Applications for comprehensive support of improving health and welfare in dairy cattle

K.F. Stock, K. May, J. Heise, F. Reinhardt, R. Reents

IT Solution for Animal Production (vit), Verden (Aller), Germany
Background & study approach

- limited access to information on direct health traits vs. huge amount of information on potential indicator traits

  ➢ **integrated data usage**

- required comprehensive, consistent and practice-oriented support of farmers to allow optimizing management and breeding
  - health and welfare of dairy cows
  - farm efficiency

  ➢ **quantifying the potential gain in farm efficiency through targeted improvement of dairy health**
Results & conclusions

 recorded health events and health-related disposals

- different quality (indirect, direct)
- characteristic and reasonably similar distribution patterns
Results & conclusions

- recorded health events and health-related disposals
  - different quality (indirect, direct)
  - characteristic and reasonably similar distribution patterns

- optimal integrated use
  - clear distinction between sources of information
  - complementary statistics in health reports, multiple trait setting in genetic and genomic evaluation (GE)

<table>
<thead>
<tr>
<th>Health complex (GE)</th>
<th>Health-related disposal reason</th>
<th>Genetic correlation</th>
<th>Reliability increase (gBV)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Udder health</td>
<td>udder disease</td>
<td>0.85</td>
<td>13 %</td>
</tr>
<tr>
<td>Claw health</td>
<td>claw / limb disorder</td>
<td>0.60</td>
<td>5 %</td>
</tr>
<tr>
<td>Metabolic stability</td>
<td>metabolic disorder</td>
<td>0.80</td>
<td>12 %</td>
</tr>
<tr>
<td>Reproduction</td>
<td>infertility</td>
<td>0.55</td>
<td>4 %</td>
</tr>
</tbody>
</table>
recorded health events and health-related disposals

- optimal integrated use
- balancing qualitative and quantitative requirements
- great opportunities for improving animal health and by that overall efficiency and sustainability of milk production

THANK YOU!