WaCASA meetings 2017-2018

- Every second Wednesday of the month
- Meetings in W0.1, Radix
- For information on previous meetings - [www.wacasa.wur.nl](http://www.wacasa.wur.nl)
- Interested in presenting your research?
  Contact Aart or Gerrie
Sustainable development of agriculture: contribution of farm-level assessment tools

WaCASA meeting, September 13

Evelien de Olde
Introduction

- Impact of agriculture

- Sustainability assessment tools
  - Evaluate sustainability performance
  - Support decision-making
External drivers

Market

Policy

Research
Sustainability assessment tools
Sustainability assessment tools
Research objective

• What is the contribution of farm-level assessment tools to sustainable development of agriculture?
  • Adoption & implementation
  • Variability
  • Decisions
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Adoption &amp; implementation</th>
<th>Variability in tools</th>
<th>Decisions in tools</th>
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<td>Chapter 6</td>
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Sustainability performance of organic farms in Denmark

• RISE 2.0
• 10 trained consultants
• Results of 37 farms
  • 4 sectors: vegetable, dairy, pigs and poultry
Sustainability performance of organic farms in Denmark
Animal husbandry
Animal husbandry

- Herd management
- Livestock productivity
- Possibilities for species-appropriate behaviour
- Quality of housing
- Animal health
Animal husbandry

Herd management
Livestock productivity
Possibilities for species-appropriate behaviour
Quality of housing
Animal health

Productivity farm/regional average
Product quality
Development of product quality

Average

Weighted LU

= \frac{F}{R} \times 100 - 33

Sig. above average
+20
+10
0
-10
-20
<table>
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Assessing sustainability at farm level

1. Literature study – overview of 48 tools
2. Selection criteria
   - RISE, SAFA, PG, IDEA
3. Comparison of tools in practice
4. Relevance according to farmers
Assessing sustainability at farm level

<table>
<thead>
<tr>
<th></th>
<th>RISE</th>
<th>SAFA</th>
<th>PG</th>
<th>IDEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Origin</td>
<td>HAFL, CH</td>
<td>FAO</td>
<td>ORC, UK</td>
<td>France</td>
</tr>
<tr>
<td>Themes - indicators</td>
<td>10 - 156</td>
<td>21 - 116</td>
<td>11 - 185</td>
<td>10 – 126</td>
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<tr>
<td>Scoring</td>
<td>0 – 100</td>
<td>1 - 5</td>
<td>1 - 5</td>
<td>variable</td>
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<tr>
<td>Time</td>
<td>7:00</td>
<td>2:30</td>
<td>3:00</td>
<td>3:10</td>
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</table>

- Themes and indicators
- Scoring and aggregation
- Data and time requirements
Assessing sustainability at farm level

- Relevance perceived by farmers
  - Context
  - Complexity
  - Value judgements
- Implementation
## Outline

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The choice of the sustainability assessment tool matters

- Validity & reliability
- RISE, SAFA, PG and IDEA
- Coverage analysis
- Comparison of assessment outcomes
The choice of the sustainability assessment tool matters

- Terminology
  - Indicator, question, criteria

- Content and approach
  - Themes and indicators
  - Auditor, aggregation and scoring

- Results
  - Animal welfare
<table>
<thead>
<tr>
<th>Tool</th>
<th>Subthemes</th>
<th>Ind. Assessment</th>
<th>Assessor</th>
<th>Scores</th>
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<tbody>
<tr>
<td>RISE</td>
<td>Possibilities for species-appropriate behaviour</td>
<td>2 List of criteria; per animal category</td>
<td>Trained consultant</td>
<td>0 - 100</td>
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<td></td>
<td>Quality of housing</td>
<td>5 On 3 levels; per animal category</td>
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<td>SAFA</td>
<td>Freedom from stress</td>
<td>3 Practices, observations, per animal category</td>
<td>Consultant or expert</td>
<td>1 - 5</td>
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<tr>
<td>PG</td>
<td>Ability to perform natural behaviours</td>
<td>5 Questions to farmer on practices and behaviour</td>
<td>Farmer</td>
<td>1 - 5</td>
</tr>
<tr>
<td></td>
<td>Housing</td>
<td>4 Questions to farmer on practices</td>
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<tr>
<td>IDEA</td>
<td>Animal welfare</td>
<td>6 Self assessment farmer</td>
<td>Farmer</td>
<td>0 - 3</td>
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</table>
The choice of the sustainability assessment tool matters

- Type of indicators
- Auditor
- Scoring and aggregation
- Value judgements
- Reliability and validity
- Implementation
Decisions made in the development of sustainability assessment tool matter
# Outline

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*Wageningen University & Research*
When experts disagree ...
When experts disagree ...

• 11 criteria for indicator selection
  • Sustainability relevance, affordable, sensitivity
• 9 criteria for indicator set selection
  • Participation, policy relevant, transparency
• Expert ranking
  • TempAg (18)
  • NZSD (20)
- Kendall’s W = 0.31
When experts disagree ...

• Priorities

• Context

• Frame of reference
  • Knowledge, norms, values, interest, convictions
Sustainable development of agriculture: contribution of farm-level assessment tools

- Adoption & implementation
- Variability
- Decisions
Recommendations

- Transparency
- Harmonisation
- Participation
- Implementation
  - Drivers
External drivers

Market

Policy

Research
Current projects

Market

Policy narratives

Policy

Research
Thanks!

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