The Chiru's Moroi: Forgotten Indigenous Food Product of Manipur

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Abstract: *The present study was initiated to evaluate the Chiru Moroi cultivator'ssocio-economic features vis-à-vis their relationship with income from Chiru Moroi cultivation. The study was conducted at Bungte chiru block under kangpokpi district. Four villages were selected in convenience of the researcher. A total of 80 completed questionnaires could be collected randomly from respondents who held major responsibility of Chiru Moroi farming activity. The data was administered using SPSS 21.0 for analysis. Linear regression was used to find out whether age, education, initial capital, cost of labour and area of cultivation are a useful predictor of income or not.*

Keywords: Chiru Moroi, cultivation, socio-economic

1. Introduction

Chiru tribe is one of the indigenous and recognized tribe of Manipur, The tribes are mostly habitat partially in Kangpokpi district and Tamemlong District of Manipur; they are economically backward and politically neglected tribe in the state. Poverty and unemployment are major challenges prevail among the people. The major limitation in democratic system of government is economic suppression of most minority community, as in it prevail the economic well-being of the Chiru tribe but due course oftheir entrepreneur potentialityon indigenous food product offers a constructive solution to these exploded stigma of our society. The Chiru Moroi is one impetus to foster self-employment and also take care of all the component of the system. Traditional farming of Chiru Moroi is a holistic approach, ensuring not only requirement of the present but also ensure the conservation of the resources of future. This farming has been practices seen time unknown, many others tribe are also involved into this farming activity yet success is far beyond. With due course of time this product become by local name as Chiru Moroi as it has unique collaboration only with the Chiru tribe through-out the year. Today Chiru Moroi is not only significance of socio-economic well-being but also maintain identity of the tribe.Manipur is gifted with various kinds of ecological conditions for raising different kinds of fruits and vegetables. Yet, owing to its unique challenges given issue related to poverty and un-employment, poor infrastructure and connectivity, low economic development and others, the villagers left with the limited option of the traditional or conventional system of farming.Agriculture and its allied activity constitute the single largest sources of livelihood of the people. The Chiru Moroi has been growing as one of the major crop in the hilly district of Manipur. For reasons, Chiru Moroi is a popular vegetable because of its adaptability to a wide range of climate conditions and soil, ease of production and its food value. Another advantage of Chiru Moroi farming is it can be grown and uneven and undulating land (Govt. of Manipur, 20011). However, the indigenous food items has the bigger challenges of existence in the state, as the people and even the Government of Manipur are not adopted any method to deal in the problems especially financial and marketing management. This reasons leftthe thousands of local people un-employed, it is a matter of regret that even indigenous people of the state are on wave of recent train of luxury imported food items, and they get lost in the milieu of slightly different items in the imperfect market. The present fashions, given right away to the imported product override indigenous competition. In view with the prospect of agriculture farming in Manipur and the present people fashion on imported food items, a study was initiated among Chiru Moroi cultivator at Kangpokpi district. This research in particular, identified the cultivator sustainability on income generated from the product and also over all socio-economic empowerment.

2. Review of Literature

L.D Chiru (2009) According to his study, the Chiru Moroi can be one of the most productive indigenous food products in the state, since the product shows the distinctive unique feature of commercial important. He further maintains that Chiru Moroi is considered as the essential part of the food items since the product has the high food value. However, the proper entrepreneurship awareness and systematic product storing is essential to be maintain in the state.

According to **R.B Chiru** and **P. R Chiru (2012)** they mention that the Chiru Moroi is the main indigenous food product which is available throughout the year unlike the other indigenous food product were not worth to maintain in difference seasons. They further mention that the product need the government interference for the better productivity and safeguard of the products, otherwise the imported food product will surpass the indigenous product and leaving thousands of the local people un-employed.

K.H Tomba and **A.S Rapheiling (2013)** mention that familial income has an impact on promotion of agricultural activity and its volume of production, identification of the cultivator's socio-economic profile and demographic condition profile are the important contribution in their study.

2.1 Research Gap

From the above literature review shows that there is no such study was conducted so far in Manipur. Inspite Chiru's Moroi has tremendous commercial importance and also showcasing the important character ofmost available indigenous foods items in the state. However, the people of Manipur are on wave of recent train on luxury and imported costlier food items, they get lost in the milieu of slightly different items in the imperfect market. Which override indigenoustraditionally prepared competition and left the local enterprise less opportunity? Therefore, in the context of the growing importance of this indigenous product, the present study as indigenous food items of Manipur were selected for the present study.

2.2 Objective of the Studies

The present study aims to focus on problems faced by the Chiru tribe as the beholder of indigenous food product in Kangpokpi district. In order to make the study not only academic interest but also practical utility the following objectives have been set as:
1) To find the cultivators socio-economic profile in the study area.
2) To evaluate the relationship between the cultivator annual income and it sustainability from the indigenous food product
3) To offer suggestions based on the findings of the study.

2.3 Hypothesis of the study

1) Null Hypothesis (H_0): the income generated from the indigenous food product is not the economic indicator of their day-to-day livelihood expenditure.
2) Alternative Hypothesis (H_a): The income generated from the indigenous food product is the economic indicator of their day-to-day livelihood expenditure.

2.4 Methodology of the Study

Types of research: The present study shall be exploratory in nature.

Data collection: Both primary and secondary data were collected for the purpose of study. To collected primary data questionnaire were designed, pre-tested and finally administered to 80 respondents. Primary data were also collected through personal interaction, interview and discussion with the villagers and other related agencies. The secondary data were collected from important publication and report (published as well as unpublished) from various organizations and agency functioning in the state.

Sample size and sampling: The study covered one district namely Kangpokpi district of Manipur. With the help of stratified sampling method sample area is stratified into six 6 development blocks from where data and other related information were collected. The sampling unit consisting of 4villages, approximately 33.33% sample of the 12 villages of the selected district were chosen by applying convenient Sampling technique e.i. Nungsai Chiru village 25 respondents, Bungte Chiru 25 numbers of respondents,

Charoi Khullen 15 numbers of respondents and Dolang Khunou 15 numbers of respondents. From the sampling villages, the sample size consists of 80 respondents villages were selected by using purposive sampling technique. The respondents chosen are the major responsibility of Chiru Moroi farming activity of the 4 villages. Apart from these data other relevance information were also collected from the concern organization and other agencies.

Delimitation of the Study
The present study were cover four Chiru's villages namely Nungsai Chiru village, Bungte Chiru village, Charoi Khullen village and Dolang Khunou village in Kangpokpi district of Manipur, the whole study were strictly depend only on the data collected from these four villages. The shortcoming of this study is that there is a potential for a sampling bias due to simple random sampling method, the sample population may not be representative.

Method of data analysis
In this stage an attempt to analyses and codified the data and the administered using SPSS version 21.0. The categorically distribution of the socio-economic characteristic were presented in a tabular format and Mean and S.D is calculated. Finally conclusion are derived by calculating Multiple Regression analysis to predict the relationship between income generated from Chiru Moroi cultivation and other independent variable like Age of respondent, initial capital, educational qualification, labour cost and area of cultivated land of the respondents.

3. Results and Discussion

In this stage an attempt is made on data analysis, presentation and interpretation. The data analysis and interpretation were on the research quires as well as research objectives. The following analyses were presented as follows:

Table 1.1: Composite Demographic Characteristics of the Respondents
(N=80)

Variables		Gender		Total
		Male (N = 10)	Female (N = 70)	(N = 80)
Age	Below 25	1 (10%)	3 (4.28%)	4 (5%)
	25-35	4 (40%)	21 (30%)	25 (31.25%)
	35-45	3 (30%)	27 (38.57%)	30 (37.5%)
	Above 45	2 (20%)	19 (27.14%)	21 (26.25%))
Education	Illiterate	2 (20%)	20 (28.57)	22 (27.5%)
	Can only read	0	4 (5%)	4 (5%)
	Can read and write	1 (10%)	30 (42.85%)	31 (38.75%)
	Primary	3 (30%)	15 (21.42%)	18 (22.5%)
	High School	4 (40%)	1 (1.45%)	5 (6.25%)
	Others	0	0	0
Marital Status	Married	8 (80%)	60 (85.25%)	68 (85%)
	Un-Married	2 (20%)	1 (1.45%)	3 (3.75%)
	Widow	0	9 (12.85%)	9 (4.50%)
Type of family	Joint	1 (10%)	7 (10%)	8 (9%)
	Extended	2 (20%)	56 (80%)	58 (72.5%)
	Nuclear	7 (70%)	7 (10%)	14 (17.5%)

Source: Computed from primary data

The above Table 1.1 Showcase the demographic condition of the sample area, a total of 70 female and 10 numbers of respondents were included in the study, the minimum age of the participants was 20 years while the maximum was 65 years. With a mean42.5 (SD = 8.75),most of the respondents i.e 30 (37.5%)respondents are under the age group of 35-45 in the local market, the age group of below 25 and above 45 with 21 (26.5%) and 4 (5%)numbers of respondents stood the third and the last respectively

It also revealed that most of the respondents with 31 (38.75%) respondents of local cultivators can read and write and 4 (5%) numbers of male respondents have their education qualification up to the high school level.

The maximum of the respondents with 68(85%) numbers are under the categories of married status, only 3 (3.75%) numbers of respondents are un-married and there are 9(4.50%) numbers of respondents which fall under the categories of widow.

As per the convenient of the study, the local family are study into three types out of which 58 (72.5%) numbers of respondents are under the categories of extended family, 14 (17.5%) respondents are nuclear family and only 8 respondents falls under the categories of joint family.

Table 1.2: Composite Socio-Economic Nature of Respondents (n = 80)

Variable	Group	Male N = 10 (%)	Female N = 70	Total N = 80
Source of capital	Own	8 (80%)	70 (100%)	78 (97.5%)
	Loan from other	2 (20%)	0	2 (2.5%)
Capital Investment (in Rs)	10000-30000	8(80%)	66 (94.29%)	74 (92.5)
	30000-60000	2(20%)	4 (2.8%)	6 (7.5%)
	60000-90000	0	0	0
	90000-above	0	0	0
Area of cultivation	1 acre and below	6(60%)	54 (77.14%)	60 (75%)
	1 – 2 acre	4(40%)	16 (22.86%)	20 (25%)
	2 – above	0	0	0
Cost of labour (in Rs)	Self- labour	6(60%)	20 (28.86%)	26 (32.5%)
	10000 – 40000	4(40%)	46 (65.71%)	50 (62.5%)
	40000 – 80000	0	4 (5.72%)	4 (5%)
	80000 - above	0	0	0
Annual Income (In Rs)	10000 – 30000	0	0	0
	30000 – 60000	1(10%)	12 (17.14)	13 (16.25%)
	60000- 90000	7 (70%)	48 (68.57%)	55 (68.75%)
	90000 – above	2(20%)	10 (14.28%)	12 (15%)
Market place	Bishenpur	2(20%)	10 (14.28%)	12 (15%)
	Nambol	1(10%)	6 (8.57%)	7 (5.6%)
	Imphal	6(60%)	48 (68.57%)	54 (67.5%)
	Others	1(10%)	6 (8.57%)	7 (5.6%)
Off season occupation	Agriculture and allied	8(80%)	58 (82.86%)	66 (82.5%)
	Handloom/ handicraft	0	2 (2.86%)	2 (2.5%)
	Business	0	10 (14.28%)	10 (12.5%)
	Timber trade	2(20%)	0	2 (2.5%)

Source: pre-tested questionnaire

In the above Table 1.2 revealed the respondents socio-economic profile, there are altogether 80 numbers of respondents, out of which 78 (97.5%) participants started venturing their Chiru Moroi farming activity from their own capital whereas a little margin of 2.5% initiated with loan from other. It also reveals the significance of area of cultivation in the study area, majority i.e,. 60 (75%) numbers of the respondents cultivate the product below 1 acre and just 20% of respondents under 1 – 2 acre of land.

Table 1.2 also showcase the expenditure on the labour force, 52 (65%) of the respondents expense on labour at the range of 10000-40000; 26 (32.5%) of respondents are the self-employed, all the required human capital were being adjusted from the family members and meagre of just 4 (5%) of the respondents were incurred expenses on labour at the amount of 40000-80000. 55 (68.75%) of the respondents earned income from the farming activity at the range of 60000-90000. Majority of the respondents i.e., 54 (67.5%) sales the products in the Imphal market, it is found that 66 (82.5%) of the respondents engaged with the indigenous product throughout the years

Multiple Regression Analysis

The hypotheses was also tested with multiple regression analysis to determine the relationship between the income generated from forest based industries and others independent variables like monthly expenses on education, monthly expenses on Medical and monthly expenses on fooding & clothing. The below equation shows the regression equation for predicting the dependent variable from the independent variables:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3$$

Where,
Y = Income generated from the cultivation of Chiru Moroi
a = constant
b_1 to b_3 = Represents co-efficient for the representative variables

X_1 = Initial capital
X_2 = Educational qualification
X_3= Marital Status
X_4 = Labour cost
X_5 = Age of respondents

Table 1.3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.87[a]	.752	.732	21657.141

Note: a. predictors: (constant) Initial Capital, Educational Qualification, Marital Status, Labour Cost, Age of Respondents,
b. Dependent variable: Annual income Chiru Moroi from Cultivation

Source: Computed from primary data

This model summary shows that equation is highly fit and described the relationship between dependents and independent variable significantly. The coefficient of determination is0.752; therefore, about 75% of thevariation in the dependent data is explained by the independent data.

The regression equation appears to be very useful for making prediction since the of r^2 is closed to 1.

Table 1.4: ANOVA results

Model	Sum of Square	Df	Mean Square	F	Sig.
Regression	104060680371.745	6	17343446728.624	56.98	.000[b]
Residual	34239319628.255	85	469031775.730		
Total	138300000000.000	91			

Dependent co-efficient Variable: Annual income from Chiru Moroi Cultivation

Predictors: (constant), Initial capital, Educational Qualification, Marital status, Labour Cost, Age of Respondents

Source: Computed from Primary data

The ANOVA table 1.4 shows positive and significant relationship among the variables wit F value of 56.98 and significant level of 0.000. Hence from this table, it can be concluded the model is valid and accepted with the existing variable.

Table 1.5: Regression coefficient results (Coefficients[a])

Model	Unstandardized Coefficient		Std.	t	Sig.
	B	Std. Error			
Constant	4033.648	26163.292		0.154	.878
Age of Respondents	179.574	2774.405	.004	.065	.949
Education Qualification	-2335.059	2069.327	-.125	-2.095	.048
Initial capital	443.267	2704.618	.010	.164	.870
Labour Cost	2.908	.213	.855	13.651	.000
Area of cultivation	9259.964	4425.867	.137	2.092	.040

Note: dependent variable: Average Income from Forest based Industries

Source: Computed from primary data

Multiple regressions was used to find out whether initial capital, Age of respondents, Educational Qualification, Labour Cost and Area of cultivation are useful predictor of income generated from forest based industries or not. Stepwise regression analysis results indicated that variation of income earn can influence the independent variable at above 75.2 % (R^2 = 0.752). Regression coefficients of the variables are shown in table 1.5. Their relationship may be express as:

Y = 4033.648 to + 179.574 (Age of respondents) – 2335.059 (Educational Qualification) + 443.267 (initial capital) + 2.908 (Labour cost) + 9259.964 (Area of Cultivation)

At the Alpha = 0.05 level of significance, the p- value of X_1, and X_2 are < 0.05, thus there exist enough evidence to conclude that Initial capital, Cost of labour and Area of cultivation were useful predictors of income generated from farming of Chiru Moroi. So, reject of null hypothesis is at 5% level of significant and accept the alternative hypothesis.

4. Findings of the Study

After analyzing the data collected through questionnaire by using certain suitable statistical tools and techniques, the following are the important findings.

1) It is found that 97.5% cultivations of Chiru Moroi are self-capital investment.
2) The study also reveals that 74.5% villagers invest the capital at the range of Rs 10000-30000.
3) Area of cultivation, 75% of the villagers cultivated the product at the average of 1 and below acre
4) The present study reveal that 62.5% of local cultivators incurred expenses on labour at the cost range of Rs 10000-40000
5) The study reveals that 68.5% of the local cultivator earned Rs 60000-90000 annually.
6) It is found that 67.5% of the cultivators sales their product at Imphal market
7) Study shows that 37.5% of the local cultivators are in the age group of 35-45 years. 38.75% of the cultivators can read and write.
8) It is found that 85% of the respondents are married and lived as extended family.
9) Income generated from cultivation of Chiru Moroi is the main source of their livelihood and significant of their socio-economic well-being.

5. Suggestion and Conclusion

In the above discussion, the study showcases the significant and the impact of income generated from the Chiru Moroi cultivation. A summary of the regression analysis is indicated that about 75% of the variation in the dependent data is explained by the independent data. The regression analysis result shows that initial capital, cost of labour, age of respondents, area of cultivation and marketing place is useful predictors of income from the farming for cultivators. However,the present environment of the marketing management, Chiru Moroi's are on the verge of depletion since the product can't meet the present environment booming demand of the customers and the product are not in a position to compete the rival of imported expensive product. The people by and large and even the Government of Manipur are not adopted any method to deal with the problems. Today, it's a matter of regret that people of Manipur are on wave of recent train of luxury imported expensive food items, they get lost in the milieu of slightly different items in the imperfect market.

The studies also reveal that Chiru Moroi is the only product lifeline for the people of Chiru tribe in particular. The entire livelihoods like Education, Clothing, Shelter, fooding etc., are over adjusted with the main source of income from the products. Therefore, the local cultivators must awake to educate the entrepreneurship knowledge for the better productivity for now and beyond.

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