Impact of small ruminant diseases on different household members in Ethiopia

Barbara Wieland, Biruk Alemu, Hiwot Desta, Wole Kinati, Shiferaw Tafesse, Anouka Van Eerdewijk, Annet A. Mulema

First joint conference of the Association of Institutions for Tropical Veterinary Medicine and the Society of Tropical Veterinary Medicine, Berlin, Germany, 4–8 September 2016
Background

• Small ruminants serve multiple livelihood roles for Ethiopian small holders
• Women play important role in small rumiant production
• Little is known on how disease impact and risk mitigation strategies differ among household members

→ understanding of these issues is pivotal to design sustainable livestock health interventions
Objectives

This study aimed at

- identifying disease constraints
- assess impacts of disease constraints as perceived by men and women in mixed crop-livestock and agro-pastoralist systems
Materials and methods

1. Focus groups discussions (FGDs)

- In 23 villages in 4 regions, Oromia, Tigray, Amhara and SNNPR, in Ethiopia
- In each village separate FGDs were held with women, men, young women and young men
- Participatory tools: simple ranking, proportional piling and seasonal calendar
Materials and methods

2. Household survey

- 440 household in the same areas
- 50% of interviews conducted with women, 50% with men
- Questions based on FGD findings
Quantify/rank impacts

In FGDs:
For identified important diseases, farmers were asked
• how the disease impacts the household
• which household members most affected
• proportional piling for M, W, YM, YF, CH

In HH survey:
• 3 main impacts for the 3 most important diseases
• recorded according to impact categories from FGDs
## Results

### Disease Priority: agro-ecology

<table>
<thead>
<tr>
<th>Disease Category</th>
<th>Highland Woredas</th>
<th>Lowland Woredas</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean rank score</td>
<td>Test statistics</td>
</tr>
<tr>
<td>Respiratory dis</td>
<td>6.10</td>
<td>N=68</td>
</tr>
<tr>
<td>Neurological dis</td>
<td>4.40</td>
<td>Kendall's W= 0.38</td>
</tr>
<tr>
<td>Skin dis</td>
<td>3.93</td>
<td>Chi-Square= 153.952</td>
</tr>
<tr>
<td>GIT</td>
<td>5.01</td>
<td>Df=6</td>
</tr>
<tr>
<td>External par</td>
<td>2.71</td>
<td>Asymp. Sig.= 0.000</td>
</tr>
<tr>
<td>Systemic</td>
<td>2.72</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>3.13</td>
<td></td>
</tr>
</tbody>
</table>

- In highland areas (mixed crop-livestock system): priorities were respiratory diseases and GIT parasites with strong agreement among respondent groups
- In lowland areas (pastoral and agro-pastoral system): priorities were systemic diseases and neurological diseases, differences between regions
Results

Disease priority: gender

- Women and young female scored respiratory diseases higher than young male and men
- Young men and women scored neurological diseases higher than men and young female
# Results

**Impact categories identified in FGDs**

## Economical

- Financial: loss of income
- Mortality
- Productivity: poor growth rates & weight gain, lack of milk for offspring
- Value: meat quality, hide quality
- Costs: for treatment
- Waste of time

## Social

- Social/psychological: status, taxes unpaid, no mixing with other animals
- Drop out of school: school fees unpaid
- Migration for other jobs in cities

## Human

- Food security/malnutrition
- Human health
Who is affected from the HH? Why?

Women are most severely affected

- women bear the main responsibility of looking after diseased animals
- In order to fulfill their household duties (children, food), they rely on income from small ruminants
- Lack of other income sources if animals are lost due to disease
- For men it is easier find other work if for some reason animals are lost

Kendall's $W = 0.49$, $p=0.000$

Error bars: 95% CI
Impact perception: by gender

- Human Health
- Food Security
- Psychological
- Social
- Dropout School
- Migration
- Timewasting
- Cost
- Value
- Productivity
- Mortality
- Loss of income

% of answers received
Conclusions

• Impact of SR diseases highly important in women
• Understanding of impacts almost similar in men and women
• Need to take gender into account when designing small ruminant health interventions
Acknowledgements

This work is financed by

- SmaRT project (IFAD), Africa RISING project (USAID)

It is implemented in a partnership with

- ICARDA, Regional Research Centers (DBARC, SDARC, YPDARC, BongaARC, AbergelleARC, BakoARC, ArekaARC), Mada Walabu University and Agricultural Offices in the project sites

It contributes to the CGIAR Research Program on

- Livestock and Fish
better lives through livestock

ilri.org