

Constraints encountered by wheat producer in adoption of wheat production technology in Faizabad district in Uttar Pradesh

ABSTRACT

Wheat is the major staple food crop; which constitutes one of the key sources of protein in least developed countries and middle-income nations and in terms of calories and dietary intake. Present study was carried out to identify the constraints in adoption of wheat production technology in Masaudha and Sohawal blocks of Faizabad district. The data were collected with the help of personal interview methods and pre-tested interview schedule. One hundred twenty respondents were selected from twelve villages which were selected randomly. The findings inferred that, 52.5 per cent of the wheat growers had middle age (36-50 years) and 53.33 per cent were literate while 22.5 per cent of respondents having education up to primary level. Most of the farmers' agriculture was the main occupation, respondents also facing a low level of income, whereas respondents occasionally meet the respondents to extension contact. So results indicated that the varieties of constraints were responsible for low adoption of wheat production technology however, few of them were most important such as , lack of seed technology, lack of knowledge about seed treatment, lack of knowledge about soil analysis technology, lack of knowledge about plant protection and irrigation technology lack of knowledge about improved implements etc. This trends to imply that more educational efforts are required to be undertaken by extension agency for improvement of knowledge and accelerating the pace of production by way of more adoption of new technologies of wheat cultivation.

Key words- *Producer, constraints, wheat, technology, adoption, production*

INTRODUCTION:-

Wheat is grown globally in about 217 m ha area with a total production of 632 million tones. The area under wheat cultivation remained constant at about 220 m ha in the past 3 decades; however, the production has increased many folds from 355 million tons (1975) to the present level owing to enhanced wheat productivity. In India, wheat was cultivated in about 29.6 m ha of the total cultivated area with an annual production of 93.5 m tones. The average wheat productivity of India is 31.5 q/ha (FAO, 2013). This increase in wheat productivity may be

attributed to the increase increased irrigation facilities, application of inorganic fertilizers, improved varieties and socio-economic support provided to the farmers. The major wheat growing states of India are Uttar Pradesh, Punjab, Haryana, Rajasthan, Madhya Pradesh and Bihar. Uttar Pradesh is largest wheat growing state of the country with an annual production of 30.30 m tones from an area of 9.73 m ha. The average productivity of the Uttar Pradesh is 31.14 q/ ha (**Anonymous, 2013**).

It's one of the world's most important crops and holds the title of the second most produced grain in the world; it's also consumed more than any other grain in the world except for rice and provides 20% of the global population's daily protein intake.

The farmers facing several impediments in wheat production focusing in three important issues viz. yield gap between research farm and farmer's field, bio-physical constraints and socioeconomic constraints. The findings of the study will help to understand the real situation in production, which in turn help in enhancing the wheat production in the selected district. Therefore, the present study was conducted to constraints encountered by wheat producer in wheat production in Faizabad districts of Uttar Pradesh.

RESEARCH METHODOLOGY:-

Uttar Pradesh state has 75 districts and out of these Faizabad district selected, which is one of the agriculturally important districts of the state. In the district major crops are Paddy, wheat and Jwar. Out of these eleven development blocks, Masaudha and Sohawal blocks was selected purposively for the study because maximum area of the block covered by wheat growers. There are 94 villages in Masaudha block and 86 villages in Sohawal block out of these 5 villages were selected from each block randomly. Thus a total of 120 respondents were selected for the study. Pre-structured, Pre-tested and Pre-interview schedule was used for the data collection. Collected data were analyze and interpreted in the light of the objectives by using appropriate statistical tools to draw logical conclusion.

RESULTS AND DISCUSSION:-

Table- 1. Distribution of respondents according to their socio -economic profile. (N=120)

S.No	Category	Respondents	
		Frequency	Percentage
1.	Age		
	Young (18-35)	35	29.16

	Middle (36-50)	63	52.05				
	Above 50	22	18.33				
2.	Education						
	Illiterate	64	53.33				
	Primary School	27	22.05				
	Junior High School	13	10.83				
	Higher Secondary'	09	7.05				
	Graduate and above	07	5.83				
3.	Occupation						
	Main (Agriculture)	66	55.00				
	Subsidiary						
	Ag.+ Caste Occupation	29	24.16				
	Ag.+ Business	16	13.33				
	Ag.+ Service	9	7.05				
4.	Land Holding						
	below 1 hac.	38	31.66				
	below 1-2 hac.	54	45.00				
	Large above 2 hac.	28	23.33				
5.	Annual Income						
	Up to Rs. 100000	52	43.33				
	Rs. 100001-150000	35	29.16				
	Above Rs. 150000	18	15.00				
6.	Innovativeness						
	Low (0-3 score)	34	28.33				
	Medium (4 – 6 score)	64	53.33				
	High (above 7 score)	22	18.33				
7.	Extension Contact	Extent of participation					
		Regular		Occasional		Never	
		F	%	F	%	F	%
	Village Development Officer	21	17.05	51	42.05	47	39.16
	Additional Development Officer	14	11.66	34	28.33	72	60.00
	Block Development Officer	17	14.16	34	28.33	69	57.05

	Subject Matter Specialists	29	24.16	52	43.33	39	32.05
	District Agriculture Officer	17	14.16	36	30.00	67	55.83

It was observed from the table no.1 shows that 29.16 per cent respondents were between the young age group of 18-35 years, whereas 52.05 per cent respondents were between the middle age groups of 36-50 years, and in age of above 50 years there were 18.33 per cent respondents. And there were majority of the respondents 53.33 per cent respondents illiterate, and 22.05 per cent respondents were educated up to primary school whereas educated up to junior high school 10.83 per cent respondents and in higher secondary 7.05 per cent respondents were educated and 5.83 per cent respondents were educated up to graduate and above. It is apparent from the above table that majority of the respondents 55.00 per cent respondents having their main occupation as agriculture and about 24.16 per cent respondents having subsidiary occupation as Ag+ Caste Occupation, followed by 13.33 percent respondents having agriculture + Business and 7.05 per cent respondents having agriculture + Service. Similar findings are also reported by **Kumar and Kushwaha (2017)**

It is clear from the Table no.1 shows that 31.66 per cent respondents having their main land holding as below 1-2 hectare, whereas 45.00 per cent respondents having land holding as below 1 hectare, followed by 23.33 per cent respondents having above 2 hectare land holding. It is also found that from the above table regarding income 43.33 per cent respondents were in Rs.50001-100000; similarly 29.16 per cent respondents were in Rs.100001-150000, while 15.00 per cent respondents were in the Above Rs. 150000.

It is revealed from the above table no.1 indicated that 28.33 per cent respondents were in low innovativeness category whereas 53.33 per cent respondents were in medium innovativeness category while 18.33 per cent were in high innovativeness category. And It is also evident from the table no.1 that 17.05 per cent respondents were regularly meeting with Village Development Officer in the that area whereas 42.05 per cent respondents meeting with VDO often while 39.16 per cent never meet with Village Development Officer of the village, and there was also found that in the area 11.66 per cent respondents were regularly meeting with Additional Development Officer, while 28.33 per cent often meet him and 60.00 per cent never meet with Additional Development Officer of their village, Similar findings are also reported by **Kumar and Kushwaha (2017)**, and 14.16 per cent respondents were meeting with Block Development Officer regularly while 28.33 per cent met with him on often basis whereas 57.05 per cent never

met with Block Development Officer of their block and in case of Subject Matter Specialists 24.16 per cent respondents met with them regularly, and 43.33 per cent met him on often basis while 32.05 per cent never met with them, 14.16 per cent respondents met with District Agriculture Officer of their district regularly, 29.16 per cent met him often basis whereas 55.83 never met with him. Similar findings also reported by **Singh and Peshin (2018)**

CONSTRAINTS FACING BY WHEAT PRODUCER:-

Table-2 Major constraints as perceived by the wheat growers in adoption of wheat Production Technology

S. No.	Constraints	Frequency	Percentage	Rank
A	Seed Technology			
1-	Lack of knowledge of growing HYV wheat	70	58.33	IV
2-	Non availability of HYV seed in time	85	70.83	II
3-	High cost of HYV seed	80	66.66	III
4-	Lack of finance	95	79.16	I
5-	Inadequate irrigation facility	35	29.16	V
B	Seed treatment			
1-	Lack of knowledge	90	75.00	III
2-	Not availability of seed dresser	98	81.66	I
3-	High cost of chemicals	81	67.05	IV
4-	Lack of finance	95	79.16	II
C	Soil analysis technology			
1-	Lack of soil testing facility	73	60.83	IV
2-	Lack of interest by extension personnel	81	67.05	III
3-	Lack of knowledge	89	74.16	II
4-	Lack of convinced about utility	92	76.66	I
D	Plant protection technology			
1-	Non availability of chemicals	55	45.83	VI
2-	High cost of pesticide & fungicides	86	71.66	II
3-	Lack of technical help	93	77.05	I
4-	Non-conviened about their effectiveness	73	60.83	V
5-	Non-availability of plant protection equipments	81	67.05	IV

6-	Lack of knowledge	84	70.00	III
E	Irrigation technology			
1-	Lack of finance	95	79.16	I
2-	Lack of irrigation facility	83	69.16	III
3-	Low flow of water in deep tube well	86	71.66	II
4-	Non-availability of underground water for irrigation	75	62.05	IV
F	Improved implements			
1-	Lack of knowledge	76	63.33	IV
2-	Small size of land holding	93	77.05	II
3-	Lack of experience	35	29.16	V
4-	High cost of improved farm implements	85	70.83	III
5-	Lack of finance	95	79.16	I

Seed technology:-

It is evident from the Table 1 that 'lack of finance' (79.16%), non availability of HYV seed in time (70.83%), high cost of HYV of wheat (66.66%), Lack of knowledge of growing HYV wheat (58.33%) and inadequate irrigation facility (29.16%) were the important constraints responsible for low adoption of seed technology, which were ranked I, II, III, IV and V, respectively. The similar findings also reported by **Kumbhare (2011)**

Seed treatment:-

The above table no.2 shows that not availability of seed dresser (81.66%), lack of finance (79.16%), followed by and lack of knowledge about seed treatment (75.00%) whereas high cost of chemicals (67.5%) is the constraint for low adoption of wheat.

Soil analysis technology:-

It is apparent from the Table 2 that lack of convince about utility' (76.66%), lack of knowledge about soil analysis (74.16%) and lack of extension personnel's interest (67.05%) were the main constraints in getting the soil analyzed by wheat producer.

Plant protection technology:-

Table 2 clearly shows that the important constraints which were responsible for low adoption in case of plant protection technology were lack of technical help (77.05%),high cost of pesticides

and fungicides (71.66%), lack of knowledge (70.00%) about their effectiveness (11.67%) respectively.

Irrigation technology:-

The above table no 2 further reveals that lack of finance (79.16%) and low flow of water in deep tube well (71.66) was reported by less than 80.00% of the respondents. The other constraints which were experienced by the respondents were lack of irrigation facility (69.16%).

Improved implements:-

It is clear from the above Table no. 2 that major constraint was responsible for low adoption of improved implements technology was Lack of finance reported by farmers (79.16%), however others constraints which were small size of land holding (77.05%), High cost of improved farm implements (70.83%), lack of experience about improved implements (29.16%), and which were ranked I, II, III, IV and V, respectively. Similar findings also reported by **Singh et.al 2020**

CONCLUSION:-

It is concluded from the above results, it may be concluded that major constraints which were responsible for low adoption of wheat production technology as experienced by the wheat producer were lack of soil testing facility, lack of knowledge about chemical weed control, use of chemicals weed control is not as effective as hand weeding, lack of knowledge about soil treatment, lack of non availability of underground water for irrigation, lack of knowledge about plant protection technology, lack of knowledge about seed treatment, non availability of HYV seeds in time, costly chemicals for soil treatment, lack of technical help regarding plant protection technology, high cost of pesticides/fungicides, lack of extension personnel contact, high cost involved in chemical control of weeds, and hence they were not effective in controlling the pests, lack of convince about pesticides effectiveness. It may also be concluded from the present investigation that action should be taken to ensure the availability of insecticide/pesticides etc. Farmers must be provided with credit facility for purchase of different inputs at reasonable rate of interest. Fertilizers, insecticide, pesticides are a very serious problems. Government should take efforts for checking the adulteration in farm inputs for efficient use of the farm inputs, production cost of different farm inputs should be reduced and prices of different farm produce should be remunerative.

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