



Perception of Farmers and Challenges during COVID-19 Pandemic in Haryana, India

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Abstract: The study was conducted in Rohtak District of Haryana State to study factors affecting perception of farmers and challenges faced by them. The majority of the farmers were agreeing to the statement that there is low availability of labour followed by impact wages of labour, main selling channel for produce, changed prices of the agricultural output and changes in price of agri. inputs. About 48.30 percent of farmers had medium level of perception regarding covid-19. Half of the farmers who belonged to 36-50 years age category had medium level of perception regarding covid-19, majority of the farmers were marginal farmers and had low level of perception regarding covid-19. 25.00% farmers had income between 3 to 6 lakhs. Education and mass media exposure were found significantly associated with perception level regarding covid-19 at $\chi^2=9.5$ and $\chi^2=12.3$ while age, caste, family type, family size, size of land holding, annual income, subsidiary occupation, and extension contacts were non-significantly associated with perception level of the respondents.

Keywords: Covid-19, Farmers, Perception level, Socio-economic factors

Covid-19 epidemic was a significant event that had a global impact on billions of people. Coronavirus had a catastrophic impact on every facet of life globally and the Indian agriculture was no exception. The pandemic highlighted the struggles encountered by farmers, particularly in nations with an agrarian economy. These nations were combating the high rates of poverty, hunger, debt, and farm bankruptcies, but the epidemic further aggravated the prevalent issues and made the matters worse (Menon and Vogt 2022). For the agrarian Indian economy, the agricultural and allied sector is of utmost importance, contributing one-sixth of the national income approximately (NABARD 2020) and employing 263 million workers comprising of 55% as agricultural labour and 45% as cultivators (Menon and Vogt 2022). Covid-19 had an impact on agriculture's supply and demand (Nabard 2020) as well as disrupted the world's supply chain due to tightened sanitary controls, transit restrictions, a lack of raw material supplies, and closures of the food distribution and processing industries (Ebel et al 2022). The unexpected enactment of the lockdown in India had an impact on agriculture sector, resulting in unharvested crops, labour shortages, delays in planting the subsequent crops, inadequate supply of agricultural inputs, along with poor access to services, credit, and advisory facilities (Habanyati et al 2022). Farmers were in a state of vexation due to the constant inconveniences faced in marketing and delivery of their crops to the Agricultural Produce Marketing Committees (APMC) mandis (Behura and Dash 2020, Menon and Vogt 2022). Farmers

engaged in horticultural activity especially fruit and vegetable growers were compelled to sell their perishable produce at incredibly low rates due to a lack of storage amenities, items restricted market access and inadequate post-harvest treatment (Behura and Dash 2020, Habanyati et al 2022). The dearth of labour had an effect on farming operations, from planting to processing crops after harvest, which had an impact on crop management, production, and post-harvest handling and resulted in crop losses.

The pandemic and its economic reverberations burdened the agricultural sector in the country therefore, it became necessary to prioritize the agriculture industry and ensure a speedy socio-economic recovery for the nation while upholding the sustainability ethos (NABARD 2020). In view of this, the present study was designed to know the nature and extent of perception of farmers regarding Covid-19, assess the level of perception of farmers and delineate the socio-economic factors associated with perception level of the farmers.

MATERIAL AND METHODS

The study was conducted in Rohtak District of Haryana State. Three blocks were selected from Rohtak district village Titoli and Sunderpur from block Lkhan Majra; Samar Gopalpur from Samar Gopalpur Kalan block; Bhagwatipur and Bahu Akbarpur from Rohtak block were selected. One hundred and twenty farmers were surveyed with the help of well-structured interview schedule. The data was collected by interview method from the respondents to gather

information on dependent and independent variables. The data were coded, tabulated, analyzed, and interpreted according to the objectives of the present study with the help of appropriate statistical techniques. The descriptive statistical tools such as frequency, percent, chi-square, weighted mean, and total weighted score were calculated to draw the inference. The data was tabulated, classified, and analyzed by application of suitable statistical tools to work out association of the dependent and independent variables so as to draw meaningful inferences of the study.

RESULTS AND DISCUSSION

Perception of the farmer families: The 83.30% of the farmers were agreeing to the statement that there is low availability of labour followed by wages of labour, main selling channel for produce, changed prices of the agricultural output s and changes in price of agriculture inputs by (69.30%). The 71.70% of the farmers were not agreeing to the statement that there are job cuts in agricultural sector whereas, only 33.33% of the farmers were agreeing to the statement delay in sowing and harvesting of crops. The results are in line with the impact assessment done by NABARD wherein, there is a decline in availability of agri-inputs with sharpest decline in fertilizers (11.2%) and

Table 1. Perception of the farmer families regarding Covid-19

Statements	(n=120)
	Yes
Main selling channel for produce was disrupted	71.60
Sources for main household income were changed/ disrupted	46.60
Your abilities to practice agriculture activities were affected	63.30
Changed prices for the agricultural output	70.00
Low availability of labour	83.30
Impact Wages of labour	75.00
Availability of agri inputs were impacted	56.60
Changes in price of agri inputs	68.30
Low access to farm credit during COVID	38.30
Impact on procurement of food grains by govt agencies	65.00
Basic banking services like deposits/ withdrawal were affected	71.60
Impact of farmers getting MSP for their produce	36.60
Impact on price level of key raw materials	35.00
Consumer sentiments/ demand were impacted	58.30
Reduction in employment activities in rural areas	55.00
Psychological health was severely impacted	33.30
Job cuts in agricultural sector	28.30

Figures denote percentage, Responses were multiple

Table 2. Perception of farmers with socio-economic variables

Socio-economic variables	Level of perception			
	Low perception	Medium perception	High perception	Total (n=120)
Age				
Up to 35 years	38.24	38.24	23.52	28.34
36-50 years	32.20	54.24	13.56	49.18
Above 50 years	29.63	48.15	22.22	22.50
Total	40 (33.4)	58 (48.3)	22 (18.3)	120 (100)
$\chi^2=2.97$				
Education				
Illiterate	46.43	37.50	16.07	46.67
Up to middle school	0.08	63.88	19.44	30.00
Secondary school and above	28.57	50.00	21.49	23.33
$\chi^2=9.5^*$				
Caste				
General	43.33	40.00	16.67	50.00
Backward	22.50	57.50	20.20	33.40
Schedule	25.00	55.00	20.00	16.60
$\chi^2=5.5$				
Family type				
Nuclear	38.64	40.90	20.45	36.67
Joint	30.26	52.64	17.10	63.33
$\chi^2=1.54$				
Family size				
Up to 4 members	40.00	40.00	20.00	16.67
Between 5-8 members	32.50	45.00	22.50	33.33
Above 8 members	31.67	53.33	15.00	50.00
$\chi^2=1.7$				

Cont...

Table 2. Perception of farmers with socio-economic variables

Socio-economic variables	Level of perception			Total (n=120)
	Low perception	Medium perception	High perception	
Size of Land holding				
Marginal Farmer (Up to 1 ha)	31.03	25.80	7.50	48.33
Small Farmer (>1-2 ha)	35.71	42.85	21.42	23.33
Semi Medium Farmer (>2-4 ha)	41.67	37.50	20.83	20.00
Medium Farmer (>4-10 ha)	20.00	60.00	20.00	8.34
$\chi^2=3.0$				
Annual income (in Rs.)				
Up to 3 lakh	29.03	56.45	14.51	51.70
Between 3,00,000 - 6,00,000	33.33	46.66	20.00	25.00
Above 6,00,000	42.86	32.14	25.00	23.30
$\chi^2=4.7$				
Subsidiary occupation				
Nil	31.25	55.00	13.75	66.70
Service	26.67	46.67	26.67	12.50
Small scale enterprises	44.00	28.00	28.00	20.80
$\chi^2=6.7$				
Social participation				
Not member of any organization	30.95	53.57	15.47	70.00
Member of one organization	40.00	40.00	20.00	16.70
Member of more than one organization	53.50	25.00	25.00	13.30
$\chi^2=4.0$				
Mass media				
Low (7-10)	38.98	49.15	11.86	49.20
Medium (11-13)	12.50	70.83	16.67	20.00
High (14-16)	37.84	32.43	29.73	30.80
$\chi^2=12.3^{**}$				
Extension contacts				
Low (5-7)	38.00	48.39	14.52	51.70
Medium (8-10)	23.53	58.82	17.65	28.30
High (11-13)	37.50	33.33	29.17	20.00
$\chi^2=5.2$				

Figures denote percentage, **Significant at 1% level of significance, *Significant at 5% level of significance

insecticides (9.8%), and also the availability of seeds was down by 9.2%.

Perception of farmers with socio-economic variables:

Education and mass media exposure were significantly associated with perception level at $\chi^2=9.5^*$ and $\chi^2=12.3^{**}$ while age, caste, family type, family size, size of land holding, annual income, subsidiary occupation, and extension contacts were not significantly associated with perception level of the respondents. Majority of the farmers (49.18%) of 36-50 years age category had medium level of perception. The 48.33% who were marginal farmers had low level of perception. One-fourth farmers with income between 3 to 6 lakhs had medium level of perception.

The majority of the respondents acknowledged that transport facilities were not available (71.67%). The 75% respondents were ignorant of Covid-19 and its repercussions. Substantial majority admitted that they were facing financial problems (73.33%) and it was corroborated by the survey conducted by NABARD indicating that nearly 59% of districts at all-India level indicated a negative impact

Table 3. Challenges and problems faced by farming families (n=120)

Statements	Yes
Transport facilities were not available	71.67
People were ignorant	75.00
Finance problems	73.33
Medical facilities were not accessible	54.26
Unable to perform agricultural activities	61.67

Figures denote percentage, Responses were multiple

on farmers' access to finance through KCC in approximately 50% of the sample districts in India, access to basic banking facilities like deposits and withdrawals was severely affected (NABARD 2020). The 61.67% of the sampled population was not able to perform agricultural activities. Furthermore, 65% of the respondents were not able to avail the medical facilities. Ojo et al (2022) observed that 90% negative influence on farm activities and income. Sarada and Kumar (2021) reported that 43% of farmers felt restricted by non-availability of cash and 25% felt that poor medical facilities for animal during the pandemic were an issue.

CONCLUSION

The majority of respondents concurred that Covid-19 had a detrimental impact on agricultural output and, consequently, their level of income. Additionally, their profit level had significantly decreased because of the increased wastage of produce brought on by the restriction on vehicular movement, which made it difficult for them to transport their produce from the farm to the point of use. Reduced demand, declining prices, and a scarcity of labour are the issues that need to be fixed. Due to tight restrictions, the epidemic has affected every step of the chain from farm production until the final consumer. However, maintaining a smooth supply chain is essential for food security. In addition, waiving of interest on agri-term loan, construction of rural godowns, expansion of cold storage infrastructure capacities in rural areas and agricultural mechanization can be done. All of the aforementioned recommendations will address the difficulties and limitations that farmers are experiencing as a result of COVID-19. Therefore, agriculture is essential to ensuring the nation's socio-economic and emotional well-being both during and after the COVID-19.

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