

food and other crops to feed the mounting mass of population at an increasing rate in this region. However, question arises whether there is potentiality of increasing productivity of each of the various crop enterprises to satisfy the ever increasing demand. So far coconut cultivation is concerned, in South India for commercial purposes planted 51 to 76 numbers of plants per acre (Naik and Nagaraja, 2017). In this region the drive for productivity is increasingly combined with a desire for commercialization.

The study is therefore, designed to answer these questions through examining the available potentiality and diversity of coconut cultivation in this part of the country more particularly in Nagaon district of Assam (Raha area). The specific objectives are given below for the study.

1. To determine the production and productivity of coconut cultivation in Raha area of Nagaon district, Assam
2. To explore the possibilities of small scale coconut based agricultural enterprises through coconut plantation.
3. To analyse the issue concerned with coconut yield from the selected villages in Raha Block.

### **Methodology**

The study was based on farm level information pertaining to the year 2014-15 in Raha area. A total of 5 villages were randomly selected from Raha revenue circle. The villages are Dighaldori, Rahachaki, Garmari, Durgajan and Dewaguri. These are situated within 5 km radius from Raha circle office. The numbers of respondents considered were having more than 4 numbers of bearing coconut plants. The total numbers of respondent farmers were as follows-

Table1: **Breakup of the Respondents**

Village	Numbers of farmer	Average no. of plants per farmer
Dighaldori	16	9
Rahachaki	14	8
Garhmari	14	6
Durgajan	15	8
Dewaguri	13	5
<b>Total</b>	<b>72</b>	

These gave total sample of 72 households for collection of primary data. The respondents were asked different questions related to coconut cultivation by interview

method with the help of testing schedule and recorded accordingly. The collected information was processed and appropriate statistical tools were used for the analysis of data. At the time of survey it was observed that the farmers did not adopt any improved cultivation technologies which hampered the productive plant growth and development, ultimately reducing nut production. So, there is tremendous possibility to increase the production and productivity of nut by adopting the improved package of practices and sustain the plantation. We tried to evaluate the development of small scale enterprises. For this purpose it is assumed that the farmers would go for improved cultivation to earn more for upliftment of their economic condition.

### **Limitation of the study**

The study is subject to the following limitations:

1. The study is restricted to Raha Block only. Its findings and suggestions may not be applicable to all other regions
2. Time and cost are the factors which have limited the size of the sample.

### **Results and Discussion**

Results were discussed with the following heads:

1. Present scenario of coconut production of the study villages
2. Returns from existing situation of the farm.
3. Estimated returns from improved situation per farm.
4. Per cent improved over existing situation, and
5. Policies for small scale coconut based Agri-Business for sustainability

#### **1. Present scenario of coconut production of the study villages**

The age of the coconut plants under study varied from 11 to 32 years. The average effective nuts were found maximum in Rahachaki (36 nuts/plant/year) followed by Garhmari (34 nuts/plant/year).

#### **2. Returns from existing situation of the farm.**

Net Returns from the existing situation were shown in Table-2. Out of the total production, farmers sold 70% nut to the local traders which is called as marketable nuts. In this context different studies pointed that nuts price are fixed by the local dealers (S. Barma

*et. al.*) Generally, cultivation process in this study area, farmers did not use any inputs to increase nut production. There was, therefore, no any variable cost in this condition. The highest income per farm was obtained in Rahachaki (Rs.5700), followed by Durgajan (Rs. 4710) and the lowest was in Dewaguri (Rs.3090).

**Table 2: Returns from Existing Situation per farm**

Village	No. of Plants	Age of the plant	Production of Nut (No.)	Marketable Nuts(No.)	Variable cost(Rs.)	Net Return (Rs.)
Dighaldori	9	10-25	207 (23)	145	nil	3540
Rahachaki	8	10-32	272(36)	190	nil	5700
Garhmari	6	11-32	210(34)	147	nil	4410
Durgajan	8	11-30	224(29)	157	nil	4710
Dewaguri	5	10-31	140(28)	98	nil	3090

Parentheses indicate the production of nuts per plant, Market price per nut Rs.30.00

### 3. Estimated returns from improved situation per farm.

As the farmers did not practice any improved technique such as fertilizer and pesticide use for nut production, it is so, advisable to adopt these means to get higher production. It is essential in Assam condition that each bearing plant requires 1.5 kg urea, 2.5 kg SSP, 1.8 kg MOP and 50 g borax per plant per year (recommended dose). Total cost would be around Rs. 395.00 per plant per year at present market price of inputs (labour and chemicals). The effective bearing is assumed to be increased at least double. These were shown in Table 3 and fig 1. From the table it is observed that net return would go upto Rs. 11030.00 in Rahachaki per farm followed by Durgajan (Rs. 8690/farm). The total cost varied from Rs.1155 in Dighaldori to Rs.775 in Dewaguri village due to the number of available bearing plants.

**Table 3: Estimated Returns from improved situation per farm**

Village	Production of nut (No.)	Marketable nut(No.)	Gross Returns (Rs.)	Total Cost (Rs.)	Net Return (Rs.)
Dighaldori	414(46)	290	7170	1155	6015
Rahachaki	576(72)	403	12090	1060	11030
Garhmari	408(68)	286	8580	870	7710
Durgajan	464(58)	325	9750	1060	8690
Dewaguri	300(60)	210	6300	775	5525

Parentheses indicate the production of nuts per plant

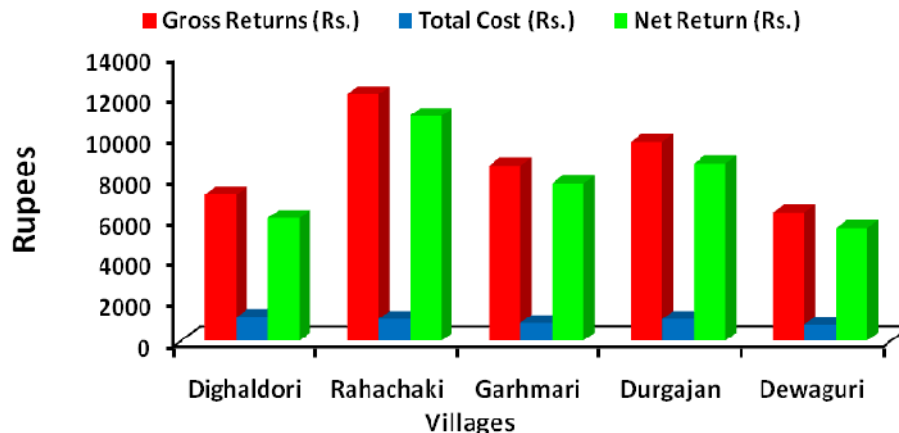


Fig. 1: Net Return of the study villages

#### 4. Per cent improved over existing situation

The additional net return over the existing situation may be the highest in Rahachaki (Rs. 5330) followed by Durgajan (Rs. 3980). The lowest net return may obtain in Dewaguri (Rs. 2435). The overall improvement expected to obtain to be 80.31% over existing situation in the study area, whereas the highest may be observed in Rahachaki (93.50 %) shown in table 4 and fig 2 & 3.

Table 4: Percentage improved over existing situation per farm

Village	Net Return under Improved condition (Rs.)	Net Return in Existing condition (Rs.)	Additional Net Return (Rs.)	*Improvement over existing situation (%)
Dighaldori	6015	3540	2475	69.91
Rahachaki	11030	5700	5330	93.50
Garhmari	7710	4410	3300	74.83
Durgajan	8690	4710	3980	84.50
Dewaguri	5525	3090	2435	78.80
<b>Overall</b>				<b>80.31</b>

\* Net Return (Improved-Existing)/Net Return in Existing situation x 100.

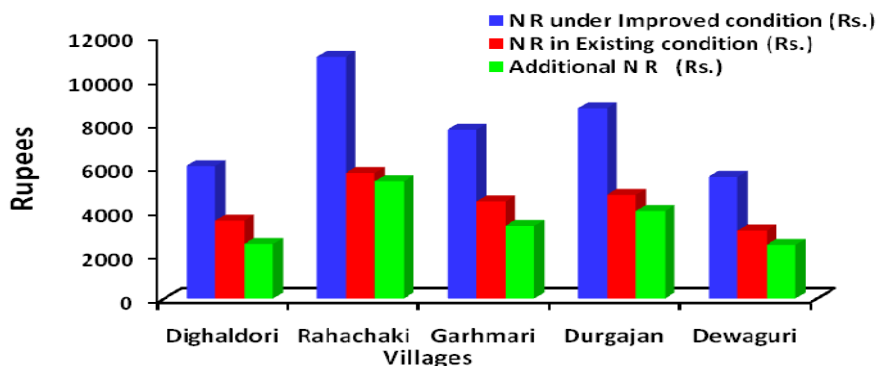


Fig. 2: Addup Net Return in Improvement

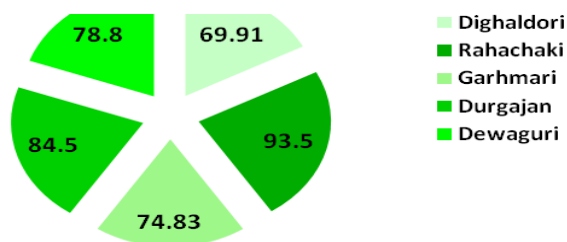


Fig 3: Per cent improvement over existing situation in the villages

##### 5. Policies for Small scale coconut based Agri-Business for sustainability

Coconut cultivation is a labour intensive enterprise, once it is planted properly it will generally produce nut for about 40 years. The nut has high demand and varied uses. To develop coconut based small scale enterprise as a whole in Nagaon district particularly at Raha area the following policies may be adopted.

1. Make aware about production practices, pest and disease and marketing intelligence.
2. Extension machinery should be interactive with the farmers.
3. Farmers should be organised and cooperative motive should be initiated.
4. Proper production management in terms of planting, fertilization (i.e. recommended package of practices) etc. should be adopted.
5. Concept of commercialization should be developed.
6. Develop storage facilities.
7. Channelize the marketing prospect.
8. Establishment of oil extraction facilities.
9. Establishment of coconut industry by promoting product diversification and product utilization.
10. Processing of value addition knowhow.
11. Coconut Palm Insurance Scheme.
12. Export Promotion.

New Initiatives: Four Area are earmarked for increasing the coconut production in Assam as a whole

- Cluster Approach-Productivity Improvement through farmers' participation.
- Rejuvenation and Replanting in a phased manner-High investment, incentives.
- Strengthening Farmers Producers Organisation (FPO)
- Creation of skilled bank-Friends of Coconut trees.

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