Sheep & Goats
Meat & wool
International survey

Joanne Conington, UK; Jean-Michel Astruc, France
Sharon McIntyre, NZ; Dan Brown, Aus; Cesare Mosconi, ICAR ...and more..
Background

• ICAR Sheep & Goat Committee – guidelines for small ruminant dairy production published

• No ICAR guidelines yet exist for recording meat & wool characteristics

• ‘New’ interest in meat production from sheep meat – producing nations & emerging economies
e.g. Australia - Change in focus from wool to meat

— Rob Banks, ICAR 2017, Edinburgh

<table>
<thead>
<tr>
<th>Year</th>
<th>Merino Ewes to meat rams (millions)</th>
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<th>% “Meat” Matings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>9</td>
<td>51</td>
<td>15%</td>
</tr>
<tr>
<td>2002</td>
<td>20</td>
<td>25</td>
<td>44%</td>
</tr>
</tbody>
</table>
Background – cont’d

• Increase in requests for knowledge
  – Performance recording guidelines
  – Which traits - how to measure
  – Models used

• Scope for new international evaluations

• Working group initiated 2017
  – Aim to draw up guidelines for recording sheep & goats meat + wool
First step – survey

• Initial survey sent to countries already known (and some unknown)

• Gathered info on traits, breeds, number of animals, % flock recorded etc

Survey results summarised from 18 respondents from 13 known countries
What we know from the survey

• Type of individual collecting data for evaluations

• WHO (names of organisation) is delivering genetic evaluations in each country

• WHY performance recording is done

• WHICH traits
Sheep performance recording system?

<table>
<thead>
<tr>
<th></th>
<th>Fine Wool</th>
<th>Maternal (Replacements, Meat &amp; Wool)</th>
<th>Terminal (Meat)</th>
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<tbody>
<tr>
<td>Have a performance recording system:</td>
<td>3 (15.79%)</td>
<td>9 (47.37%)</td>
<td>7 (36.84%)</td>
<td>19</td>
</tr>
<tr>
<td>From birth to weaning:</td>
<td>2 (11.76%)</td>
<td>8 (47.06%)</td>
<td>7 (41.18%)</td>
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<tr>
<td>From weaning to slaughter:</td>
<td>2 (14.29%)</td>
<td>6 (42.86%)</td>
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<td>14</td>
</tr>
<tr>
<td>Female lifetime performance:</td>
<td>2 (15.38%)</td>
<td>7 (53.85%)</td>
<td>4 (30.77%)</td>
<td>13</td>
</tr>
</tbody>
</table>

Total Responded to this question: 11 / 18 = 61.11%
Total who skipped this question: 7 / 18 = 38.89%

Meat 7/11
Maternal (replacements) – 9/11
Wool 3/11
Sheep performance recording system
How long are they recorded for?

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Total Responded to this question: 11 61.11%
Total who skipped this question: 7 38.89%
Total: 18 100%

Birth- weaning
Weaning to slaughter
Female lifetime
## Traits used in evaluations

<table>
<thead>
<tr>
<th>Traits</th>
<th>Fine Wool</th>
<th>Maternal</th>
<th>Terminal</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reproduction (lambs born, reared):</td>
<td>3(16.67%)</td>
<td>7(38.89%)</td>
<td>6(33.33%)</td>
<td>2(11.11%)</td>
<td>18</td>
</tr>
<tr>
<td>Lamb survival:</td>
<td>2(14.29%)</td>
<td>7(50%)</td>
<td>5(35.71%)</td>
<td>0(0%)</td>
<td>14</td>
</tr>
<tr>
<td>Lamb growth:</td>
<td>3(17.65%)</td>
<td>7(41.18%)</td>
<td>6(35.29%)</td>
<td>1(5.88%)</td>
<td>17</td>
</tr>
<tr>
<td>Adult size:</td>
<td>2(28.57%)</td>
<td>3(42.86%)</td>
<td>2(28.57%)</td>
<td>0(0%)</td>
<td>7</td>
</tr>
<tr>
<td>Meat (carcass characteristics):</td>
<td>2(18.18%)</td>
<td>4(36.36%)</td>
<td>5(45.45%)</td>
<td>0(0%)</td>
<td>11</td>
</tr>
<tr>
<td>Wool:</td>
<td>3(50%)</td>
<td>3(50%)</td>
<td>0(0%)</td>
<td>0(0%)</td>
<td>6</td>
</tr>
<tr>
<td>Fleece weight:</td>
<td>3(50%)</td>
<td>3(50%)</td>
<td>0(0%)</td>
<td>0(0%)</td>
<td>6</td>
</tr>
<tr>
<td>Fleece quality:</td>
<td>3(60%)</td>
<td>2(40%)</td>
<td>0(0%)</td>
<td>0(0%)</td>
<td>5</td>
</tr>
</tbody>
</table>

- Total Responded to this question: 9 (50%)
- Total who skipped this question: 9 (50%)
- Total: 18 (100%)
Reproduction trait recording

Depends on recording category

- 5/9 of maternal/replacement use pregnancy scanning information
- 2/9 for fine wool recording
Other groups of traits – varied response

- Lamb survival
- Ewe survival/stayability
- Lamb/ kid growth & adult live weight
- Carcass and meat quality - pre & post slaughter
- Wool characteristics
Frequency of genetic evaluations & publication of results

Big variation

– Ranged from weekly to annually
– Depends on 1) Trait, 2) test station result timings, 3) breed

..and other reasons..
On-farm data collection or performance test?

• Performance test station 4/9 YES

• On-farm data collection 8/9 YES
International evaluations

Yes: 2/10
No: 8/10
Considering: 7/9
Are you using genomic selection?

- Yes – now: 2/10
- Planned: 4/10
- Future: 4/10
- Not considering: 0
Are single/major genes reported?

<table>
<thead>
<tr>
<th></th>
<th>Responses</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes:</td>
<td>5</td>
<td>71.43%</td>
</tr>
<tr>
<td>No:</td>
<td>2</td>
<td>28.57%</td>
</tr>
<tr>
<td>if so, which ones?:</td>
<td>3</td>
<td>42.86%</td>
</tr>
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</table>

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Next steps

• Propose examples of recording for some key traits
  • Growth ✓
  • Wool
  • Meat ✓
  • Maternal

• Collate examples and finalise into new ICAR reporting format

• Report to ICAR 2019
Improving yield, efficiency, quality and acceptability
Delivering guidelines for performance recording