INTRODUCTION

Rearing farm animals besides agriculture is routine activity of farming community in India and a large number of farmers depend on animal husbandry for their livelihood. Agriculture and allied sectors contributed approximately to 10.50 per cent of India’s GDP during 2015-16 (Annual report, 2016-17) and the overall contribution of livestock sector in total GDP was nearly 04.50 per cent during 2015-2016 (Anonymous, 2017). Average contribution of livestock towards Gross State Domestic Products (GSDP) of Gujarat is nearly about 05.00 per cent of total GSDP. The livestock sector of Gujarat has achieved remarkable milestones with the collective efforts of line department and non-government organisations where farmers’ played key role which resulted in sustainable and steady growth as well as in consumption of livestock products (Anonymous, 2016-17). The crossbreeding of non-descript zebu cows with semen of exotic dairy cattle breeds has resulted in enhancing milk production by 5 to 8 times to that of non-descript cows, reducing age at first calving and shortening calving intervals in first generation crossbred progenies. The formation of new crossbred cattle breeds to increase milk production was started in India because crossbred cattle were more economical and gave higher milk yield than the indigenous cows and increased the income of farmers, dairy entrepreneurs and provided beneficial and round the year employment to them.

OBJECTIVE

To know the relationship between personal, socio-economic and psychological characteristics of crossbred cattle owners and their knowledge about dairy management practices.

METHODOLOGY

Ex-post facto research design was adopted to study the profile characteristics of crossbred cattle owners. Out of the 9 talukas of Surat district 2 talukas namely, Mahuva and Mandvi were randomly selected for the study. From each selected talukas 6 villages were randomly selected. Hence a total of 12 villages were covered under this study. From each selected village 10 crossbred cattle owners were randomly selected to form a total of 120 crossbred cattle owners. Each selected respondent was personally contacted and interviewed with the help of a well structured pretested interview schedule incorporating all the items pertaining to the specific objectives of the study. The information collected through interview was analysed with the help of suitable statistical tools to derive the results.

RESULTS AND DISCUSSION

Relationship between selected socio-economic characteristics of crossbred cattle owners and their knowledge.
about scientific dairy management practices is presented table 1.

Table 1: Relationship between selected socio-economic characteristics of crossbred cattle owners and their knowledge about scientific dairy management practices  

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Characteristics</th>
<th>Coefficient of correlation 'r' value</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1</td>
<td>Age</td>
<td>-0.2599**</td>
</tr>
<tr>
<td>X2</td>
<td>Education</td>
<td>0.7401**</td>
</tr>
<tr>
<td>X3</td>
<td>Occupation</td>
<td>0.1615NS</td>
</tr>
<tr>
<td>X4</td>
<td>Dairy farming experience</td>
<td>-0.1666NS</td>
</tr>
<tr>
<td>X5</td>
<td>Training exposure</td>
<td>0.1935*</td>
</tr>
<tr>
<td>X6</td>
<td>Herd size</td>
<td>0.3948**</td>
</tr>
<tr>
<td>X7</td>
<td>Extension contact</td>
<td>0.1791*</td>
</tr>
<tr>
<td>X8</td>
<td>Organizational participation</td>
<td>0.2365**</td>
</tr>
<tr>
<td>X9</td>
<td>Annual income from dairy farming</td>
<td>0.3555**</td>
</tr>
<tr>
<td>X10</td>
<td>Mass media exposure</td>
<td>0.4650**</td>
</tr>
<tr>
<td>X11</td>
<td>Risk orientation</td>
<td>0.1835*</td>
</tr>
<tr>
<td>X12</td>
<td>Innovation proneness</td>
<td>-0.1040NS</td>
</tr>
<tr>
<td>X13</td>
<td>Economic motivation</td>
<td>0.1943*</td>
</tr>
<tr>
<td>X14</td>
<td>Marketing orientation</td>
<td>0.2380**</td>
</tr>
</tbody>
</table>

* Significant at 0.05 level of probability  
** Significant at 0.01 level of probability  
NS Non-significant

It can be observed from the Table 1 that there was negative and highly significant relationship (r = -2.599**) between age and knowledge level of crossbred cattle owners. As the age advanced the knowledge level of the respondents about scientific crossbred cattle rearing practices was observed to be low. This might be because the aged farmers were not interested in gaining knowledge about scientific farming practices and they followed the traditional farming practices which they learned from their fore fathers. Similar result was reported by Rathod et al. (2012) and Senthil Kumar et al. (2012).

With respect to education of crossbred cattle owners, there was positive and highly significant relationship (r = 0.7401**) with their knowledge level. This might be because the educated crossbred cattle owners had greater access to different information sources and better capacity to adopt new technologies. This finding is in accordance with the findings of Shekhawat et al. (2013), Patel et al. (2014) and Sabapara et al. (2014).

Organisation of crossbred cattle owners, showed non-significant relationship \((r = 0.1615^{NS})\) with their knowledge level. Majority of the respondents were engaged in agriculture and dairy farming was considered as subsidiary occupation which might be the reason for non-significant relationship between occupation and knowledge level of respondents in crossbred cattle farming. Similar results were reported by Chandrasekar et al. (2017).

Dairy farming experience showed negative and non-significant relationship \((r = -0.1666^{NS})\) with the knowledge level of the respondents. Most of the crossbred cattle owners inherited dairy farms and were following the traditional management practices which they learned from their fore fathers. This might be the reason for non-significant relationship between dairy farming experience and scientific knowledge about crossbred cattle management practices.

It can be observed from the data presented in Table-1 that there was positive and significant relationship \((r = 0.1935^*)\) between training exposure and knowledge level of the crossbred cattle owners. This, finding proves that training plays an important role in improving knowledge about farming. This might be due to the fact that training enhances the competency of farmers and keep them informed about latest developments. It improves knowledge and skill of farmers in managing the farm and also gives orientation to forth-coming practices. Similar result was reported by Shekhawat et al. (2013).

Data presented in Table-1 reveals that herd size showed positive and highly significant \((r = 0.3948^{**})\) relationship with knowledge level of crossbred cattle owners. Managing large herd of crossbred cattle profitably requires high knowledge about scientific crossbred cattle management practices than managing a smaller herd. This might be reason behind the above finding. Similar result was observed by Kankarne et al. (2017) and Panchbhai et al. (2017).

Extension contact showed positive and significant \((r = 0.1791^*)\) correlation with knowledge level of crossbred cattle owners. Dairy farmers who actively participated in more number of extension activities got an opportunity to come in contact with the experts, which might have helped them to enhance their knowledge about scientific crossbred cattle management practices. This finding is in accordance with the findings of Shekhawat et al. (2013).

Organisational participation of crossbred cattle owners had positive and highly significant \((r = 0.2365^{**})\) relationship with their knowledge level. The involvement of the respondents in the activities of various organizations related to dairy production might have helped them to
enhance their knowledge about scientific crossbred cattle management practices. This might be the reason behind above finding. Similar result was reported by Rathod et al. (2012).

Annual income of the crossbred cattle owners was positively and significantly \( r = 0.3555^{**} \) correlated with their knowledge level. Better economic condition might have encouraged crossbred cattle owners to expand dairy farming, for which they might have had frequent interactions with different agencies to acquire knowledge about scientific crossbred cattle management practices. This finding is in accordance with the findings of Rathod et al. (2012) and Panchbhai et al. (2017).

Mass media had positive and highly significant \( r = 0.4650^{**} \) relationship with knowledge level of crossbred cattle owners. This might be due to the fact that mass media exposure helps to enhance the knowledge of the farmers by keeping them informed about the latest developments in the area of crossbred cattle management practices. This finding is in accordance with the findings of Sabapara et al. (2014).

The data presented in Table-1 clearly indicated that risk orientation of the crossbred cattle owners had significant relation \( r = 0.1835^{*} \) with their knowledge level. The probable reason might be that, the dairy farmers with higher level of risk orientation would be much ahead of others in exploring the potentialities to enhance their profit by adopting scientific dairy management practices. This finding is in accordance with the findings of Panchbhai et al. (2017).

The data presented in Table-1 revealed that, innovation proneness of the crossbred cattle owners showed non-significant relationship \( r = -0.1040^{ns} \) with their knowledge level. Similar result was reported by Singh and Baruah (2012).

Economic motivation of crossbred cattle owners had positive and significant relationship\( r = 0.1963^{*} \) with their knowledge level. Economically motivated farmers try to acquire knowledge about scientific and modern practices which would reduce the input cost and enhance the profit margin. This might be the reason why economic motivation of crossbred cattle owners had positive and significant relationship with their knowledge level. This finding is in line with the finding of Lawrence and Ganguli (2012), Rathod et al. (2012), Senthil Kumar et al. (2012) and Patel et al. (2014).

Marketing orientation showed positive and highly significant \( r = 0.2380^{**} \) relation with knowledge level of crossbred cattle owners. Majority of the respondents were members in village dairy co-operatives and sold milk to the village co-operative societies. These societies provides their members in puts on no profit no loss basis and extension education free of cost which might have helped the farmers to gain scientific knowledge about crossbred cattle management practices. This finding is in accordance with the findings of Rathod et al. (2012).

CONCLUSION

The selected characteristics such as age, occupation, dairy farming experience and innovation proneness did not show any significant relationship with knowledge level of crossbred cattle owners. Whereas, remaining characteristics such as training exposure, extension contact, risk orientation and economic motivation showed positive and significant relationship at 0.05 level of probability. However, education, herd size, organisational participation, annual income from dairy farming, mass media exposure and marketing orientation showed positive and significant relation at 0.01 level of probability with their level of knowledge.

REFERENCES


Pragmatic Perspectives of Agricultural Development Programmes in Present Scenario


