Development and implementation of an on-farm self-monitoring tool to promote welfare in dairy cows in northern Germany

H. Lehrke¹, J. Brinkmann², H. Kahle³, O. Lamp¹, H. Rowehl⁴

¹Chamber of Agriculture of Schleswig-Holstein, Research and Training Centre Futterkamp
²Thuenen-Institute of Organic Farming
³Rinderzucht Schleswig-Holstein eG
⁴Landeskontrollverband Schleswig-Holstein e.V.
Farmers in Germany are legally committed to regularly monitor their animals’ welfare.

Aim

▪ Evaluation of animal welfare by using animal based indicators
▪ Emphasising the personal responsibility of the animal owner for the animals well-being
▪ Improvement of animal welfare

Challenges

▪ No further regulation on content, extent or frequency of self-assessment
EIP Agri European Innovation Partnership

- Provides funding for innovative ideas in agriculture
- Aims to encourage dedicated farmers, researchers and entrepreneurs to new forms of cooperation
- Working together in "Operational groups", farmers take an active part during the project
- Promote better exchange between science and practice
- Project start: June 2018, 3 years
Animal welfare – Curse or blessing?

How can I tell?
Measurement of animal welfare?

Animal
- Genetics
- Performance
- Conformation

Husbandry
- Stable concept
- Feeding

Human
- Management
- Education
- Motivation

Animal health

Animal behaviour

Emotional state

(Fraser et al., 1997; Fraser, 2008)
Selection of suitable indicators

- Use of existing data recording systems to reduce amount of work for farmers
- Evaluation of indicators of the animals’ condition on site
- Set of valid, animal-based indicators which documents the animal welfare situation and covers animal health, husbandry and management
- Easy to use and reproduce when carried out by the farmers
Set of indicators

Q Check (DLQ)
- Indicators from existing data for:
  - Udder health
  - Herd demographics
  - Metabolic health
  - Mortality of calves and young stock

EiKoTiGer (KTBL)
- Indicators from animal inspection:
  - Body condition
  - Cleanliness
  - Integument damages
  - Claw health
  - Lameness
  - Tail injuries

Tierwohl-Check
- Combination of both sets of indicators, completed by basic information about the husbandry system.

www.q-check.org
www.ktbl.de/themen/eikotiger/
www.tierwohl-check-sh.de
Practical tool for farmers

Providing a practical tool for farmers:

▪ Easy and quick analysis of the animal welfare
▪ Optimization of the individual herds’ management
▪ Implementation and documentation of the required self assessment
▪ Create an added value for practical farming
Development of the application

- Easy to use interface
- Making maximum use of existing data: herd information from the milk recording
- Scoring of indicators by images
- Recommended sample size according to the herd size
- Accompanying E-Learning program
Web application
## Self-assessment

### Meeting the legal requirements by:

<table>
<thead>
<tr>
<th>Documentation</th>
<th>Evaluation</th>
<th>Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Regular data collection</td>
<td>• Automatic evaluation on the basis of traffic light system</td>
<td>• Possible comparison with similar farms</td>
</tr>
<tr>
<td>• Structured review of current and prior results</td>
<td>• Defined for each indicator for better classification of own values</td>
<td>• Participation optional for all app users</td>
</tr>
<tr>
<td>• Combination of existing data and animal scoring</td>
<td>• Easy presentation of results</td>
<td></td>
</tr>
</tbody>
</table>

**ICAR/IDF Animal Welfare 2021 Leuwaarden / Referent: Hannah Lehrke**
Animal welfare report

**Tierwohl-Check Ergebnisübersicht**

<table>
<thead>
<tr>
<th>Name:</th>
<th>Anschrift:</th>
<th>Datum:</th>
<th>nicht beendet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Betrieb:</td>
<td></td>
<td>Herdengröße:</td>
<td>325</td>
</tr>
<tr>
<td>Stichprobe:</td>
<td></td>
<td>80 Empfohlen</td>
<td></td>
</tr>
</tbody>
</table>

**Auswertung der Milchkontrolle**

<table>
<thead>
<tr>
<th>Verteilung der Abgänge [%]</th>
<th>Betriebswert</th>
<th>Zielbereich</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abgangsrate</td>
<td>51,8</td>
<td>&lt;=25</td>
</tr>
<tr>
<td>Abgänge unter 100 Laktationstagen</td>
<td>0,9</td>
<td>&lt;=5</td>
</tr>
<tr>
<td>Nutzungsdauer [Monate]</td>
<td>33,7</td>
<td>&gt;=10</td>
</tr>
<tr>
<td>Tierverluste Kühe</td>
<td>9,0</td>
<td>&lt;=2</td>
</tr>
</tbody>
</table>

**Eutergesundheit [%]**

<table>
<thead>
<tr>
<th>Anteil Tiere mit einem Zeitgehalt</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;= 100.000 Zellen/ml</td>
<td>54,6</td>
</tr>
<tr>
<td>&gt; 100.000 und &lt;= 200.000 Zellen/ml</td>
<td>18,3</td>
</tr>
</tbody>
</table>

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Take home points

Making the most of existing indicators
Already well known animal based indicators can be successfully used in practical farming.

Keep it simple
The analysis of data on a regular base helps to track developments in animal welfare. Only with an easy-to-use approach, animal based indicators will find use in practical farming.

Animal welfare assessments need an added value
Self-assessments shouldn’t only be carried out to follow legal requirements, but create a real value for the farmers.
Thank you for your attention!

For further information please check www.tierwohl-check-sh.de

Contact
Leadpartner
Landeskontrollverband Schleswig-Holstein e.V.
Steenbeker Weg 151, 24106 Kiel
+49 (0)431 33987 21
stadter@lkv-sh.de

Referent
Hannah Lehrke
hlehrke@lksh.de