Participation of Women in Dairy Farm Practices under Small Holder Production System in Pakistan

Z. Batool\textsuperscript{1}, H. M. Warriach\textsuperscript{1,2}, M. Ishaq\textsuperscript{1}, S. Latif\textsuperscript{1}, M. Afzal\textsuperscript{1}, A. Bhatti\textsuperscript{1}, N. Murtaza\textsuperscript{1}, S. Arif\textsuperscript{1} and P. C. Wynn\textsuperscript{2}

\textsuperscript{1}University of Veterinary and Animal Sciences, Lahore, Pakistan, \textsuperscript{2}EH Graham Center for Agricultural Innovation, Charles Sturt University, Australia

The objective of the study was to investigate the participation of women in dairy farm practices in the small-holder production system in Pakistan. A questionnaire was designed to collect the data from female farmers (n = 200) of districts Bhakkar and Jhelum in the Punjab province. Our results indicate that the participation of women in dairy farm practices was significantly higher (p<0.05) in Bhakkar as compared to district Jhelum. The present study suggested that, in order to maximize the small-holder dairy farm productivity, a strong extension program should be implemented to enhance the skills and knowledge of women.

**Key Words:** Women, Dairy farm practices, Smallholder

**INTRODUCTION**

Livestock are considered a key asset for rural livelihoods and offer significant opportunities for improving household incomes. Women traditionally play a major role in conducting various livestock management activities all over the world. Pakistani women have a significant role in agriculture and livestock rearing. Nearly 65.9 % of Pakistan’s population are living in rural areas that are directly and indirectly linked with the agricultural related sector for their livelihood (Farhana et al; 2008). Women comprise half of the rural population and contribute 60 to 80% of labour in the animal husbandry (Younas et al., 2007). Women not only perform normal household chores such as cooking, cleaning, mending clothes and raising children (Kazmi, 1999), but also participate in rearing of livestock and carry out various dairy farm practices. These practices include feeding and watering, fodder cutting, cleaning animals and their sheds, caring for sick animals, calf rearing, milking and the processing of dairy products like ghee, butter and yogurt. Some of these activities, like fodder production, are generally considered the responsibility of men, but in many cases the women are also involved

The participation of women in dairy farm practices varies by region, age, culture and social status and are changing rapidly in some parts of the country. The existing information regarding participation of women in dairy farm practices is very limited. Therefore, the present study was aimed to investigate the participation of women in dairy farm practices in the small-holder production system within the districts of Bhakkar and Jhelum. Additionally,
possible factors affecting their participation in dairy farm practices investigated. It is anticipated that the information generated from this study will be helpful in identifying the extension needs and areas where women can improve dairy production by enhancing her skills and knowledge.

MATERIALS AND METHODS

A dairy extension project (no. LPS/2010/2007, funded by ACIAR) is working in Pakistan aimed at strengthening the dairy value chains in Pakistan through improved farm management and more effective extension services. A questionnaire was designed to collect data from project working areas, 92 female farmers from Bhakkar and 102 from Jhelum. These two districts provide a contrast between an undeveloped arid region poorly served by irrigation and state livestock services (Bhakkar) and a more advanced region where farmers have access to extensive irrigation and support from the state livestock veterinarians (Jhelum). Eight villages were selected from Bhakkar and nine from Jhelum.

Statistical analysis

Participation of women in dairy farm practices under small holder production system in comparison to Bhakkar and Jhelum was analyzed using Chi-square test. All the analysis was carried out with the Statistical Package for Social Sciences (SPSS-13.0). A p-value of 0.05 was regarded as significant.

RESULTS

Participation of women in dairy farm practices was significantly higher \((P < 0.05)\) in Bhakkar as compared to district Jhelum. Comparisons of various dairy farm practices between both districts are shown in Table 1. Socio- economical status and cultural norms are significantly affecting women’s participation in dairy farm practices in the small-holder production system in Bhakkar and Jhelum. From Jhelum 15.6% women are not participating in dairy farm practices due to cultural or religious barriers and 24 % due to their relative affluence. Whereas, in district Bhakkar only 4.4 % are prohibited from participating because of a cultural barrier while 9% are not participating due to their affluence. The education level for women was observed to be almost the same in both Bhakkar and Jhelum (Fig 1 and Fig 2).

DISCUSSION

The present study revealed that the participation of women in dairy farm practices was significantly higher in Bhakkar in comparison to district Jhelum. Women are exclusively taking part in various dairy farm practices like husbandry and nutritional management. The present study shows clearly that provision of appropriate extension services to women in the field of animal husbandry and nutritional is likely to significantly improve the production of animals. The women trained in livestock production activities will help increase milk and
meat production at the national level and raise household incomes (Younus et al., 2007; Shehzad, 2004).

Factors causing lower participation of women in dairy farm practices are socio- economical status and cultural norms in Jhelum. Gender roles are shaped by ideological, religious, ethnic, economic and cultural factors and are a key determinant of the distribution of responsibilities and resources between men and women (Moser, 1989). Our survey data showed that from Jhelum 15.6% women are not taking part in dairy farm practices due to cultural barriers and 24% due to their high economical status. The latter 24% of economically advantaged women do not work themselves but they hire labourers, whereas most of the rural and tribal women do most of the on farm work themselves.

Land holding also affects their economical status. Although the average land holding in Bhakkar (9 Acres) is larger than in Jhelum (6.9 Acres) but the fertility of land is poorer. The lower soil fertility with less irrigation water and more hot weather are major factors limiting production in Bhakkar while holdings in Jhelum are highly fertile and productive.

The present study indicated that the education level was almost the same in the two districts. According to the Pakistan Social and Living Standard Measurement (PSLM) Survey 2010-11 the literacy rate for the population (10 years and above) is 58 percent. (Pakistan Economic Survey 2011-12). It is important to know that equal opportunities (schools and colleges) are available in both of the districts, which would seem to be the case given the results of our survey.

The present study suggested that, in order to maximize the dairy farm productivity a strong extension program should be implemented to enhance the skills and knowledge of women. We propose to identify the remote areas where more women are taking part in livestock production. Following this, these women can be engaged with extension programs to ensure they know of the best practices for livestock health and production.

REFERENCES

Table 1. Comparison of participation of women in various dairy farm practices between district Bhakkar and Jhelum

<table>
<thead>
<tr>
<th>Livestock management activities</th>
<th>Bhakkar (%)</th>
<th>Jhelum (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shed Cleaning</td>
<td>71 (78.3)</td>
<td>80 (73.1)</td>
</tr>
<tr>
<td>Fodder cutting from field</td>
<td>19 (20.7)&lt;sup&gt;a&lt;/sup&gt;</td>
<td>17 (15.7)&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Feed and watering</td>
<td>58 (64.1)&lt;sup&gt;a&lt;/sup&gt;</td>
<td>22 (19.4)&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Care of calf</td>
<td>67 (73.9)&lt;sup&gt;a&lt;/sup&gt;</td>
<td>32 (28.7)&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Milking</td>
<td>71 (78.3)&lt;sup&gt;a&lt;/sup&gt;</td>
<td>22 (19.4)&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Milk sale</td>
<td>64 (69.6)&lt;sup&gt;a&lt;/sup&gt;</td>
<td>61 (56.5)&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Care of sick animals</td>
<td>37 (40.2)&lt;sup&gt;a&lt;/sup&gt;</td>
<td>10 (9.3)&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Value addition of milk</td>
<td>71 (78)</td>
<td>98 (89.9)</td>
</tr>
</tbody>
</table>

<sup>a,b</sup> means with a different superscript within rows are significantly different (P < 0.05)

![Fig 1. Education level of women in district Bhakkar](image1)

![Fig 2. Education level of women in district Jhelum](image2)