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Socio economic profile of the farmers of the district Fatehgarh Sahib and Rupnagar

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Abstract
The study purpose is to know the condition of farmer at a ground level in agricultural context. This study is done under RAWE programme which was conducted by Department of University Institute of Agriculture Science (UIAS) Chandigarh University Mohali Punjab, between August 2023 and September 2023. The study was on the socio-economic profile the of farmers in the six different village i.e Chhoti Mandauli, Rattangarh, Ramgarh Manda Bhadwali, Bhateri and Bari Mandauli of the two districts i.e Fatehgarh Sahib and Rupnagar of Punjab, India. The data of the farmers were collected by the personal interview or face to face interview in their respective homes or fields with the help of a well prepared questionnaire. The questionnaire included 3 section, socio economic profile agronomic practices and plant protection. The sample size was 150 farmers. The study disclosed the socio economic profile of the farmers based on the education level, age, family composition and size, caste social participation, occupation, land holdings, etc. Majority of the respondent were between the age of 36 to 70 and the majority studied till class 10th and belong to the general or OBC category. Both male and female participants possessed over two decades of farming experience. They engaged in agriculture as their primary occupation and reported a moderate annual income ranging up to 5-6 lakh. The majority of the land was owned by the male head of the family. The maximum respondent had their land holding in lease. Hence a unique shift has been observed that the younger generation of the village has ventured abroad. As a generation moving the land has been fragmented and this seems to major concern. Youth participation is less. To do farming as a business purpose mind strategy, Passion, Interest and soon this make a farming a more profitable sector. Through this practices it could make farmer life filled with prosperity.

Keywords: Experience, farmer, family, land, respondents, socio-economic

1. Introduction

Agriculture, a longstanding and fundamental occupation in Punjab, serves as a primary livelihood for many, constituting the backbone of our nation's economy. The economic advancement of the region hinges on agricultural activities, offering employment opportunities, supplying food for the population, and providing raw materials for industries. Agriculture not only contributes to state revenue but also plays a role in earning foreign exchange. Moreover, it lends support to industries, particularly those reliant on agricultural raw materials, categorizing them as agro-based industries [1]. The agricultural sector holds paramount significance in the Indian economy, contributing 18% to the country's Gross Domestic Product (GDP) and offering employment to half of the nation's workforce. India proudly stands as the leading global producer of pulses, rice, wheat, spices, and spice products. The diverse business opportunities within agriculture span dairy, meat, poultry, fisheries, and food grains, presenting a multitude of options for investment. Notably, India has secured its position as the second-largest producer of fruits and vegetables worldwide. While currently, only 6% of agricultural production undergoes processing, there is a strategic focus to elevate this to 20% in the near future. The labor-intensive nature of this business sector significantly contributes to industrial production, accounting for approximately 50%. Multinational food companies have played a role in shaping the business landscape, introducing competition and drawing attention to the sector. The adoption of innovative and experimental packaging methods by the food industry has facilitated the production of safe and high-quality food product [3].

Socioeconomic conditions are the combined measures of income, education, age qualification, housing, and access to basic services in a community.

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These conditions impact people's overall well-being, shaping their opportunities and quality of life. High income, good education, and access to essential services typically lead to improved living standards, while poverty and limited access to these resources can result in challenges for individuals and communities. Education for farmers holds a crucial significance in acquiring and applying information about contemporary agricultural technologies, enabling more effective solutions to local challenges. Hence, the pivotal role of ensuring equitable access to quality education, especially for the impoverished and rural communities, cannot be overstated. This is fundamental to fostering the economic and social development of India (Gille, 2010) [4]. The literacy rate in Punjab has experienced a positive trajectory, reaching 75.84% according to the latest population census. Breaking down the figures, male literacy stands at 80.44%, and female literacy is at 70.73% [5] Approximately 62.52% of the entire population of the Punjab state resides in rural areas. The population growth rate for the rural population in Punjab during the 2001-2011 decade stood at 7.75%. In the rural regions of Punjab, the female sex ratio per 1000 males was 907, and the average literacy rate in rural areas of Punjab was 71.42% [5]. Punjab stands prominently among Indian states due to its remarkable achievements in agricultural progress. The region experienced significant growth in agricultural production during the Green Revolution era, primarily attributed to a successful combination of institutional and technological factors. The agrarian economy, land consolidation, expansion of agricultural lands, irrigation development, and the adoption of biochemical inputs, including high-yielding seeds, fertilizers, insecticides, and mechanical tools, were pivotal contributors to the rapid advancements in Punjab's agriculture. The influential presence of politically empowered figures with agricultural backgrounds in rural areas further fostered an environment conducive to rural and agricultural development. Notably, the extension of the irrigation network, development of rural roads, electrification of rural areas, establishment of focal points and agricultural market centers, and an efficient credit delivery system, alongside the effective implementation of agricultural price policies for wheat and paddy, played a crucial role in shaping the agricultural and rural landscape of the state. Consequently, despite representing only 1.54% of the total geographical area of the country, Punjab now contributes 13-14% to the nation's total food grain production. Earning the moniker "Granary of India," the state has played a significant role, contributing 35-40% of rice and 40-75% of wheat to the central pool over the past two decades. Singh Jasdev *et al.* (2012) [6]. Fatehgarh Sahib and Rupnagar District is located Northeastern part of Punjab. We randomly selected 6 villages out of which Bhateri is in the district Fatehgarh Sahib and the villages Chhoti Mandauli, Rattangarh, Ramgarh Manda harwali and Bari Madoli lies in the district Rupnagar. The districts are adjacent to the Union Territory of Chandigarh so it achieve faster growth of development. The approx population of Fatehgarh Sahib is 6.69 lakh and the population of Rupnagar is 7.45 lakh.

2. Materials and Methodology
2.1 Research design
The study utilized a non-experimental research design, where six villages were randomly selected for observing and analyzing the socio-economic profiles of farmers in those areas.

In this non-experimental approach, data were gathered from the selected villages through a questionnaire. The questionnaire included a range of questions related to socio-economic profiles, forming the basis for the research as it was conducted based on the responses obtained.

2.2 Study area
Within the Punjab State, there are a total of 23 districts. This research specifically targeted three districts: Fatehgarh Sahib, Roop Nagar, and Sirhind. The study was carried out in six villages near Gharuan, namely Chhoti Mandauli, Rattangarh, Ramgarh Manda, Bhadwali, Bhateri, and Bari Mandauli in the Punjab State Figure 1 [7].

2.3 Sample techniques
In this study, a method of multistage random sampling was applied for participant selection, and the collection of data was conducted through personal interviews.

2.4 Selection of village
The research was conducted in the northeastern region of Punjab to examine the socio-economic status of farmers in six villages across three districts, namely Chhoti Mandauli, Rattangarh, Ramgarh Manda, Bhadwali, Bhateri, and Bari Mandauli.

2.5 Selection of respondent
A total of 150 farmers were randomly chosen from six villages across three districts in Punjab to participate in the survey conducted under the RAWE program.

2.6 Description of each village
2.6.1 Chhoti Mandauli
Chhoti Mandauli village is positioned in the Chamkaur Sahib tehsil of Rupnagar district, Punjab, India, approximately 20km away from the Chamkaur Sahib sub-district headquarters. With a pin code of 140013, the village spans an area of 200 hectares and boasts 164 houses. Morinda serves as the nearest town for major economic activities. Chhoti Mandauli has a population of 915 individuals, with 487 males and 428 females. The village exhibits a literacy rate of 72.68%, with 77.62% of males and 67.06% of females being literate. The village is situated 5 km from Morinda town (Table 1).

2.6.2 Rattangarh
Rattangarh village, also located in Chamkaur Sahib tehsil, is 25km away from the sub-district headquarters and 5km from the Rupnagar district headquarters. It is a gram panchayat, comprising approximately 300 houses with a pin code of 140101. Spanning 232 hectares, Rattangarh has a population of 1,488 individuals, including 777 males and 711 females. The village's literacy rate stands at 81.05%, with 84.81% of males and 76.93% of females being literate. Rattangarh is 6 km from Morinda town (Table 2).

2.6.3 Ramgarh Manda
Ramgarh Manda village, situated 18km from Chamkaur Sahib and 25km from Rupnagar, serves as the gram panchayat of Ramgarh Manda. With a pin code of 140013, the village covers 104 hectares and is home to 699 people, including 359 males and 340 females. The literacy rate is 73.53%, with 77.44% of males and 69.41% of females being literate. There are 123 houses in Ramgarh Manda, and the village is 3.9 km

from Morinda town (Table 3).

2.6.4 Bhadwali
Ramgarh Manda village, situated 18km from Chamkaur Sahib and 25km from Rupnagar, serves as the gram panchayat of Ramgarh Manda. With a pin code of 140013, the village covers 104 hectares and is home to 699 people, including 359 males and 340 females. The literacy rate is 73.53%, with 77.44% of males and 69.41% of females being literate. There are 123 houses in Ramgarh Manda, and the village is 3.9 km from Morinda town (Table 3).

2.6.5 Bhateri
Bhateri village, situated in Bassi Pathana tehsil of Fatehgarh Sahib district, is 17km from the sub-district headquarters and 21km from the district headquarters. This gram panchayat, with a pin code of 140412, comprises around 284 houses.
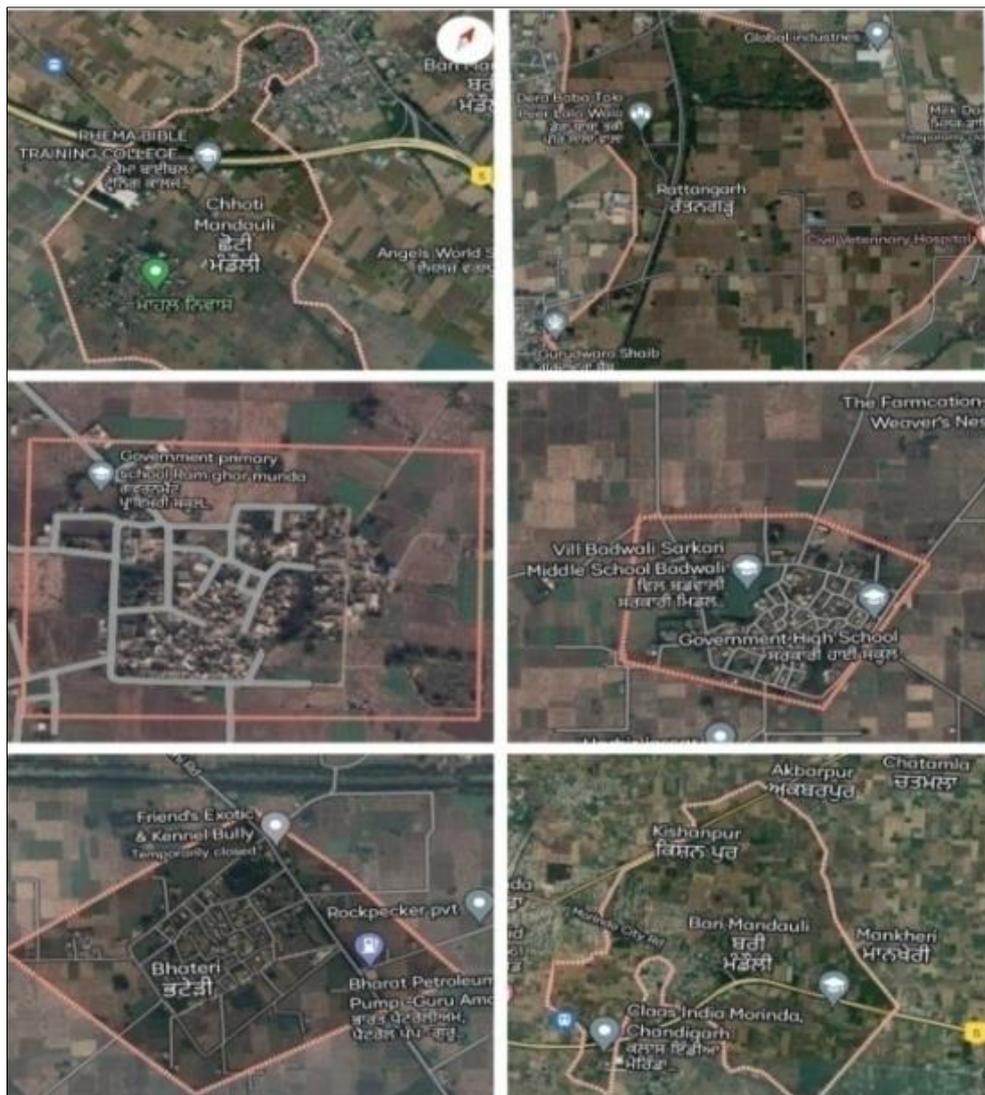
Covering 154 hectares, Bhateri has a population of 1,371 individuals, including 731 males and 640 females. The literacy rate is 71.12%, with 75.92% of males and 65.63% of females being literate. Bhateri is 5 km from Morinda town (Table 1).

2.6.6 Bari Mandauli
Bari Mandauli village, situated in Chamkaur Sahib tehsil, is 20km from the sub-district headquarters and 27km from the district headquarters. Marauli Kalan is the gram panchayat of Bari Mandauli village, comprising approximately 517 houses with a pin code of 140045. Encompassing 596 hectares, Bari Mandauli has a population of 2,670 individuals, including 1,430 males and 1,240 females. The literacy rate is 77.72%, with 81.68% of males and 73.15% of females being literate. The village is 3.5 km from Morinda town (Table-1).

Table 1: Geographical area per villages

Village	Geographical area	Longitude	latitude
Chhoti Mandauli	200	76.52146°E	30.77085°N
Rattangarh	232	76.5821° E	30.8557° N
Ramgarh Manda	104	76.5040° E	30.7855° N
Bhadwali	234	76.4917° E	30.7553° N
Bhateri	154	76.5156° E	30.7416° N
Bari Mandauli	596	76.5286° E	30.7867° N

Fig 1: The maps of the selected village

2. Results and Discussion

2.1 Age of the respondent
The below (table 2) demonstrate the age of the respondent. The age category is divided into four category that is 16 to 35, 36 to 5, 56 to 75 and above 75 The maximum respondent were between the age of 36 to 55 and the minimum respondent were above 75 age. This shows that the respondent were Middle aged neither old nor youth from the survey we observe that the maximum youth shifted to abroad either Canada or Italy for better education and standard of living.

2.2 Education
The below (table 3) demonstrate the educ or qualification of the respondent the categories divided Into five columns that is illiterate primary 10th 12th and graduation. From the survey we observed that the percentage of illiterate respondents are 7.33% the respondent studied till primary school is 28% till 10 th is 37.33% till 12th is two four point six six percent and the graduation is 2.66% from this we can conclude that the maximum respondent qualification is still 10th and the least qualification is graduation.

2.3 Family composition
The table 4 below shows the type of family composition of the farmers in the villages. The observation is that the nuclear families in the villages are 46.67% and the joint families are 53.33% i.e the percentage of joint families is more than that of nuclear families in all the villages.

2.4 Caste
The table 5 below shows the cast composition of the respondent of all the villages The cast mainly observed general OBC and SC. The percentage of general is 46% the percentage of OBC is 50% and the percentage of SC is 4%. From this we can conclude that the obc and the general category respondent and nearby equal.

2.5 Farming Experience
Death table 6 below shows the farming experience of the respondent of all the villages the category is mainly divided into 5 parts that is 5 to 10 years, 11 to 20 years,21 to 30 years 31 to 40 year and above 45 years. Most number of farmers have experience between 11 to 20 years about 46%, between 11 to 30 years 21% and 31 to 40 is also 21% farmers experience and above 45 years only 7.35% farmer lies. But the least number of farmers have a experience between 5 to 10 years Approximately 6%.

Table 2: The age category of different respondent of the villages

Sr. no.	Villages	16-35	36-55	56-75	Above 75
1	Chhoti Mandauli (n=21)	5	8	5	3
2	Rattangarh (n=28)	7	9	8	4
3	Ramgarh Manda (n=16)	3	7	5	1
4	Bhadwali (n=25)	4	11	6	4
5	Bhateri (n=27)	5	9	10	3
6	Bari Mandauli (n=33)	6	13	6	8
	Overall % of age category (N=150)	30(20%)	57(38%)	40(26.67%)	23(15.33%)

Table 3: The education or qualification of the respondent

Sr. no.	Villages	illiterate	primary	10th	12th	UG
1	Chhoti Mandauli (n=21)	1	7	10	3	-
2	Rattangarh (n=28)	3	5	`12	7	1
3	Ramgarh Manda (n=16)	-	4	3	8	-
4	Bhadwali (n=25)	2	8	9	5	1
5	Bhateri (n=27)	4	12	7	4	-
6	Bari Mandauli (n=33)	1	6	15	10	2
	Overall% of literacy (N=150)	11(7.33%)	42(28%)	56(37.33%)	37(24.66%)	4(2.66%)

Table 4: Family Composition

Sr. No	village	Nuclear	Joint
1	Chhoti Mandauli (n=21)	9	12
2	Rattangarh (n=28)	15	13
3	Ramgarh Manda (n=16)	9	7
4	Bhadwali (n=25)	10	15
5	Bhateri (n=27)	13	14
6	Bari Mandauli (n=33)	14	19
	Overall % (N=150)	70(46.67%)	80(53.33%)

Table 5: Caste

Sr no.	village	General	OBC	SC
1	Chhoti Mandauli (n=21)	13	8	
2	Rattangarh (n=28)	11	15	2
3	Ramgarh Manda (n=16)	9	7	
4	Bhadwali (n=25)	11	14	
5	Bhateri (n=27)	7	17	3
6	Bari Mandauli (n=33)	18	14	1
	Overall % (N=150)	69(46%)	75 (50%)	6(4%)

Table 6: Farming experience of the farmer

Sr no.	Village	5-10	11-20	21-30	31-40	Above 45
1	Chhoti Mandauli (n=21)	1	10	6	3	1
2	Rattangarh (n=28)	3	15	`3	6	3
3	Ramgarh Manda (n=16)	-	5	3	8	-
4	Bhadwali (n=25)	-	9	7	6	3
5	Bhateri (n=27)	4	12	7	4	-
6	Bari Mandauli (n=33)	1	18	5	4	5
	Overall % (N=150)	8(5.33%)	69(46%)	31(20.66%)	31(20.66%)	11(7.34%)

2.6 Social participation
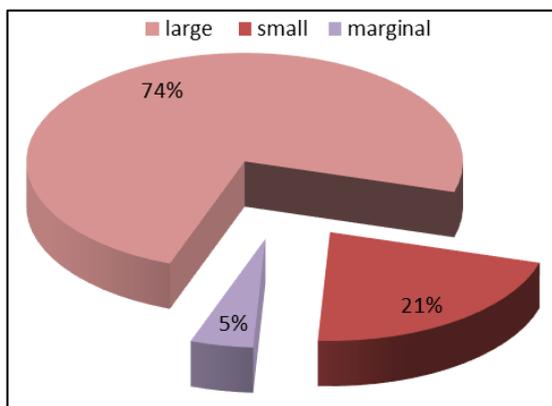The social participation among all the six villages is approximately 1-2%. Few people are the gram panchayat members or the Sarpanch member but other than that the almost villagers have least social participation

Table 7: Land holdings

Sr no.	Villages	>1	1-2	2-4	4-10	Above 10
1	Chhoti Mandauli (n=21)	1	2	10	6	2
2	Rattangarh (n=28)	2	5	14	`5	2
3	Ramgarh Manda (n=16)	-	6	7	2	1
4	Bhadwali (n=25)	-	7	9	6	3
5	Bhateri (n=27)	3	5	12	7	-
6	Bari Mandauli (n=33)	1	7	18	5	2
	Overall% (N=150)	7(4.66%)	32(21.33%)	70(46.66%)	31(20.66%)	10(6.66%)

2.7 Type of farmer
According to the land holdings the farmers are divided into three category i.e marginal small and large farmers. The farmers having total land of 0 to 1 hectare are the marginal farmers, 1 to 2 hectare is the small farmers and the farmers having total land holding of more than 2 hectare is the large farmers, from the survey data (table 7) we observed that 5 percentage of farmers are marginal farmers, 22 percentage of farmers are small farmers and 74 percentage of farmers are large farmers.

Fig 2: Type of farmer

Conclusion
This comprehensive exploration of socioeconomic landscape provides a panoramic view of the community. This study reveals that how the community works. We looked at things like who lives here, how much money they make and how much education they have. According to the data we can picture the overall condition of the farmers and the village.
 Based on the findings and collected data, it can be deduced that the Rural Agricultural Work Experience (RAWE) program significantly influences the lives of agricultural students. Agriculture heavily relies on hands-on experience and practical experiments, aspects that cannot be fully comprehended through theory alone. Numerous facets of this field can only be grasped by interacting with individuals who have been actively involved in the sector for an extended period. The RAWE program serves as a valuable means through which many aspects of agriculture become clear and understandable.

As per the data collected most of the farmers are in age group of 36-55 years category i.e 38 percentage and about 37.33 percentage of respondents are qualified upto metric. About 50 percentage of respondents has farming experience of 20 years and below. Most of the respondents family are joint (53.33%) and the percentage of nuclear is 46.67. All the respondents belong to either general (46%) or OBC (50%) category. The major source of information is obtained from input dealers and other successful farmers of the village. The participation of the respondents in social organizations is very less. According to the land holdings 5 percentage of farmers are marginal farmers, 22 percentage of farmers are small farmers and 74 percentage of farmers are large farmers.

All respondents were very calm and helpful in nature. They shared their whole life experience of agricultural sector as well as about life also. They also told us the problems they were facing currently. Common problems were lack of awareness regarding agricultural schemes and over use of agro- chemicals.

Competing Interests
Authors have declared that no competing interests exist.

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