

AGRICULTURAL INFORMATION SOURCES AND THEIR RELATIVE EFFECTIVENESS ON RECOMMENDED TECHNOLOGY FOR RICE CROP IN BALOCHISTAN: PERCEPTION OF RICE FARMERS.

**Ahmed Ali Mengal
Abdul Razzaq Raisani
Noor Ahmed
Bijar Khan**

Economist: Agriculture Research Institute (ARI) Sariab Quetta, Balochistan

Director: Agricultural Research, Panjgoor, Balochistan.

Assistant Professor: Pakistan Study Center, University of Balochistan Quetta

Research Officer: Pakistan Study Center, University of Balochistan Quetta

ABSTARCT

The present article explores the sources of information and their effectiveness regarding rice technology adoption based on a descriptive survey of 100 rice growers in rice belt of Balochistan province i.e. Nasirabad district. A simple random sampling technique was adopted to achieve a representative sample. Hundred (100) rice growers were selected through the simple random sampling technique. The results revealed that most (46%) of the farmers were illiterate, most (49%) of the farmers belonged to the age category of 21 to 35 years while less than half (45%) of the rice farmers had 11 to 20 years farming experience. Information regarding level of diffusing of recommended technologies of rice crops were depicted that (100-100%) of the rice growers were agreed that the sowing method and weed control measures were complete diffused among them which were ranked at 1st. The finding also revealed that neighboring farmers were the most important source of information regarding diffusion-adoption of recommended technologies. In addition, agricultural extension workers did not paid any attention towards uses of mass media, therefore, the study recommend that agricultural extension department and other responsible institutes of technology transfer should take strong initiatives for visualize the recommended technologies through demonstrations and mass media.

Keywords: Nasiabad, Balochistan, Sources of information.

OVERVIEW:

The rice is the major cash and important food crop of the country after wheat crop and production comprises 40% of basmati (fine) and 60% of coarse types. The Pakistani basmati rice was one of the top rice commodities all over the world, but the exports of this commodity witnessed sharp decline of 14.87% during the last fiscal year 2011-12 as compared to the previous year. Rice has the potential to become a high value asset for Pakistan's economy; however it needed value addition in its production to harness optimal utilization. On the other hand, there has been manifold increase in the exports of the basmati rice from the country, according to the data of Rice Exporters Association of Pakistan. Giving break up, the sources added that during 2007-08 Pakistan earned US \$ 1.836 billion, in 2008-09, \$ 1.983 billion, in 2009-10, \$2.160 billion, in 2010-11 \$2.160 billion and in 2011-12 the country exported rice worth \$ 2.061 billion. The rice crop is low in productivity and production is affected by water shortage and there are enormous post harvest losses. They stressed the need for more investments in general research and development in rice for further increasing its production (GoP, 2013).

Research and experience of advanced countries have shown that key to increase per hectare yield lies in the adoption of modern scientific technologies by the farmers for which they do have contacts with a variety of information sources. Therefore, a need exists to identify the information sources for the farmers and to assess their level of awareness and adoption of rice production technologies. The purpose of this study is to investigate

the information sources and their effectiveness on adoption of recommended technology and level of technology adoption for rice crop in district Nasirabad, Balochistan. Keeping in this view following specific objectives were formulated:

1. To find out the biographic characteristics of the rice growers.
2. To determine the sources of information and their effectiveness on adoption of recommended technologies of rice crop.

MATERIALS AND METHODS:

The population of the study comprised of one hundred (100) of rice growers through simple random sampling method of district Nasirabad, the researcher purposively selected district Nasirabad due to convenience and considered as rice belt of the province. A simple random sample of 100 farmers was obtained (Acharjee et al., 2002; Ogunjuyigbe, 2005). Sample size was determined by using table of Fitzgibbon and Morris (1987); McCall (1980). A well-structured questionnaire was constructed and administrated in order to denote the perceptions of the respondents on 4 and 5-point Likert scale regarding the diffusion and adoption, perception of farmers about the effective information sources. The questionnaire consists of two sections (biographic information and sources of information) was prepared to collect required information from the respondents. The researcher personally visited and interviewed from those 100 rice farmers. Majority of the respondents were interviewed at their fields. Researcher was interviewed farmers at the morning time when they were working at the field. Initially the data were arranged and organized in coding system. Standard statistical tools such as frequencies, mean, standard division and rank were calculated by using SPSS program. By using the coding sheet, after the coding of collected data, all the data were

tabulated, summarized and analyzed through Statistical Package for Social Science computer software.

RESULTS AND DISCUSSION:

The demographic characteristics of the growers in the present study such as age, educational qualification, farming experience, type of tenure, size of land holding and area under cultivation play an important role in determining the grower's response towards adoption of recommended technologies.

Table-1: Biographic characteristics of the rice grower (n=100)

<i>Biographic characteristics</i>	<i>Categories</i>	<i>Frequency</i>	<i>%age</i>
Educational level	Illiterate	46	46.0
	Primary	27	27.0
	Middle	9	0.09
	Matriculation	8	0.08
	Intermediate	6	0.06
	Graduate	4	0.04
Age	Up to 20	2	02.0
	21 to 35	49	49.0
	36 to 50	42	42.0
	51 and above	7	07.0
Farming experience	Up to 10	34	34.0
	11 to 20	45	45.0

	21 to 30	14	14.0
	31 and above	07	07.0
Area under rice	Up to 5	40	33.0
(Areas)	6 to 20	40	36.0
	21 and above	20	11.0

Most (46%) of the farmers were illiterate, this was followed by (27%) of rice farmers had received up to primary. In addition, collected information regarding the age of rice farmers resented in **Table-1** which indicates that most (49%) of the farmers belonged to the age category of 21 to 35 years, whereas (42%) of the rice farmers belonged to 36 to 50 years of age. While most (45%) of the rice farmers had 11 to 20 years experience. This was followed by (34%) of the rice growers had up to 10 years of experience. Most (40-40%) of the farmers had an area under rice cultivations up to 5 and 6 to 20 acres respectively.

The farmers were asked to rank the level of diffusion of recommended technologies on a 4 point Likert-type scale (1= not diffused, 2= partially diffused, 3= moderately diffused and 4= completely diffused). Information regarding to level of diffusion of recommended technologies are presented in **Table-2**.

Table-2: Level of diffusion of recommended technologies as perceived by farmers (N=100)

<i>Categories</i>	<i>ND</i>		<i>PD</i>		<i>MD</i>		<i>CD</i>		<i>Total</i>	<i>Mean</i>	<i>SD</i>	<i>RO</i>
	<i>F</i>	<i>%age</i>	<i>F</i>	<i>%age</i>	<i>F</i>	<i>%age</i>	<i>F</i>	<i>%age</i>				
Sowing method	0 0	0.0	0 0	0.0	0 0	0.0	0 0	0.0	100	4.00	0.0 0	1 st
Weed control measures	0 0	0.0	0 0	0.0	0 0	0.0	100 100.0	100.0	100	4.00	0.0 0	1 st

Insect control measures	0 1	1.0	0 9	9.0	0 0	0.0	9 0	90.0	100	3.79	0.6 4	2 nd
New varieties	0 8	8.0	2 9	29.0	0 0	0.0	6 3	63.0	100	3.18	1.1 0	3 rd
Irrigation replication	1 9	19.0	1 8	18.0	0 5	5.0	5 8	58.0	100	3.02	1.2 3	4 th
Land preparation	3 2	32.0	2 5	25.0	0 2	2.0	4 1	41.0	100	2.52	1.3 1	5 th
Fertilizer application	5 8	58.0	4 0	4.0	0 0	0.0	0 2	2.0	100	1.46	0.6 1	6 th

Scale:1=not diffused (ND), 2= partially diffused (PD), 3= moderately diffused (MD), 4= completely diffused (CD).

SD: Standard deviation RO: Rank Order

Information regarding level of diffusing of recommended technologies of rice crops were depicted the relevant outcomes, whereas (100-100%) of the rice growers were agreed that the sowing method and weed control measures were complete diffused among which were ranked at 1st. While, majority (63-58%) of farmers perceived that insect control measures and new varieties for rice were completely diffused, were ranked at 2nd and 3rd respectively. while (1.46%) of the farmers perceived that the fertilizer application were not diffused among them and bottom of the ranking.

The farmers were asked to judge the effectiveness of information sources regarding diffusion of recommended technologies on a five point Likert-type scale (1= not effective, 2= somewhat effective, 3= effective, 4= very effective and 5= extremely effective). In this regard, information regarding the effectiveness of sources of information about recommended technologies as perceived by the farmers is presented in **Table-3**.

Table-3: Effectiveness of information sources as perceived by farmers (N=100)

Categories	NE		SE		E		VE		EE		Total	Mean	SD	RO
	F	%age	F	%age	F	%age	F	%age	F	%age				
Neighboring Farmer	01	1.0	01	1.0	19	19.0	37	37.0	42	42.0	100	4.18	0.84	1 st
Radio	05	5.0	13	13.0	28	28.0	37	37.0	17	17.0	100	3.48	1.07	2 nd
T.V	15	15.0	50	50.0	31	31.0	4	4.0	00	0.0	100	2.24	0.75	3 rd
Fellow farmers	78	78.0	00	0.0	03	3.0	12	12.0	07	7.0	100	1.70	1.35	4 th
Extension worker	77	77.0	01	1.0	06	6.0	08	8.0	08	8.0	100	1.69	1.33	5 th
News papers	86	86.0	03	3.0	10	10.0	01	1.0	00	0.0	100	1.26	0.67	6 th
Contact Farmers	96	96.0	02	2.0	02	2.0	00	0.0	00	0.0	100	1.06	0.31	7 th
Research worker	100	100.0	00	0.0	00	0.0	00	0.0	00	0.0	100	1.00	0.00	8 th
Magazines	100	100.0	00	0.0	00	0.0	00	0.0	00	0.0	100	1.00	0.00	8 th

Scale:1=not at all effective (NE), 2= somewhat effective (SE), 3= effective (E), 4= very effective (E), 5= extremely effective.

SD: Standard deviation RO: Rank Order

Majority (42%) of the farmers were perceived that neighboring farmers considered as effective source of information regarding diffusion of

recommended technologies and were ranked 1st with a mean score of (Mean = 4.18, S.D = 0.84). Whereas, radio was ranked 2nd with a mean score of (Mean = 3.48, S.D = 1.07) and television was ranked 3rd with a mean score of (Mean = 2.24, S.D = 0.75) based on the perceptions received of the rice growers on the Likert 5 point scale. However, in this regard, least perceived score about sources of information were newspapers ranked 6th with a mean score of (Mean = 1.26, S.D = 0.67) contact farmers were ranked 7th with a mean score of (Mean = 1.06, S.D = 0.31) research worker and magazines were ranked 8th with a mean scores of (Mean = 1.00, S.D = 0.00) respectively. Somewhat results were found those of Lakho (2004) who found that neighbor farmers were the most important source of information for technology transfer to the rice growers. This trend may be due to the facts that the same tradition, language and cropping pattern and the like.

CONCLUSION AND RECOMMENDATION:

Agriculture sector being the life line of the Pakistan's economy continues to be the single largest sector and a dominant driving force for growth and development of the national economy. It accounts for 24 percent of the Gross Domestic Product (GDP) and employs 48.4 percent of the total work force. Information regarding level of diffusing of recommended technologies of rice crops were depicted the relevant outcomes, whereas very vast majority of the rice growers were agreed that the sowing method and weed control measures were complete diffused among which were ranked at 1st. Majority of the farmers always received information regarding recommended technologies from neighboring farmers and regard as an extremely effective source of information regarding diffusion

of recommended technologies of rice. Based on finding of the study following recommendations were suggested. Study results showed that extension authorities point blankly neglect the effectiveness of mass media as perceived by the farmers for diffusion of agriculture technologies. Therefore, it is recommended that a careful selection of mass media should be made while diffusing recommended technologies of rice crop. The study found that the performance of agriculture extension services was insignificant in the whole diffusion-adoption process of recommended technologies of rice crop. Therefore, it is recommended that extension worker must visit farmer's field for their proper guidance.

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