Gendered Intra-household Contributions to Low-input Dairy in Senegal

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Gendered Intra-household Contributions to Low-input Dairy in Senegal

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Summary and Implications
A survey was conducted in two sites of Senegal to determine the intra-household gender roles in the Senegal dairy cattle systems. Two surveys, baseline and longitudinal were conducted and the main survey respondents were the households heads. Households were grouped into two levels (higher or lower) of market orientation using the longitudinal household milk production data. Baseline survey results revealed that adult males (> 15 years of age) were responsible for the costs and decision making of most of the dairy related activities though less so when production was quite low. Adult males, hired males (> 15 years of age), and any other household members, except the female gender were the main labor source for the dairy activities. When comparing who received income from milk sales, income from lower market orientated households went to females for a larger proportion of households, than in higher market orientated households.

Introduction
Gender is an important aspect to consider for any developmental activities in various societies. Gender is not only a biological difference between males and females, but it defines specific roles, status, and expectations within different households, communities, and cultures. In many societies, gender influences nature/type of work or tasks that an individual performs. This may as a result confer specific opportunities, challenges, and status for individuals. In that regard, it is important to understand the specific roles and responsibilities of household members prior to dissemination of any developmental projects/programs. These include roles and responsibilities on household decision making, division of labor, and control over productive assets.

The objective of the study is to determine the intra-household roles and responsibilities on dairy enterprises, for low-input dairy keeping households in Senegal. The households were classified into two levels of market orientation (lower and higher) to enable comparison between these two groups.

Materials and Methods
Data was collected for this work as part of the Senegal Dairy Genetics project (http://www.ilri.org/node/7295). Two surveys, baseline and longitudinal were conducted on 220 dairy keeping households, with more than 3000 animals, in two sites in Senegal (around Thienes / Tivaoune and Touba / Mbacke). The baseline survey was conducted between May to July, 2013, while the longitudinal survey was conducted from July, 2013 to April, 2015, with households visited 13 times over this period. Both baseline and longitudinal surveys collected a range of information pertaining to the household dairy enterprise, including information on animal productivity, economics (costs and benefits), provision of labor and decision making. Households were classified as higher or lower market oriented based on both the average milk sold per day (whether fresh or processed) and percent of milk produced that was sold, averaged over the rounds of the longitudinal survey. Households with milk production >2.5 liters per day and with sale of >50% of the milk produced were classified as higher market oriented, otherwise (≤ 2.5 liters and ≤ 50%) they were classified as lower market oriented. Data from baseline survey to 204 male headed households (who were the main survey respondents) were analyzed to determine who is responsible for payment of costs and control of benefits, decision making, and provision of labor in relation to the household dairy enterprise. Data were also analyzed using PROC FREQ of SAS (SAS Inst. Inc., Cary, NC) and chi square tests were performed to determine any significant differences between male and females regarding payment of costs and control of benefits.

Results and Discussion
The main decision makers on dairy for both the lower and higher market oriented households were adult male household members, with the exception of decision making in relation to milk processing and milk sale, where either male or female adult household members were the decision makers. Payment of the various costs on dairy was mainly the responsibility of male household members for both levels of market orientation, with the exception of milk processing costs in the lower market oriented households, where either male or female adult household members were responsible. Control of the benefits from the sale of live animals was mainly by adult household males, for both levels of market
orientation, but it was significantly higher in the higher market orientation group than in the lower market orientation group ($P<.01$). For the control of benefits from the sale of milk adult females in the lower market oriented households received more benefits than those female in the higher market oriented households (Table 1). The change in who controlled the benefits from milk sale between the lower and higher market oriented households was statistically significant ($P<0.05$).

The main providers of labor were household adult males, hired adult males, and sometimes any household members, for both level of market orientation, with the exception of labor on milk processing and milk sale where adult female household members were the main providers.

These results indicate that whilst men pay most of the costs on dairy, and provide most of the labor, women benefit from the sale of milk. However the proportion of women benefiting from the sale of milk decreases as the level of market orientation increases, in-line with other studies that have shown a shift in benefits from women to men as household livestock enterprises in developing countries commercialize. These results require further exploration in relation to trade-offs between men and women across the range of enterprises in which a household is involved, however they do indicate the importance of considering gender issues in relation to the development of dairy in Senegal.

### Acknowledgments

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<table>
<thead>
<tr>
<th>Market orientation</th>
<th>N</th>
<th>Milk sales</th>
<th></th>
<th>Live animal sales</th>
<th></th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Adult male (%)</td>
<td>Adult female (%)</td>
<td></td>
<td>Adult male (%)</td>
</tr>
<tr>
<td>Higher</td>
<td>80</td>
<td>53</td>
<td>47</td>
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<td>Lower</td>
<td>82</td>
<td>28</td>
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<td>89</td>
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<tr>
<td>Chi Square P value, df=1</td>
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<td>Fishers exact test P value, df=1</td>
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</tr>
</tbody>
</table>

1 Percentages are within higher and lower market orientation rows