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ROLE OF ICTS IN BRIDGING THE GENDER GAP OF INFORMATION REGARDING LIVESTOCK PRODUCTION TECHNOLOGIES

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ABSTRACT

Pakistan, an agriculture based country, facing gender biasness in farming community. Female farmers are facing an information gap in livestock production sector. For this purpose Okara district (Punjab province) was selected which consists of three tehsils i.e. Okara consists of 30 Rural Union Councils (RUCs), Depalpur (43 RUCs), and Renalakhurd (16 RUCs) which comprise 89 rural union councils. A sample of 30% rural union councils from each tehsil was drawn at random. Two villages from each union council were selected randomly. There were 12 respondents from each village which were selected through purposive sampling. The data were collected through pre-tested and validated interview schedules and were analyzed using Statistical Package for Social Sciences (SPSS) to draw conclusions and to suggest measures for improvement. Results showed that most of the female respondents belonged to young aged group and primary pass. In the context of availability of information sources TV stood first then came the mobile phone, telephone and radio, respectively. Really Old ICTs (print media) got very less position as compared to Old ICTs (TV, radio and telephone) with regard to utility of ICTs. However, regarding the future role of various ICTs in livestock production, modern ICTs stood first then came the old and really old ICTs, respectively. It was concluded from the results that due to less education of the respondents really old ICTs (print media) was less both in availability and utility of ICTs. Whereas, modern ICTs has more scope in the future due to escalating role of internet and mobile in livestock production.

Key words: Role, ICT, gender gap, information, livestock production.

INTRODUCTION

In Pakistan, more than 35 million people reside in rural areas. Livestock sector has 52% share in country's GDP shared by agriculture (Govt. of Pakistan, 2012). This sector has two sub sectors viz. dairy farming and meat production. Pakistan is the 3rd largest milk producing country of the world. The total milk production of the country is 47 billion liters produced annually from 50 million animals managed by approximately 8 million farming household. Out of total milk produced, 97% is utilized in the form of unprocessed liquid milk (FAO, 2011). The second sub sector i.e. meat production is also very important. Large number of farm female's rear goat and sheep for mutton purpose and mostly they sale at the eve of Eid-ul-Azha which provide financial support to them and their families.

In livestock production sector, role of female farmers is very significant. Predominately, female farmers remain busy in home and farm management activities. They play a conspicuous role as livestock caretakers. They have a strong affiliation with animals and naturally they can deal well with this sector as compared to male members (Ali, 2001; Adeokun, 2004; Hashmi *et al.* 2007). In rural areas of Pakistan, almost every household keeps a few animals, which are mostly looked after by female members of the family. Early in the morning, they awake up and perform the farm operations; like milking, shed cleaning, feeding and transfer of animals from shed. In this way, they spend almost 8 hrs daily in animal production operations (Saghir *et al.* 2005; Nosheen *et al*., 2010).

All these activities take plenty of their time but female farmers are not addressed by the extension services. Due to our traditions and culture, they have poor social links and also have no access to research centers to get knowledge of advanced livestock production technologies and markets to sale and purchase livestock commodities (Hossain, and Mishra, 2002; Fabiyi *et al.*, 2007; Afzal, 2009). They have no access to media to update their knowledge. They are the most neglected group especially in areas located at long distance from road where the condition of services are poor (FAO, 2002; Adisa and Adekunle, 2007; Ganai *et al.*, 2008).

ICTs (Information and Communication Technologies) refer to any electronic means of capturing, processing, storing and disseminating information. The coverage of ICTs is far beyond such activities as programming, networking and analyzing. There are three categories of ICTs (Elijah and Ogunlade, 2006) *viz.* new ICTs (computer, internet, and mobile phone), old ICTs (radio, television, land line telephone and telegraph) and really old ICTs (Newspaper, books and libraries). In modern countries ICTs have been operating in all fields of life. However, in poor countries the use of mobile and

internet is relatively limited due to less government support and budget allocation (Singh, 2003).

Mobile and internet usage fluctuates between richest and poorest nations like richest countries such as America and Canada has much higher mobile and internet subscription due to plenty of financial resources and poorest countries such as African countries has very low mobile and internet subscription. Asian countries (Pakistan) are in the middle position as compared poor countries. These ICTs has variety of uses which also differs from nation to nation for instance, these ICTs has been getting their popularity among farm females to update their knowledge (Sheikh.and Khoja, 2011).

Farm females are facing an information gap due to lack of awareness of ICTs in livestock production. According to Arshad *et al.* (2010) animal husbandry practices can be improved through educating them in their particular field. Hassan *et al.* (2007) reported a gender information gap in farming in Pakistan. Due to social norms and orthodox attitude, farm female's practical access to modern information sources is disappointing. ICTs can provide farm females with skills, training, and market information for their small-scale enterprises and agriculture commodities as reported by FAO (2002) and Chaudhry, *et al.(*2008).

The present study was planned to explore the present and prospective role of ICTs in bridging the information gap regarding livestock production technologies among female farmers of Okara District, Punjab, Pakistan. Main objectives of the study were i) To analyze the information gap regarding livestock production technologies among female farmers ii) To find out the information sources available to female farmers in livestock production Iii) To determine the future of ICTs in the dissemination of livestock production technologies among female farmers.

MATERIALS AND METHODS

The present study was conducted in Okara district, Punjab, Pakistan. This district consists of three tehsils i.e. Okara (30 Rural Union Councils; RUCs), Depalpur (43 RUCs), and Renalakhurd (16 RUCs) which comprise of 89 rural union councils and this study deals only in rural areas. A sample of 30% rural union councils from each tehsil was drawn at random. Two villages from each union council were selected. A list of livestock households was obtained from the office of union council. A female livestock farmer, defined as a female between age group of 25-60 who is directly involved in livestock farming, was selected through purposive sampling. There were 324 respondents comprising of female livestock farmers who constituted the sample. Information regarding age of respondents, their education level, availability of ICTs for livestock use, utility of ICTs in livestock production and perceptions about scope of ICTs was collected. The data were collected through pre-tested and validated interview schedules and analyzed using Statistical Package for Social Sciences (SPSS) to draw conclusions and to suggest measures for improvement.

RESULTS AND DISCUSSION

Demographic attributes of the respondents like age and education play an important role in bridging the information gap regarding livestock production technologies among female farmers. In the present study role of ICTs was estimated through availability, utility and its scope.

Table 1 Distribution of respondents according to their age

Age (years)	Frequency	Percent
20-30	128	39.5
31 – 40	96	29.6
41-50	100	30.9
Total	**324**	**100.0**

Mean=37.27years, SD=13.41

The data reflect that most of the respondents belonged to young aged group and less than one third of the respondents fell in old and middle aged categories, respectively. It is obvious from the above results that young women were more involved in the livestock management practices as compared to rest of the categories. The present results are in consonance with those of Arshad *et al.* (2010) who found that most of the respondents belonged to young aged category.

Table 2. Distribution of the respondents according to their education level

Education level	Frequency	Percent
Illiterate	74	22.0
Primary (Up to 5^{th} grade)	115	36.3
Middle (Up to 8^{th} grade)	100	31.0
Matric (Up to 10^{th} grade)	35	10.7
Total	**324**	**100.0**

It is evident from Table 2 that both the illiterate and literate female farmers participated in livestock production activities. More than one fifth of the respondents were illiterate whereas, more than one third were primary pass. Less than one third and one tenth were middle and matriculate, respectively. These findings are more or less in consonance with those of Muhammad *et al.* (2008) who found that about one fifth were illiterate and one tenth matriculates, respectively. Bakar and Mohamed (2008) documented there is dire need to train and educate the female farmers to use ICTs.

Table 3. Distribution of respondents according to availability of ICTs

ICTs	No.	%
ROICT (Really Old ICTs)		
Newspaper	5	1.5
Magazine	15	4.6
Books	11	3.4
Old ICT		
Telephone	60	18.5
Radio	48	14.8
TV	108	33.3
Modern Sources		
Mobile phone	69	21.3
Internet	-	-

Table 3 reflects that regarding ROICT negligible number of the respondents had availability of newspapers, magazines and books. Whereas, one third (33.3%), and about one seventh (18.5, 14.8 %) of the respondents had access to TV, telephone and radio, respectively. In case of modern sources about one fifth (21.3%) of the respondents had availability of mobile phone for getting livestock information. None of the respondents had an access to internet. The results of the present study are in consonance with those of Jamal (2005); Irfan (2005); and Nosheen *et al.* (2010) who mentioned that TV stood first as possession of information source in getting agricultural information followed by radio.

Table 4. Distribution of respondents according to utility of ICTs

ICTs	No.	%
ROICT		
Newspaper	5	1.5
Magazine	4	1.2
Books	2	0.6
Old ICT		
Telephone	56	17.3
Radio	42	13.0
TV	100	31.0
Modern Sources		
Mobile phone	63	19.4

The data reflected in Table 4 show that again almost similar results are found with respect to utility of ICTs as in case of availability of ICTs. Regarding ROICT a meager number of the respondents utilized newspapers, magazines and books for getting livestock information. About one third (31.0%) utilized TV and less than one fifth (17.3%), and more than one tenth (13.0%) of the respondents utilized telephone and radio, respectively. Regarding modern sources about one fifth (19.4%) of the respondents utilized mobile phone for getting livestock information.

Above information is partially in line with those of Irfan *et al.* (2006s; and Khan *et al.* (2010) who showed that according to utility of ICTs majority of the respondents gave 1st preference to television followed by mobile phone whereas, telephone and radio were at third and fourth position according to their use in getting information. Print media (ROICTs) played a meager role due to less education.

Table 5. Distribution of the respondents according to their perception about role of various ICTs in the future

	R O ICTs		Old ICTs		Modern ICTs	
Categories	**No.**	**%**	**No.**	**%**	**No.**	**%**
Low	150	73.5	35	14.2	87	32.1
Medium	42	20.6	77	31.1	112	41.3
High	12	5.9	135	54.7	72	26.6
Total	204	100.0	247	100.0	271	100.0

Table 5 shows that almost three fourth of the respondents were of the view that ROICTs has less future role in livestock production. In case of old ICTs a simple majority of the respondents perceived old ICTs as higher future role in livestock production. In case of modern ICTs more than one fourth (26.6 %) of the respondents gave higher future aspirations. The present study has some resemblance with those of Khan *et al.* (2010) who reported that TV (old ICTs) was at the top then comes the mobile phone as future preference in getting agricultural information. Radio and telephone got subsequent positions, respectively.

Table: 6. Distribution of the respondents according to their response of various livestock production practices and modern ICTs as their source of information

Production Practices	Mean	WS	Rank Order
External/ Internal parasite	1.83	474	1
Fodder pickle	1.82	475	2
Vaccination	1.82	475	2
Calf management	1.81	470	3
Marketing	1.80	470	4
Milk management	1.78	460	5
Shad cleaning	1.74	456	6
Dry fodder	1.73	450	7
Balance diet	1.70	450	8

Table 6 reveals that external parasite is at the top in getting livestock information through modern ICTs the mean value showed medium to high positive value with its subsequent values of fodder pickle, vaccination,

calf management, marketing, internal parasite, milk management, shad cleaning, and dry fodder were fell in the middle of the table. On the other hand, again balance diet was at the bottom of the table with medium to high positive trend. Jain and Goria (2006) described the information need of farmers. He specified the areas in which they feel deficient in information, such as veterinary, dairying and milk related information, advice on export potential and quality of livestock products in the world market.

Conclusions: Based on the findings of the present study, it was concluded that majority of the female farmers were middle aged, less educated, and had meager access to sources of information. They were unaware of the recent technologies in livestock production. Most of them were equipped with TV and radio as sources of information. It is suggested that female livestock farmers should be provided with the recent ICTs through public and private partnership to enhance the livestock production.

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