Asian Journal of Agricultural Extension, Economics & Sociology

39(5): 146-155, 2021; Article no.AJAEES.68830
ISSN: 2320-7027

Demographic and Socio-Economic Status of the Farmers of North Eastern Part of Country: A Case Study

H. Vanlalhmuliana[1], C. Rachael[1], Mukesh Sehgal[2], Meenakshi Malik[2*] and Subhash Chander[2]

[1]Krishi Vigyan Kendra, Siaha District, Siaha, Mizoram -796901, India.
[2]ICAR-National Research Centre for Integrated Pest Management, Pusa Campus, New Delhi-110012, India.

Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

Article Information

DOI: 10.9734/AJAEES/2021/v39i530585
Editor(s):
(1) Dr. Wang Guangjun, Chinese Academy of Fishery Sciences, China.
Reviewers:
(1) Ravi Manne, CHEMTEX Environmental laboratory, USA.
(2) Emerson Barbosa Da Silva, Faculdade de Medicina do ABC – FMABC, Brazil.
Complete Peer review History: http://www.sdiarticle4.com/review-history/68830

Case Study

Received 20 March 2021
Accepted 26 May 2021
Published 09 June 2021

ABSTRACT

A socio-economic study of farmers from Siaha district was conducted with the objectives to know the socio-economic status of Siaha district farmers, to study the availability of resources, to locate the specific socio-economic weaknesses in their production organization, and to find the constraints that inhibit the popularisation and adoption of modern technologies. Siaha district is comprised of numerous hills and valleys and is rich in vegetation and forests. Jhum cultivation is still widely practiced as the traditional farming system. The cropping pattern of the Siaha district is characterized by the predominance of rice as the lead crop. Agricultural crops account for more than 65 percent of the gross cropped area which indicates the prevalence of subsistence agriculture and lack of crop diversification. It was observed that these farmers are socio-economically backward. Agriculture of the primary source of livelihood for the overwhelming majority of the farmer's population. It is mandatory to identify and quantify the socio-economic factors which are key factors that are inhibiting their growth and development.

**Corresponding author: E-mail: minaxi.2007@gmail.com;*

Keywords: Agricultural crops; cropping pattern; farmer's population; Siaha district.

1. INTRODUCTION

Siaha district is one of the eleven districts of Mizoram state in India. The district is bounded on the north and northwest by Lunglei district, on the west by Lawngtlai district and on the south and east by Myanmar. The district occupies an area of 1399.9 km². Siaha town is the administrative headquarters of the district. It is the third largest town in Mizoram after Aizawl, the state capital and Lunglei. Siaha district was formerly part of Chhimtuipui district. In 1998 when Chhimtuipui district was bifurcated into Two (2) District Saiha district and Lawngtlai district, the half that became Saiha district was briefly called by the old name Chhimtuipui district which is later known as Saiha.

Siaha, is one of the districts of Mizoram state in India, bounded on the north and northwest by another district Lunglei, on western side by Lawngtlai district, and on the southern and eastern side by the country Myanmar. The district occupies an area of 1399.9 km² and has Siaha town is the administrative headquarters. It is the third-largest town in Mizoram after Aizawl, the state capital, and Lunglei. Siaha district was formerly part of Chhimtuipui district. In the year 1998 the Chhimtuipui district was divided into Two new district Saiha and Lawngtlai, the half that was named as Saiha district was known by its the old name Chhimtuipui district which is later known as Saiha.

Siaha (the official name given by the Mara Autonomous District Council, popularly referred to as Saiha) may be a census town in Siaha district within the Indian north-eastern state of Mizoram. This is one of three autonomous administrative Headquarters- Mara Autonomous, in Mizoram. It is located within the South Central part of the state. The word 'Siaha' in the local Mara language comes from 'Sia' for Masia which depicts the elephant and 'ha' suggests tooth - An elephant tooth. It was a place where a large number of elephant teeth were found. Though the local people name the town as Siaha, Mizos called it by the name 'Saiha', which is purely a translated term in the Mizo language. The majority of the district inhabitants are Maras' people and are an offshoot of the Kuki-Chin group of Tibeto- Burman family, however, their original home is not definite, and their ancestral home appears to be southern China. The Maras were earlier known under a different name called it by the name 'Saiha', which is only a translated term in the Mizo language. the bulk of the district inhabitants are Maras' people and are an offshoot of the Kuki-Chin group of Tibeto-Burman family, however, their original house is not definite, and their ancestral home appears to be southern China. The Maras were earlier known under a special name called the Lakhers, as they were called by their neighboring villages. The Mara people even have an autonomous district council called the 'Mara Autonomous District Council' under the Sixth Schedule to the Constitution of India since 1971 [1]. The Council functions like a mini- legislature with powers to pass its own customary laws and rules, subject to ratification by the Administrator (Governor of Mizoram). the govt has jurisdiction over land administration, administration of justice, and limited legislative powers, and a couple of other local powers. The Maras have an upscale art and cultural heritage. Most of their festivals and cultural songs and dances have a deep connection and significance with their agricultural activities.

Siaha district has a number of hills and valleys and also rich in vegetation. There are two Blocks in the district, Siaha, and Tipa. It is one of the backward districts of Mizoram state. The districts have always had very high growth potential, however, it still remains undeveloped in comparison to other districts. The district is lacks quality human and non-human resources, the various sectors have not been able to interlink too, thus leaving almost all regions of the district are poorly developed. In 2006 the Ministry of Panchayati Raj named Siaha one of the country's 250 most backward districts (out of a total of 640). This is one of the two districts in Mizoram continuously receiving funds from BRGF, Backward Regions Grant Fund Programme [2].

Siaha was formerly part of Chhimtuipui, up to 1998, now it is one of the eleven districts of Mizoram in the Indian northeastern state of Mizoram. The word Siaha in the local Mara language comes from Sia for Masia which means elephant and ha mean tooth-an an elephant tooth. It was a place where a large number of elephant teeth were found. The district is bounded on the north and northwest by Lunglei district, on the west by Lawngtlai District, and on the south and east by Myanmar. The district occupies an area of 1399.9 km². This district of

Mizoram is the least populous district of Mizoram. This district has a population density of 40 people per square kilometer. Mara people are the dominant inhabitant; they have Mara autonomous district council, one of the three autonomous district councils within Mizoram, composed of two Blocks Siaha and Tipa with 92 villages. It has a mild climate, being relatively cool in summer 20 to 290C [3,4].

The district has a total population of approximately 56,574 (as in the 2011 census) with a total number of 9500 households. The literacy rate is 90.4% (Anonymous, 2017). Agriculture is the primary source of livelihood for the overwhelming majority of the tribal population in the district. Many of the farmers are engaged in agriculture and livestock rearing activities. The major crops grown in the district are paddy, maize, roselle, brinjal, bitter brinjal, sesamum, ginger, turmeric, soybean, Mizo Chilli, cabbage, strawberry, French bean, okra, tomato, and broccoli. Data pertaining to the contribution of various economic activities among the farmers is compulsory for their socio-economic development programs. Though various studies on the socio-economic conditions of farmers were carried out in India, studies are limited to North-Eastern region farmers. Their lands are dry, alienated, and have no irrigation facilities. They do not utilize chemical fertilizers, improved seeds, and pesticides in their hands. Their farming area is, therefore, somewhat different from other areas in natural topography. And also typical topography of undulating and hilly areas has this area's agriculture very less profitable.

2. CURRENT STATUS OF AGRICULTURE AND ALLIED SECTORS IN SIAHA DISTRICT

Jhum cultivation is still widely practiced as the traditional farming system. The cropping pattern of the Siaha district is characterized by a predominance of rice as the lead crop. Agricultural crops account for more than 65 percent of the gross cropped area which indicates the prevalence of subsistence agriculture and lack of crop diversification. A remarkable feature of shifting cultivation is that a wide variety of crops is grown in the jhum fields. Jhum paddy is the dominant crop and is mixed with maize, cucumber, brinjal, tapioca, soybean, mustard, colocasia, sweet potato, ginger, mesta, tobacco, Mizo chiliy, sesamum, and other vegetables. The production units are more or less self-contained, each family growing crops according to one's owns needs. An analysis of the area, production, and productivity trends in the district shows that the district produced a total of 1759 metric tonnes of food grains from an area of 1109 hectares during 2016-2017. Thus, the average productivity of the district during the above period has been 1586 kg/ha, which is much below the national average of 2200 kg/ha (2017). The population growth is higher than the growth in food grain production in the region. In addition, the growth of pulse and oilseed production is also very low. The district produces 50 metric tonnes of pulses and 26 tonnes of oilseeds from 43 ha and 23 ha respectively. The average yield of pulses is 1169 kg/ha while the average yield of oilseeds is 1109 kg/ha during 2016-2017 [5]. Non-availability of adequate quantity of quality seeds of improved varieties and lack of use of inputs like fertilizer, plant protection chemicals, and weed control are the major constraints in pulses and oilseeds production in the district.

The dominant horticultural crops of the region include pineapple, passion fruit, strawberry, Mandarin orange, citrus, banana, and mango. Vegetable crops like cabbage, tomato, brinjal, chilli and broccoli are also extensively cultivated in the district. Among the horticultural fruit crops, orange occupied 40ha with a production of 1000 metric tonnes with an average yield of 25 metric tonnes/ha during 2016-2017 while Mizo chilli occupied 155ha with a production of 124 metric tonnes with an average yield of 0.80 metric tonnes/ha in 2016-2017. Vegetable statistics are not available [5].

Livestock in the district comprises cattle, buffalo, Mithun, sheep, goat, pig, and poultry. Many farmers have no habit of rearing cattle for milk production. Therefore, animals are reared largely for meat. Feed and fodder both in quantity and quality are major constraints for any improvement in livestock and poultry production in the district. In fishery sectors, the district has vast riverine fisheries resources and inland fisheries resources. However, the bulk of the fishery resources consist of tanks ponds, and lakes. The district produces only 463.51 metric tonnes of fish from 438.50 ha in 2017-2018 which is quite low [5]. The extent of exploitation of aquatic resources of the district also remains quite low.

At present, the district faces a deficit of food grains, pulses, oilseeds, fruits, vegetables, meat eggs, etc. In short, all the agriculture and allied

commodities are deficit in the district, which is met by imports from other parts of the country. Socio-economic study of farmers from these areas of the district was conducted with the objectives to know the socio-economic status of Siaha district farmers, to study the availability of resources, to locate the specific socio-economic weaknesses in their production organization, and to find the constraints that inhibit the popularisation and adoption of modern technologies.

3. MATERIALS AND METHODS

This study was conducted with a sample of 250 farmers of five villages of the Siaha district of Mizoram. A multistage purposive cum random sampling design was followed for the selection of the respondent. The main aim to study the various problems faced by these farmers in villages viz. Noaotlah- III, Lobo, Kaochao E, Phura and Kaisi of Siaha district.

The data were collected by personal interview method using both schedule and semi-structured interview supplying questionnaire mentioning in Appendix-I salient points. After completion of the survey, a total of 250 filled-in questionnaires were received and analysed to find out the socio-economic status of farmers of these villages [6].

4. RESULTS AND DISCUSSION

The present study describes the Socio-economic Status of North Eastern Region Farmers of Siaha of Mizoram. The study area was Noaotlah – III, Lobo, Kaochao 'E', Phura and Kiasi, Siaha district, Mizoram, India. The information was collected on the basis of personal interviews with each of the farmers through a questionnaire. A total sample of 250 farmers was selected randomly from five different villages of two blocks, Siaha and Tipa during 2019-20. The study revealed that they are very poor farmers with a literacy rate of 91 to 93% and knowledge about agricultural methods and the majority of their crops grown were paddy, maize, soybean, sesamum, ginger, strawberry, mustard, French bean, brinjal, okra, tomato, roselle, Mizo Chilli, cabbage and broccoli without any awareness about their improved management practices. By introducing facilities of modern technology, their socio-economic standard can be increased.

In this study, it was observed that these farmers are socio-economically backward. Agriculture of the primary source of livelihood for the overwhelming majority of the farmer's population. It is mandatory to identify and quantify the socio-economic factors which are key factors that are inhibiting their growth and development. The farmers owing to their lifestyle and community habitats have not been able to keep pace with present society. The North-eastern region farmers are not advanced as the people from the rest of India. The information collected is given in Table 1 [5].

4.1 Prospect for Development of Agriculture and Allied Sectors in Siaha District, Mizoram

- Adopt an interdisciplinary, multi-sectoral approach and assist farmers in the gradual conversion of their presently unsustainable farming systems into a more sustainable system.
- Conservation and new development of management of natural water resources.
- Soil health improvement.
- Popularizing resource-conserving technologies.
- Improvement in land use planning by raising more than crop in a year which increases cropping intensity.
- Promote Integrated Farming Promote location specific Orchards.
- Rejuvenation of horticultural crops with good water management.
- Raising healthy nurseries in Govt and private organizations.
- Dissemination of integrated pest management and Organic farming module.
- Human resources development of rural youths, farm women other disadvantaged groups and field staff.
- Linking of farmers with agro-industry in the state or other part of the country.
- Use and promotion of post-harvest management and preservation strategies.
- Development of suitable technologies such as varietal improvement, input management supported by strong institutional arrangements for the supply of inputs like seed, fertilizers, plant protection chemicals, credit etc. price support system favourable to farmers, and market infrastructure for major crops like paddy, maize, sugarcane, banana, vegetables and fodder crops.
- Encouraging maize as an alternate crop for paddy.
- Development of minor irrigation.

- Strengthening water harvesting structures like farm ponds and check dams.
- Reclamation of fallow and degraded lands.
- Regular farmer field schools training and exposure visit to the farmers, extension and village workers.
- Strengthening of rural markets with storage facilities.
- Strengthening of a farmers market with additional storage facilities.
- Establishment of cattle, piggery and poultry feed units.
- Enhance rural income through promoting livestock, fishery and sericulture enterprise and adopt strategies suited to the remoteness of the region through an emphasis on low input technology and high value.
- Establishment of Breeding Units in order to encourage the production of piglets in the district and not depend on outside sources, and in order to bring down the price of piglets and pork. Inland fisheries development in major tanks and reservoirs.
- Development and promotion of sericulture.
- Strengthening of Market Infrastructure and marketing development.
- Potential for new MSMEs (Micro Small and Medium enterprises) food processing, confectionary item, milk products, hatchery, mushroom, vermiculture, bamboo Products etc.
- Integrated development of major food crops like paddy, coarse cereals, minor millets, pulses and oilseeds.

Fig. 1: **Baseline survey**

Table 1. Base line information at village Naohtlah – III, Lobo, Kaochao E, Phura and Kaisi of Siaha district

Sl. No.	Component	Results				
		Naohtlah – III	**Lobo**	**Kaochao 'E'**	**Phura**	**Kiasi**
1	Average Population of the village	325	1140	1350	1357	628
2.	Average Family Structure	Nuclear - 87% Joint - 12%	Nuclear- 90.9% Joint - 9%	Nuclear - 19.4% Joint – 80.6%	Nuclear-45% Joint - 65%	Nuclear-84.3% Joint – 15.7%
3	Average Educational Status of Family Members	Illiterate-6.2% High School-4% Graduate-0.3%	Illiterate-10% High School -4.4% Graduate-2.2 %	Illiterate-1.5% High School-4.8% Graduate-1.3 %	Illiterate-13% High School- 9.2% Graduate-2%	Illiterate-4.8% High School-9.2% Graduate-3.7 %
4	Average Housing Conditions	Kachcha-98.2% Pucca – 1.8	Kachcha -94.1% Pucca -5.9 %	Kachcha-90.3% Pucca -9.7 %	Kachcha-97.4% Pucca – 2.6%	Kachcha-98.4% Pucca- 1.6 %
5	Electricity Facility	Electrified-100% Unelectrified-nil	Electrified-100% Unelectrified-nil	Electrified-100% Unelectrified- nil	Electrified-100% Unelectrified- nil	Electrified-100% Unelectrified- nil
6	Source of Water	Tube Well-nil Hand pump - nil Pond- nil River-100 %	Tube Well- nil Hand pump - nil Pond - nil River-100 %	Tube Well-nil Hand pump -nil Pond- nil River-100 %	Tube Well-2% Hand pump -nil Pond-50% River- 48%	Tube Well-nil Hand pump-nil Pond-nil River-100 %
7	Mode of Transportation	Two wheeler and Public transport	Two wheeler and Public transport	Two wheeler and Public transport	Two wheeler and Public transport	Two wheeler and Public transport
8	Major Land Holdings	Landless-48.3% Marginal-51.7% Small-nil	Landless-48% Marginal-45% Small – 5.3 %	Landless-57.9% Marginal-29.1% Small -12.9 %	Landless- 25% Marginal- 45 % Small-30 %	Landless-16.5% Marginal-75.2% Small-8.3%
9	Source of Irrigation	Tube well – nil Pond - nil Rainfed – 65.5% River – 34.5%	Tube well – nil Pond - nil Rainfed - 93.6% River – 6.4%	Tube well - nil Pond - nil Rainfed - 96.8% River – 3.23%	Tube well – nil Pond - 10% Rainfed - 50% River – 40%	Tube well -nil Pond-nil Rainfed – 70.2% River – 29.8%
10	Farm Mechanization	Tractor – nil Pump set – nil Sprayer-34.5% Others(Weed cutter) - 12%	Tractor – nil Pumpset – nil Sprayer-5.3% Others (weed cutter) - 6.4%	Tractor - nil Pumpset - nil Sprayer-6.5% Others(weed cutter) - 32.4%	Tractor – 1.2% Pumpset- nil Sprayer-0.6% Others -nil	Tractor – 1.7% Pump set- nil Sprayer-nil Others (Power tiller) - 0.82%
11	Livestock	Cow, Goat, Poultry, Duck, Pig and Fish Pond	Goat, Poultry, Duck, Pig and Fish Pond	Goat, Poultry, Duck, Pig and Fish Pond	Cow, Buffalo, Goat, Poultry, Duck, Quail, Pig and Fish Pond	Cow, Buffalo, Goat, Poultry, Duck, Sheep, Pig and Fish Pond
12	Difficulties in Agriculture Improvement	Irrigation-30% Credit-20% Transport-25% Agriculture Knowledge-	Irrigation-30% Credit-25% Transport-20% Agriculture	Irrigation-35% Credit-10% Transport-20% Agriculture Knowledge-25% Labour-10%	Irrigation-20% Credit-30% Transport-35% Agriculture Knowledge-	Irrigation - 25% Credit - 20% Transport - 15% Agriculture Knowledge-

Sl. No.	Component	Results				
		Naohtlah – III	**Lobo**	**Kaochao 'E'**	**Phura**	**Kiasi**
		20% Labour-15%	Knowledge-20% Labour-15%		5% Labour-10%	25% Labour-15%
13	Source of Agricultural Information	Extension staffs from KVK, Agriculture & Horticulture dept., Mass Media	Extension staffs from KVK, Agriculture & Horticulture dept., Mass Media	Extension staffs from KVK, Agriculture & Horticulture dept.,Mass Media	Extension staffs from KVK, Agriculture & Horticulture dept., Mass Media	Extension staffs from KVK, Agriculture & Horticulture deptt., Mass Media
14	Sources of Credit Supply	Gov't servant-13% Agriculture & allied activities-86%	Gov't servant-17% Agriculture & allied activities-83%	Gov't servant-5% Agriculture & allied activities-95%	Gov't servant-15% Agriculture & allied activities-85%	Gov't servant-2% Agriculture & allied activities-98%
15	Cropping Pattern	Terrace & hill slope	Hill slope, Terrace, WRC, jhum, river banks	WRC, Terrace & Hill slope	WRC, Terrace, Hill slope	WRC, Terrace, Hill slope
16	Plant Protection	Use chemicals	Use chemicals	Use chemicals	Use chemicals	Use chemicals
17	Marketing System of Agricultural Produce	Local traders, Village market and their product strawberry is transported throughout Mizoram	Local traders Village market	Local traders, Village market and their product mango is transported throughout Mizoram	Local traders Village market	Local traders Village market
18	Soil type	Sand-Loamy and Clay-loamy soil	Sand-Loamy and Clay-loamy soil	Sand-Loamy and Clay-loamy soil	Sand-Loamy and Clay-loamy soil	Sand-Loamy and Clay-loamy soil
19	Average Pesticide used (/ha)	0.03 kg/ha	0.01 kg/ha	0.02 kg/ha	0.02 kg/ha	0.02 kg/ha
20	Knowledge about IPM	No proper Knowledge	No proper Knowledge	No proper Knowledge	No proper Knowledge	No proper Knowledge

5. CONCLUSION

The present study revealed that Mizoram is one of the backward states of India in terms of the knowledge of agricultural and allied operation hence there is a strong need for the Siaha district farmers are exposed to regular farmer field schools, there is a strong need to improve the agricultural education facilities, improvement in transport and communication facility is urgently required. The use of the latest ICT tools must be made available to farmers, extension workers, and other workers.

If all the suggestions mentioned above are implemented in these villages, the development of those backward areas can be seen in the near future. By introducing latest tools and technologies, the farmer's socioeconomic standard can be improved. Thus this weaker part of the society can be turned into a huge mass of human resource. However, further studies are required to know more about this.

CONSENT

As per international standard or university standard, respondents' written consent has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Xaxa. "Empowerment of Tribes" in Singharoy, Debal L (ed.), Social Development and the Empowerment of Marginalized Groups, Sage Publications, New Delhi. 2001;203.
2. Khonglah C. Women in North –East India: An Annotated Biblography. Ankasha Publication Delhi. 2008;25.
3. Hänke H, Barkmann J, Blum L, Franke Y, Martin DA, Niens J, Osen K, Uruena V, Witherspoon SA, Wurz A. Socio-economic, land use and value chain perspectives on vanilla farming in the SAVA Region (north-eastern Madagascar): The Diversity Turn Baseline Study (DTBS). Diskussionsbeitrag; 2018.
4. Patel T, Karmakar S, Sanjog J, Kumar S, Chowdhury A. Socio-economic and environmental changes with transition from shifting to settled cultivation in North-Eastern India: an ergonomics perspective. International Journal of Agricultural Science and Research. 2013;3(2):117-36.
5. Anonymous 2018. Statistical Handbook, Siaha district. 2018;1-30.
6. Deka, Sikha, Nath RK, Sehgal Mukesh, Barbora AC, Kakati RK, Ahuja DB. Socio-Economic Status of Tribal Farmers of Tinsukia District of Assam: A Case Study. Int. J .Curr. Microbiol. App. Sci. 2017;6(9): 2244-2248.

APPENDIX-I

Details on baseline information on experimental villages

Name of the district :
Name of the block :
Name of Village :

Sl.No	Particulars		Details
1.	Total Population	:	
2.	Literacy Rate (%)	:	
3.	Cropping Pattern	:	
4.	Main Kharif crop:	:	
5.	Main Rabi crop	:	
6.	Main Insects	:	
7.	Main Diseases	:	
8.	Total irrigated Area (%)	:	
9.	Source of irrigation	:	
10.	Area under Bt cotton	:	
11.	Main varieties/hybrids of Bt cotton	:	
12.	Average yield of cotton	:	
13.	Fertilizer in cotton (kg/ ha): (N:P:K)	:	
14.	No. of sprays (Farmer practice)	:	
15.	Level of Awareness about IPM	:	

Baseline Information of the IPM Farmer

Date of Survey:

1. Name of the village:
2. District:
3. State:
4. Name of the Farmer:
   Name of Father:
5. Age of the Farmer:
6. Total Land holdings: (Acres)
7. Literacy :
8. Occupation: Main:
   Secondary:
9. Cropping Pattern:
10. Soil Type:
11. Rainfed/Irrigated:
12. Source of Irrigation:
13. No. of irrigations(/acre): (Average).
14. Varieties/ Hybrid of selected crop:
15. Source of seed :
16. Sowing date:
17. Fertilizers (kg/acre) (Average):
    N. P. K.

18. Main Insects:
19. Main diseases:
20. Pesticides used (/acre) (Average):
    Insects Diseases
21. Source of Pesticides:
22. Do you think that use of pesticides is harmful ?

Yes/No
23. If yes (explain)
24. No. of sprays(Average):
25. Yield (Q/ha) (Average):
26. Knowledge about IPM: Yes/No
27. If yes (explain)

Peer-review history:
The peer review history for this paper can be accessed here:
http://www.sdiarticle4.com/review-history/68830