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Agriculture Development And its Socio-economic Impact : A study of Rural Punjab

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Abstract

A study was conducted on 360 farmers from three districts to evaluate the evolving state of agriculture and its consequences. The findings revealed a growing trend of materialism in rural life, as a majority of farmers have been embracing new housing patterns that include all the amenities typically found in urban areas. The cultivation of wheat and paddy crops has experienced a substantial increase, whilst other crops such as peanuts, sugarcane, grams, and oilseeds have showed a diminishing trend over time. The visiting hours of farmers to the fields have undergone significant changes. The implementation of modern machinery, automation in tube wells, and the utilization of chemicals has greatly reduced the duration of laborious work in agricultural areas. The majority of farmers obtained loans ranging from Rs 1 lakh to 2.5 lakh, sourced from both institutional and non-institutional channels. This credit was mostly used for purchasing agricultural supplies, repaying existing debts, and funding socio-religious festivities.

Farmers have been investing significant sums of money in agricultural inputs, sometimes driven by the need for social prestige. The utilization of migrant labor has significantly displaced local labor for a variety of reasons. The introduction of new technologies and the utilization of agrochemicals emerged as the primary catalysts for transforming agriculture. The agriculture industry has significantly influenced the transformation of social interactions in villages. The jajmani system is no longer functional in rural regions. The majority of farmers expressed a preference for nuclear families, citing consumerism and a desire for independent living as the primary motivations.

Key Words: Agriculture , Technology, Farmers, Rural, Change

Introduction

The state of Punjab has been associated with several slogans like ‘prosperous’, ‘progressive’, ‘forward’ and above of all the ‘granary of India’. All these catchy labels were given due to emergence to green revolution in mid sixties which resulted in high yields of crops particularly wheat and paddy which benefitted economically to most sections of society along with occurrence of social and cultural changes in rural life of the state. However after adoption of new economic policies (NEP) by Indian state in 1991-92, widely known as start of era of globalization, privatization, liberalization agriculture sector experienced many new changes which largely produced negative consequences for farmers due to withdrawal of subsidies and minimum support price of the crops. Many surveys, reports, evaluation works and other

writings concerning to agriculture has reported a few positive but more ill effects of changes for the farmers due to new economic policies and lot of negative consequences are visible in the forms of stagnation of crops yield, farmer's distress and rising suicides among them (Singh et al 2020, Jan Breman 2016, Gill 2015 Reddy & Mishra 2010,Sidhu et al : 2003, Shetty :2004, Gupta :2005, Suri :2006, Sharma :2006, Chaudhary : 2006 Mahajan: 2007, Mathur et al: 2007). Regarding agriculture crisis According to Suri (2006), the problems farmers are facing in India are caused by the changing nature of agriculture and democratic politics. Some of these problems are that farming is becoming less profitable, there are bigger differences in wealth between rural and urban areas, farmers can't work together to put pressure on the government, and politicians don't always look out for the best interests of farmers.

Similarly Jodkha :2006, Gill :2007, Gill: 2003, Ghuman :2002, have highlighted the various positive and negative aspects of privatization for various aspects of life of rural people. Sidhu et al (2004) concluded that Indian agriculture has been facing a big-challenge in the globalized era because production and productivity growth rates of food grains and other principal crops has declined in the post-reform period compared to pre-reform decade. To know the ground realities with regards to the changes in agriculture the present study was undertaken with the following specific objectives:

To pin point the changes occurring in agriculture.
To assess the factors responsible for bringing changes in agriculture.
To study the effect of agricultural changes on social life of people.

METHOD AND DATA

This paper is based on the study conducted in three districts i.e. Amritsar, Jalandhar and Sangrur representing each of the three broad socio-cultural zones of the state and having high agricultural production of major crops. Two blocks were chosen from all the selected districts. Two villages which were at least 15 Kms away from the periphery of the main town were taken for data collection. A sample of 10 small, 10 medium and 10 large farmers from each village was selected randomly, making a total of thirty farmers from each village. Thus, in all 360 respondents were selected for the present study. Data were collected personally with the help of the structured and pre-tested interview schedule and suitable statistical tools were also

applied to arrived at the conclusions. In this study effort is made to make comparative analysis i.e present scenario and ,n 15 years back because agriculture in Punjab started experience of privatization after 1990s. Some of the tables were avoided for sake of brevity of the paper.

Socio-economic profile of the respondents

So far as socio-economic characteristics of the sampled respondents were concerned, majority of the respondents (92.78 per cent) were Sikhs and from higher caste group (95.28 per cent) and largely in the age group of 50-70 years. More than half of the respondents (55.56 per cent) lived in nuclear families and 44.44 per cent in the joint families. Majority of them (64.45 per cent) were educated upto middle level and one tenth of them were matriculates while 13.05 per cent were graduate and remaining 11.67 per cent of them were illiterate. A large number (46.67 per cent) of the respondents had their annual income in between Rs. 1, 00,000-5, 00,000 while one third of them had annual income upto Rs. 1, 00,000.

FINDINGS OF THE STUDY

i) Ownership of material possessions

The first query of the study pertained to the material possession with the respondent farmers and change occurring over time. Data in this regard (Table.1) indicated that 15 years back maximum number of the respondents owned Cycle, Radio, Television set, refrigerator and small percentage of the respondents possessed Scooter/Motorcycle and VCD/VCR/DVD players. But at the time of study data showing increasing trend as most of the respondents possessed all household items as 97 per cent owned T.V sets, 83 per cent refrigerator, 78 per cent were having VCD/VCR/DVD players, 75 per cent possessed motorcycle/scooter, 60 per cent owned washing machines, 54 per cent had A.C/coolers and 68 per cent were having even mobile phones of various types while one third of the respondents owned car/jeep also. The major attributes turned out for this were the increasing connectivity with urban and even outer world, the influence of mass media and increasing materialism etc. Medium and large farmers comparatively possessed more material and durable items at the time of study. The whole data is indicative that materialism is increasing among the farmers overtime. Statistically data also proved a significant change over times.

Table 1 Change in material possession owned

Multiple Response)

Material possession	15 years back	At present	Z-value
Refrigerator	164 (45.56)	300(83.33)	10.59**
Cycle	344 (95.56)	360 (100.00)	4.05**
Scooter/Motorcycle	68 (18.89)	272 (75.56)	15.23**
Car/Jeep	-	112 (31.11)	11.52**
Radio	268 (74.44)	260 (72.22)	0.67**
Television set	200 (55.56)	348 (96.67)	12.94**
Mobile phone	-	240 (66.67)	18.97**
A.C/Cooler	-	196 (54.44)	16.41**
Washing Machine	-	216 (60.00)	17.57**
Food Processor	-	104 (28.89)	11.03**
VCD/VCR/DVD players	40(11.11)	280 (77.78)	18.00**

Figures in parentheses indicate percentage, ** Significant at 1 percent level,* Significant at 5 percent level, NS = Non- significant

ii) Changes in cropping pattern

One of the important aim of the present study has been to see the shift in cropping pattern overtime in the areas under study and data relating to this is presented in table 2. As regards the Kharif season, data indicated that 52.22 per cent of the respondents were growing paddy over 15 years and it has increased to 71.67 per cent at present. Similarly the Maize crop grown by 42.78 per cent of the respondents and it has increased to 55.00 per cent during the time of study. Cotton has also been marginally increased in last 15 years. On the other side crops like sugarcane and groundnut has shown the declining trend i.e. 8.61 per cent of the respondents raised groundnut 15 years back and it has decreased to 2.78 per cent during the time of study while sugarcane was grown by 32.22 per cent of the respondents over 15 years and it has decreased to 15.28 per cent at present. It was concluded from the discussion with farmers during data collection that major reasons to adopt paddy crop are less prone to diseases, less risky and assured Minimum Support Price.

Table 2

Changes in cropping pattern over the 15 years among total farmers in Punjab

(Multiple Response)

Crops	15 years Back		At present		z-value
	Number	Percentage	Number	Percentage	
A.Kharif					
Paddy	188	52.22	258	71.67	5.37**
Maize	154	42.78	198	55.00	3.28**
Cotton	156	43.33	175	48.61	1.42 NS
Kharif Fodder	360	100.00	360	100.00	--
Groundnut	31	8.61	10	2.78	3.38**
Vegetables	145	40.28	190	52.78	3.36**
Pulses	163	45.28	221	61.39	4.33**
Sugarcane	116	32.22	55	15.28	5.34**
Oilseeds	213	59.17	212	58.89	0.08 NS
Potato	108	30.00	139	38.61	2.43*
B. Rabi					
Wheat	360	100.00	360	100.00	--
Barley	73	20.28	86	23.89	1.17 NS
Grams	89	24.72	40	11.11	4.76**
Vegetables	118	32.78	156	43.33	2.92**
Pulses	158	43.89	198	55.00	2.98**
Oilseeds	167	46.39	141	39.17	1.96*
Rabi Fodder	360	100.00	360	100.00	--

*Significant at 5% level, **Significant at 1% level, ***Significant at 10% level, NS Non-Significant

Regarding the Rabi season, table further shows that wheat dominated the agriculture throughout the period of the study. No change is seen in wheat crop. However other crops of Rabi season like Pulses and oilseeds witnessed a declining trend. Overall results shows that Paddy, Maize and Cotton shows upward trend while other crops like Groundnut, Sugarcane, Grams and oilseeds shows declining trend. The declining trend in pulses may be attributed to

the risk in growing of these crops and fluctuations in the market. There is no significant change in wheat crop. Data indicate that there is clear shift in cropping pattern over 15 years. Sidhu and Johl (2002) in their study have also derived almost similar type of results. Gill (2002) in his work writes ‘ the wheat-paddy crop rotation has led and dominated agricultural development of Punjab. In recent years this crop combination has become more dominant withering away of other crops’.

iii) Visiting time to the Fields

During the course of study an effort was made to know the changes in the visiting times to their fields over a period of time and data in this regard presented in table 3 which showed that over time there is shift in the visiting times. Previously little more than half of the respondents visited their fields at early morning which has declined to 32.22 percent at the time of study while 35.55 per cent of the respondents visited fields in the morning time 15 years back which has decreased to 25.00 per cent in the study period. About 3.88 per cent of the respondents used to visit their fields in the afternoon over 15 years which has increased to 4.44 at the time of study while 4.16 per cent of the respondents visited their fields at any time may be in the evening over 15 years and now it shows increasing trend i.e.11.66 per cent. It was observed that now farmers preferred to go their fields on scooters, tractors and they complete their field work in less time. Gone are the days when Punjabi females used to go to field to supply the meals to Punjabi ‘Haali’ (cultivator), This is a visible change in rural life of people over time. It was observed that there is shift in the visiting time to the fields. Modern machinery and automation in the Tube wells has decreased the longer working hours to the shorter one.

Table 3: Visiting time to the fields (Multiple Response)

Timings	15 years back	At present
Early Morning	188 (52.22)	116 (32.22)
Morning Time	128 (35.55)	90 (25.00)
Afternoon	14 (3.88)	16 (4.44)
Any other	15 (4.16)	42 (11.66)

Figures in parentheses indicate percentages

iv) Indebtedness among farmers

It was tried to know about indebtedness of respondent farmers and data is given in table 4 which revealed that only 5.28 per cent of the respondents had not taken the credit while 39.72 percent of the respondents who had taken credit in between Rs.1, 00,000 to 2, 50,000 whereas more than one third 35.00 per cent of the respondents availed the credit upto Rs.100000. Further, 15 per cent of the respondents had taken credit Rs.2, 50,000 to 5, 00,000 while 5.00 per cent borrowed the more than Rs.5, 00,000. During field work it was observed that medium and large farmers had taken large amount of loan while percentage of small farmers is less. While discussing with farmers it came out that most of small farmers borrowed credit from moneylenders because it is quiet easy and without involvement of any paperwork. It was also noted that many farmers availed credit for non-productive purposes from moneylenders. Table further revealed that 49.17 per cent of the respondents took loan from institutional sources which include commercial banks and cooperatives while half (50.83%) of the respondents took loan from non-institutional sources, from while 38.33 per cent acquired credit from commission agents whereas 7.50 per cent took loan from relatives/friends.

Table 4: Amount and Sources of Credit taken

	Farmer's categories			
Amount	Small	Medium	Large	Overall
NIL	4 (3.33)	6 (5.00)	9 (7.50)	19 (5.28)
Upto 100000	68 (56.67)	32 (26.67)	26 (21.66)	126 (35.00)
100000-250000	44 (36.67)	64 (53.33)	35 (29.17)	143 (39.72)
250000-500000	4 (3.33)	12 (10.00)	38 (31.67)	54 (15.00)
500000 and above	-	6 (5.00)	12 (10.00)	18 (5.00)
Sources of loan				
A. Institutional				
Commercial	25 (20.83)	34 (28.33)	37 (30.83)	96
Banks	18 (15.00)	28 (23.33)	35 (29.17)	(26.67)
Cooperatives				81 (67.5)
	43 (35.83)	62 (51.67)	72 (60.00)	
Total Institutional				177
				(49.17)

B.Non-Institutional				
	58 (48.33)	42 (35.00)	38 (31.67)	138 (38.33)
Commission	5 (4.17)	3 (2.50)	1 (0.83)	9 (2.50)
Agents	8 (6.67)	11 (9.17)	8 (6.67)	27 (7.50)
Landlords	6 (5.00)	2 (1.67)	1 (0.83)	9 (2.50)
Relatives/ Friends				
Village-Shopkeepers etc.	77 (64.17)	58 (48.33)	48 (40.00)	183 (50.83)
Total Non Institutional	120(100.00)	120 (100.00)	120 (100.00)	120 (100.00)
Grand Total				

Figures in parentheses indicate percentages

During data collection it was observed that all farm size categories were not restricted to one source of borrowing which further proves to be a major cause for their indebtedness and commission agents was still proving to be an important source of credit to the farmers. An effort was made to know the purpose of borrowing, it was observed that farmers borrowed loan from different sources for the purchase of agriculture inputs like fertilizers, dairy and agricultural implements and machinery etc. Although a majority has utilized the borrowed loan for specific purpose but a few had not utilized the loan taken for the purpose it was taken. It was also found that some people gave more importance to their social status than their economic capacity due to which they borrowed money. Gill and Singh (2006) in their work have also yielded by & large similar types of results.

v) Change in nature of human labour

Table 6 contains the information about the change in nature of human labour used by different farm size categories. Data indicated that majority (66.19 %) of the respondents depended on migratory labour in the last one & half decades which has increased to 97.30 per cent at the time of study while 74.33 per cent of the respondents depended on local labour 15 years back and now it shows decreasing trend i.e. 52.03 per cent. Statistically, the results show significant change from local to migratory labour in the last one and half decades. During field work it was observed that local laborers move outside the village either for the same type of

job opportunities or better wages. Majority of the small, medium and large farmers used to employ local labour for farm operations 15 years back whereas the trend of employing local labour is declining overtime. This may be attributed to changes coming to the social fabric in villages and reluctance of local labour to work in the farm of village peasants. Perhaps due to this reason the employability of migratory labour is increasing in all the categories.

Table 5: Change in nature of human labour used by the farmers

(Multiple response)

Nature of human labour	15 years back	At present	z-value
Small farmers			
Local	28 (68.29)	19 (33.93)	3.35**
Migratory	22 (53.65)	48 (85.71)	3.48**
Medium farmers			
Local	94 (78.33)	54 (45.00)	5.21**
Migratory	76 (63.33)	120 (100.00)	7.34**
Large farmers			
Local	88 (73.33)	81 (67.50)	0.99NS
Migratory	88 (73.33)	120 (100.00)	6.08**
Overall			
Local	210 (74.73)	154 (52.03)	5.65**
Migratory	186 (66.19)	288 (97.30)	9.76**

Figures in parenthesis indicate percentages,** Significant at 1% level, NS = Non-Significant

vii) Agricultural Inputs owned

Agricultural inputs play very crucial role in development of agriculture. However in Punjab agricultural inputs are reported to be more with the farmers than the required number. Table 6 shows that more than half of the respondents (53.33 %) had tractors in the last one and half decade which has increased to 68.61 per cent at the time of study while half of the respondents had cultivator/plough 15 years back which has increased to 72.22 per cent during the time of study whereas little less than half (47.78%) of the respondents had trolley in the last one and half decade and 62.22 per cent of the respondents had it at the time of study. Table further revealed that all farm size categories showing positive significant change overtime. During fieldwork it was observed that people purchase machinery (especially tractors) not only

as per their requirement but also out of their ego and for their social prestige. Also none of the respondent farmers was found to plough the fields with oxen, which was a major source of cultivation in last 50 years back. It was also noted that medium and small farmers were having high cost machinery like tractor, trolley and other agricultural appliances largely taken on loan. Singh 200, Chanderashekhar et al 2004, Kaur (2001) in their works also derived similar types of results.

Table 6: Change in agricultural inputs owned

(Multiple Response)

Farm inventory	15 years back	At present	Z-value
Small Farmers			
Tractor	4 (3.33)	11 (9.17)	1.87**
Trolley	-	-	-
Bullock cart	40 (33.33)	44 (36.67)	0.54NS
Thresher	4 (3.33)	4 (3.33)	-
Cultivator/plough	24 (20.00)	40 (33.33)	2.34**
Cane crusher	-	4 (3.33)	2.02*
Seed cum Fertilizer drill	-	28 (23.33)	5.63**
Medium Farmers			
Tractor	76 (63.33)	116 (96.67)	6.46**
Trolley	68 (56.67)	108 (90.00)	5.84**
Bullock cart	8 (6.67)	60 (50.00)	7.45**
Thresher	16 (13.33)	56 (46.67)	5.63**
Cultivator/plough	48 (40.00)	104 (86.67)	7.50**
Cane crusher	-	-	-
Seed cum Fertilizer drill	16 (13.33)	60 (50.00)	6.11**
Large Farmers			
Tractor	112 (93.33)	120 (100.00)	2.88**
Trolley	104 (86.67)	116 (96.67)	2.80**
Bullock cart	78 (65.00)	108 (90.00)	4.64**
Thresher	66 (55.00)	106 (88.33)	5.73**

Cultivator/plough	108 (90.00)	116 (96.67)	2.07*
Cane crusher	-	28 (23.33)	5.63**
Seed cum Fertilizer drill	36 (30.00)	80 (66.67)	5.68**
Overall			
Tractor	192 (53.33)	247 (68.61)	4.20**
Trolley	172 (47.78)	224 (62.22)	3.90**
Bullock cart	126 (35.00)	212 (58.89)	6.42**
Thresher	86 (23.89)	166 (46.11)	6.25**
Cultivator/plough	180 (50.00)	260 (72.22)	6.12**
Cane crusher	-	32 (8.89)	5.79**
Seed cum Fertilizer drill	52 (14.44)	168 (46.67)	9.39**

Figure in parentheses indicates percentage,*Significant at 5 percent level,** Significant at 1 percent level

*** Significant at 10 percent level, NS = Non – Significant

vii) Irrigation System

Is there any shift in irrigation system over time ? This query was put to the respondent and the response in this regard is presented in table 7 shows that in the last one and a half decades 62.50 per cent of the respondents used to irrigate their fields with canal water and it has decreased to 38.89 per cent at the time of study as most of the farmers told that it is not a very reliable source of irrigation at present due to scarcity of water in the canals while 87.50 per cent of the respondents used tube wells (shallow) as a source of irrigation 15 years back and it has decreased to 58.89 per cent during the study period whereas 17.50 per cent of the respondents had submersible pump in the last one and half decade but during study period it shows increasing trend. Now, 74.17 per cent of the respondents had submersible pump as a source of irrigation to the fields. Table further revealed category wise distribution of the respondents which showed that all farm size categories showing decreasing trend of canal water and tube well (shallow) overtime whereas submersible pumps are showing increase in all the farm categories. Many small farmers held that installation of submersible pump is beyond their capacity and they were forced to borrow. Also high capacity electric motor is required to draw water from deeper level.

Table: 7 Shift in irrigation System over time

(Multiple Response)

Sources of irrigation	15 years back	At present
Canal only	225 (62.50)	140 (38.89)
Tube well (Shallow)	315 (87.50)	212 (58.89)
Submersible pump	63 (17.50)	267 (74.17)

Figure in parentheses indicates percentage

viii) Factors for bringing change in agriculture

What turned agriculture in Punjab from traditional to modern one. To this query (81.67 %) of the respondents expressed arrival of new technology as a major factor for this change (which include use of chemical fertilizers, high yielding varieties and greater mechanization) while 85.27 per cent of the farmers reported assured MSP specially wheat and rice as a factor for agriculture change whereas three fourth of the respondents expressed impact of mass media, role of institutions, urban impact and population pressure as the major factors for agriculture change. During fieldwork it was observed that farmers giving more importance to wheat paddy rotation because these crops, they felt, have assured MSP and less risky. Further respondents were found in the demonstration effects also mean they usually say 'others' following the same cropping rotation and hence they are adopting. Attitudes towards growing traditional pulses in the field was found very negative. Farmers felt that traditional crops are vanishing due to climatic changes also. Category wise distribution of the respondents also expressed the same factors for agricultural change. So, it can be concluded that these factors has not only transformed the traditional agriculture but also influenced the rural economy and socio-cultural set up.

Table :8 Factors responsible for change in agriculture

(Multiple Response)

Farmer's Categories					
S. No.	Factors responsible for bringing change in agriculture	Small	Medium	Large	Overall
1.	Arrival of new technology	98 (81.67)	94 (78.34)	102 (85.00)	294 (81.67)
2.	Mass media	84 (70.00)	97 (80.83)	95 (79.17)	276 (76.67)
3.	Role of Institutions	82 (68.33)	89 (74.17)	92 (76.67)	263 (73.05)

4.	Urban impact	78 (65.00)	83 (69.17)	108 (90.00)	269 (74.72)
5.	Population Pressure	92 (76.67)	94 (78.34)	84 (70.00)	270 (75.00)
6.	Due to assured prices	93 (77.50)	103 (85.83)	111 (92.50)	307 (85.27)

Figure in parentheses indicates percentages

ix) Agriculture and changing social relations

With mechanization and economic development the nature of relationships like caste system, old kinship, jajmani system has undergone changes and its rituals aspects have visibly weakened. During the course of study an effort was made to know the changing social relations over time and data related to it has been arranged in table 9 which revealed that half of the respondents opined that inter caste relations changed due to modern agriculture and development while little more than half of the respondents told that food-exchange relationships between different castes has increased over time. It was observed that traditional severe difference used to be observed by non Scheduled Castes from the Scheduled castes has shrunken. At present there is hardly any problem to Scheduled Caste to enter in the houses of Non Scheduled caste, to sit with them and many cases Non- S.Cs attend the social ceremonies of the scheduled castes. This may be attributed to the changes coming in socio-economic structure of villages. Most farmers felt that social fabrics is changing overtime because now lower castes people changing their occupations and all the farmers told that jajmani and barter system is not working in the villages. Gill 2003, Kaur 2001 have also arrived at by and large similar result in this regard in their works. Gill reports that the nature and extent of jajmani relationship has changed from its social and ritual aspect to a more economic one. About 57.78 per cent of the respondents told that visit to their relatives and neighbourers lessened due to mechanization of agriculture because now a day everyone is busy in their own family and job. About 59.72 per cent of the respondents expressed that the dressing pattern has changed over time because now people are more fashion oriented. About 25.56 per cent of the respondents told that awareness regarding right to vote, politics, education has increased over time. During study it was noted that now most farmers tend to send their children in private English speaking schools largely as a prestige issue or due to the attractive adds of the private schools. Most of the farmers felt that due to the development and mechanization people expose themselves

to the outside world from where they get the knowledge which helped them moving from conservative to more rational behavior.

Table: 9 Changing social relations

(Multiple Response)

Farmer's Categories				
Changing social relations	Small	Medium	Large	Overall
Inter caste relations	48 (40.00)	61 (50.83)	72 (60.00)	181 (50.27)
Dressing Pattern	54 (45.00)	77 (64.17)	84 (70.00)	215 (59.72)
Lessen the visit of relatives	63 (52.50)	69 (57.50)	76 (63.33)	208 (57.78)
Food exchange relationship between different castes	56 (46.67)	65 (54.17)	68 (56.67)	189 (52.50)
Any other (awareness regarding right to vote etc.)	27 (22.50)	31 (25.83)	34 (28.33)	92 (25.56)

Figures in parenthesis indicate percentages

x) Change in the social status over time

How do the farmers feel about their social status? To this question (T 10) shows that 36.67 per cent of the respondents experienced improvement in their social status now a days than 15 years back while 21.94 per cent of the respondents felt that their social status improved 'somewhat' and 22.22 per cent said that their social status 'remained the same' in the last one and half decade. Regarding the constitution of improvement respondents from medium and large categories opined that now they live in good houses with all the facilities, have more earning, send their children to English speaking schools etc. On the other hand 48% respondents from small farmers category held that their status has decreased. They attributed decreased in status to the high input cost, less return, and burden of debt etc.

Table 10 Change in the social status

Farmer's Categories				
Extent of improvement	Small	Medium	Large	Overall
Improved a lot	-	23 (19.17)	109 (90.83)	132 (36.67)
Improved somewhat	28 (23.33)	40 (33.33)	11 (9.17)	79 (21.94)
Remained the same	34 (28.33)	46 (38.33)	-	80 (22.22)
Lowered down	58 (48.33)	11 (9.17)	-	69 (19.17)
Mean score of improvement	-0.25	0.63	1.91	0.76
Percentage score of improvement	-12.50	31.50	95.50	38.00

Figures in parentheses indicate percentages.

Changes in Joint family system

Have the changes occurring in agriculture affected the traditional joint family system prevalent in almost in whole India ? This query was put to the respondents and the response is presented in table 11 which shows that 30.56 per cent of the respondents liked joint family system while 69.44 per cent liked nuclear family system. The data further revealed that majority of small, medium and large farmers liked nuclear family system as compared to joint family system. Impact of materialism, role of T.V, urge of the younger generation to live independently mostly to educate their own children, declining respect for the olds were some major attribute emerged during the study. On the whole, a clear shift is there from joint to nuclear family system in the countryside of Punjab.

Table 11 Changes in joint family system

Farmer's Categories				
Like joint family system	Small	Medium	Large	Overall
Yes	40 (33.33)	45 (37.50)	25 (20.83)	110 (30.56)
No	80 (66.67)	75 (62.50)	95 (79.17)	250 (69.44)

Figures in parentheses indicate percentages

*Multiple Responses

Conclusion

The research findings indicate that there has been a discernible rise in materialism among farmers, as evidenced by the emergence of contemporary housing designs equipped with nearly

all the amenities typically found in urban areas. The majority of the participants reported owning a complete range of domestic items, including a refrigerator, bicycle, scooter or motorcycle, car or jeep, television set, mobile phone, air conditioner or cooler, washing machine, food processor, and VCD/DVD player. Furthermore, the possession of this material has been steadily increasing. The producers' preference for wheat and paddy crops was primarily attributable to their lower susceptibility to diseases, lower risk, and guaranteed MSP. A significant number of conventional agricultural commodities and species have exhibited a precipitous decline, suggesting a discernible change in farming practices. The implementation of mechanization and automation has significantly disrupted the conventional agricultural timetable. It was discovered that indebtedness was widespread among all categories of farmers, and that they were not limited to a single source of borrowing, which frequently serves as the primary reason for their debt. The acquisition of agricultural inputs, the repayment of previous debt, and expenditures on socioreligious ceremonies constituted the majority of borrowing. The majority of the participants were presently reliant on migrant labor. Agricultural inputs for farms of all sizes have increased over time, and farmers acquire machinery not only to fulfill their needs but also to enhance their reputation. In irrigation, submersible tube wells have substantially supplanted shallow and conventional canal and tube well systems.

The introduction of new technologies (including the use of chemical fertilizers, high-yielding varieties, and increased mechanization) and guaranteed MSP, in particular for wheat and rice, were the primary drivers of agricultural change. Rural areas have witnessed a transformation in social relations, as evidenced by the shifting adoption patterns of foods from Scheduled castes by non-scheduled castes. Presently, the Jajmani system is inoperable in the villages. A third of the participants, predominantly from medium and large farms, reported an improvement in their circumstance in the villages as time progressed. Conversely, half of the small farmers included in the sample encountered a decline in their status. The nuclear family system was favored by respondents across all categories in comparison to the joint family system. In summary, it can be stated that significant transformations are taking place within the traditional agricultural framework, which have had a profound impact on the socioeconomic dimensions of rural communities.

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