SOURCES OF INFORMATION FOR SMALL-HOLDER CATTLE FARMERS IN THE NORTH WEST PROVINCE, SOUTH AFRICA

D.M. Motiang
&
E.C Webb
OUTLINE

- Introduction
- Methodologies
- Results
- Conclusion
INTRODUCTION

- Estimated SA national is 14 million
- 10% estimated to be dairy cattle
- Small-holder farmers own 40% of national herd
- Most small-holder farmers own 1-10 head of cattle
INTRODUCTION

- Small-holder herds are used for dual purposes (milk and beef)

- Performance of the public extension under question

- Can other sources complement public extension?

- Purpose: Identify sources and evaluate their influence on productivity
METHODOLOGIES

- 308 farmers were randomly selected from four extension service areas in the Dr Ruth Segomotsi Mompati District Municipality.

- 45 minutes interviews during May till July 2012.
METHODOLOGIES

- South Africa’s largest beef producing district
- One of the most arid
- One of the poorest
METHODOLOGIES

- Ranking scale used to measure preferred channels
- Data analysis using SPSS 22 (2013)
- Correlation analysis to measure associations between channels and demographics as well as herd dynamics
RESULTS

- Majority (76%) of farmers were male
- Average age of household head was 57
- Dominance of middle aged farmers (46%)
- Average years of schooling was 7.6
RESULTS

- Average herd size was 35
- Calving rate was 55%
- Herd mortality rate was 10%
- Herd off-take rate was 15%
# Households by herd dynamics

<table>
<thead>
<tr>
<th>Herd size</th>
<th>No farmers</th>
<th>% frequency</th>
<th>Calving rate</th>
<th>Herd mortality rate</th>
<th>Herd off-take rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-10</td>
<td>57</td>
<td>18.5</td>
<td>55.5</td>
<td>18.1</td>
<td>22.5</td>
</tr>
<tr>
<td>11-30</td>
<td>121</td>
<td>39.3</td>
<td>51.7</td>
<td>8.8</td>
<td>12</td>
</tr>
<tr>
<td>31-70</td>
<td>94</td>
<td>30.5</td>
<td>57.5</td>
<td>8.6</td>
<td>13.8</td>
</tr>
<tr>
<td>&gt;70</td>
<td>36</td>
<td>11.7</td>
<td>55.6</td>
<td>6.1</td>
<td>16.4</td>
</tr>
<tr>
<td>Total</td>
<td>308</td>
<td>100</td>
<td>55</td>
<td>10</td>
<td>15</td>
</tr>
</tbody>
</table>
Dairy ranching

- Only 7.7% of farmers use dual purpose breed in crosses with indigenous breeds
- 35% of herds milk cows
- Average number of cows milked was 6 ranging between 1 and 20
- Average daily milk per household was 12 litres
Sources of information

- Animal health officers were main source
- Extension officers second source
# Household attributes and sources

<table>
<thead>
<tr>
<th>Sources of information</th>
<th>Age</th>
<th>Years of schooling</th>
<th>Gender</th>
<th>Herd size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magazine</td>
<td>-.364*</td>
<td>.328**</td>
<td>-.130*</td>
<td>.179**</td>
</tr>
<tr>
<td>Radio</td>
<td>-.183**</td>
<td>.067</td>
<td>-.109</td>
<td>.186**</td>
</tr>
<tr>
<td>Television</td>
<td>-.298**</td>
<td>.139*</td>
<td>-.183**</td>
<td>.225**</td>
</tr>
<tr>
<td>Commercial farmers</td>
<td>-.128*</td>
<td>.113</td>
<td>-.179**</td>
<td>.174**</td>
</tr>
<tr>
<td>Small-holder farmers</td>
<td>.023</td>
<td>-.034</td>
<td>-.081</td>
<td>-.005</td>
</tr>
<tr>
<td>Extension officers</td>
<td>-.101</td>
<td>-.193**</td>
<td>-.096</td>
<td>-.014</td>
</tr>
<tr>
<td>Veterinarian</td>
<td>-.175**</td>
<td>.033</td>
<td>-.042</td>
<td>.126*</td>
</tr>
<tr>
<td>Study groups</td>
<td>-.075</td>
<td>-.080</td>
<td>.168</td>
<td>-.006</td>
</tr>
<tr>
<td>Office visits</td>
<td>.008</td>
<td>.071</td>
<td>.216**</td>
<td>-.268**</td>
</tr>
<tr>
<td>Telephone</td>
<td>.155</td>
<td>.097</td>
<td>.140</td>
<td>-.164</td>
</tr>
</tbody>
</table>
Household attributes and sources

- Owners of large herds relied on mass media including magazine, radio and TV as well as commercial farmers and veterinarians. But made less office visits.

- The negative correlation (Table 3) suggest that radio programmes put less emphasis on issues of market and trade.
## Herd performance and sources

<table>
<thead>
<tr>
<th>Sources of information</th>
<th>Calving</th>
<th>Mortality</th>
<th>Herd off-take</th>
<th>Sheep sale</th>
<th>Small stock sale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magazine</td>
<td>.019</td>
<td>-.050</td>
<td>-.046</td>
<td>.015</td>
<td>-.043</td>
</tr>
<tr>
<td>Radio</td>
<td>-.027</td>
<td>-.113</td>
<td>-.161**</td>
<td>-.137</td>
<td>-.169*</td>
</tr>
<tr>
<td>Television</td>
<td>.072</td>
<td>-.114</td>
<td>-.105</td>
<td>-.190</td>
<td>-.186*</td>
</tr>
<tr>
<td>Commercial farmers</td>
<td>-.095</td>
<td>-.053</td>
<td>-.107</td>
<td>-.112</td>
<td>-.194*</td>
</tr>
<tr>
<td>Small-holder farmers</td>
<td>-.200**</td>
<td>.006</td>
<td>-.110</td>
<td>-.050</td>
<td>-.161*</td>
</tr>
<tr>
<td>Extension officers</td>
<td>.036</td>
<td>-.056</td>
<td>-.075</td>
<td>-.418**</td>
<td>-.053</td>
</tr>
<tr>
<td>Veterinarian</td>
<td>-.014</td>
<td>-.098</td>
<td>.050</td>
<td>-.088</td>
<td>-.101</td>
</tr>
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<td>Study groups</td>
<td>.066</td>
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<td>-.127</td>
<td>-.035</td>
<td>.088</td>
<td>.393*</td>
<td>.296*</td>
</tr>
</tbody>
</table>
Reliance on other small-holder farmers for agricultural information, resulted in:
- lower calving rates
- fewer small stock sales.

The sale of small stock also declined as respondents relied on commercial farmers for information.
Household attributes and sources

- While the depressed calving rates could be attributed to the limited scope of agricultural technology among small-holder producers.

- The suppression of small stock sales by both commercial and small-holder farmers raises a question whether there is sufficient commercial orientation in the study area towards small stock farming.
Household attributes and sources

- There was a positive correlation between office visits and the sale of sheep.

- This suggests that extension officers may use other experts in the office to persuade farmers to sell livestock during the face to face sessions.

- The use of telephone also increased the sale of both sheep and overall small stock.
Household attributes and sources

- This implies the use of individual communication methods might induce a commercial orientation amongst small-holder.

- The apparent entrepreneurial orientation associated with office visits and telephone communication suggest
  - These such methods reinforce extension efforts to persuade small-holder farmers to become commercially oriented.
CONCLUSION

- Should demographic characteristics be considered choosing channels for disseminating information?

- Does farmer to farmer extension concentrate on technical aspects at expense of entrepreneurship?
  - Why are mass communication channels and farmer to farmer methods suppressing livestock sales?
Should extension methods e.g. group and mass media be combined to improve productivity and entrepreneurship
Acknowledgements

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Thank you