Beef - Key performance indicators

Mary Vickers
Today

• Suckler herd KPIs
• Update on new project
• Responses
• KPIs for finishing systems
What is a KPI?

• a business metric used to evaluate factors that are crucial to success

• KPIs differ between organizations

• used to track performance and identify strengths and weaknesses
Efficiency is about making the most of the resources on your farm
Production Efficiency

Output as a proportion of the most limiting input – area, animal numbers, kg, £

e.g. per cow to the bull

\[
\text{Output} \quad \frac{\text{Output}}{\text{Input}}
\]
What gets measured gets managed

- We can measure lots of things but what is important and useful?

Data > Information > Knowledge > Wisdom

Doing things right

Doing the right things
Performance Indicators

- Year on year
- Similar production systems
- Identify issues in the herd
- Track individual animals
- Develop a farm plan
- Challenge staff & advisers
- Motivational
# Suckler herd KPIs

<table>
<thead>
<tr>
<th>KPI</th>
<th>Stocktake</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calves born alive per 100 cows &amp; heifers put to the bull</td>
<td>87</td>
</tr>
<tr>
<td>Calves weaned per 100 cows &amp; heifers put to the bull</td>
<td>84</td>
</tr>
<tr>
<td>Calving period – first to last calf (weeks)</td>
<td>17.2</td>
</tr>
<tr>
<td>% of cows and heifers calving in first 3 weeks</td>
<td>29</td>
</tr>
<tr>
<td>200 day calf weight per cow &amp; heifer put to bull (kg)</td>
<td>226</td>
</tr>
</tbody>
</table>
## Suckler herd KPIs

<table>
<thead>
<tr>
<th></th>
<th>Stocktake</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calves born alive per 100 cows &amp; heifers put to the bull</td>
<td>87</td>
<td>&gt;95</td>
</tr>
<tr>
<td>Calves weaned per 100 cows &amp; heifers put to the bull</td>
<td>84</td>
<td>&gt;94</td>
</tr>
<tr>
<td>Calving period</td>
<td>17.2</td>
<td>&lt;12</td>
</tr>
<tr>
<td>% of cows and heifers calving in first 3 weeks</td>
<td>29</td>
<td>&gt;65%</td>
</tr>
<tr>
<td>200 day calf weight per cow &amp; heifer put to bull (kg)</td>
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</tbody>
</table>
Beef KPI calculator

Explains how to use records to calculate KPIs

<table>
<thead>
<tr>
<th>Herd1</th>
<th>Herd2</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of cows put to the bull</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of heifers put to the bull</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mating</td>
<td>Cow to bull ratio</td>
<td>&gt;40</td>
</tr>
<tr>
<td></td>
<td>Percentage of cows and heifers scanned in-calf (%)</td>
<td>&gt;96%</td>
</tr>
<tr>
<td>PD</td>
<td></td>
<td>&gt;95</td>
</tr>
<tr>
<td>Number of empty cows and heifers</td>
<td></td>
<td>&gt;94</td>
</tr>
<tr>
<td>Calving</td>
<td></td>
<td>&lt;3%</td>
</tr>
<tr>
<td>Average calving interval</td>
<td></td>
<td>&lt;12 wks</td>
</tr>
<tr>
<td>Number of cows and heifers calving from one year</td>
<td></td>
<td>&gt;65%</td>
</tr>
<tr>
<td>Number of cows with calving interval below 370 days</td>
<td></td>
<td>&gt;90%</td>
</tr>
<tr>
<td>Number of empty cow or heifer</td>
<td></td>
<td>&gt;1.1 kg</td>
</tr>
</tbody>
</table>

Definitions of records | Def. of perf indicators | +
Definitions of records & performance indicators

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of cows put to bull</strong></td>
<td>Total number of mature cows put to the bull</td>
<td>100 mature cows put to the bull in June 2013</td>
</tr>
<tr>
<td><strong>Number of heifers put to bull</strong></td>
<td>Total number of heifers (not previously calved) put to the bull</td>
<td>15 heifers put to the bull in May 2013</td>
</tr>
<tr>
<td><strong>Number of bulls used</strong></td>
<td>Total number of bulls used for the breeding period. All bulls used should also be included</td>
<td>4 bulls used in total in breeding period of 2013</td>
</tr>
<tr>
<td><strong>Number of cows/heifers scanned in-calf</strong></td>
<td>Total number of cows and heifers identified as in-calf at pregnancy diagnosis</td>
<td>108 cows and heifers scanned in-calf at October 2013</td>
</tr>
<tr>
<td><strong>Number of empty cows or heifers for this year's calves</strong></td>
<td>Total number of cows and heifers that fail to produce a live calf by 24 hours after calving</td>
<td>10 empty cows for this year's calves, including 7 empty cows at PD and 3 cows with no live calf (24 hours after birth)</td>
</tr>
<tr>
<td><strong>Number of calves born alive</strong></td>
<td>Total number of calves born alive up to 24 hours of age</td>
<td>105 calves born alive in March-May 2014</td>
</tr>
<tr>
<td><strong>Average calf date of birth (DD/MM/YY)</strong></td>
<td>Average date of birth for all calves born</td>
<td>05/04/14 for calves born between March-May 2014</td>
</tr>
<tr>
<td><strong>Date of first calving (DD/MM/YY)</strong></td>
<td>Date of the first calf</td>
<td>First calf or heifer calved on 05/03/14</td>
</tr>
</tbody>
</table>
Beef KPI project

• Response to R&D tender during 2015
• University of Nottingham
• Starts Oct 2015
• 3 year project, linked to studentship
Beef KPI project - Aims

1. Coordination of a technical advisory group
2. Collation of historic data from project farms and calculation of new and existing KPI’s
3. Assessment of trends over time in the historic data and comparisons between systems
Beef KPI project - Aims

4. Evaluation of correlations within the data and relationships between KPI’s and overall farm performance
5. Appraisal of farmer attitudes to data recording and performance monitoring
6. Maximise knowledge exchange to ensure that results have maximum impact on industry practice
Studentship add on

• To use advanced stochastic sensitivity analyses to further explore and define KPIs in relation to farm success
• Modelling impact of different management factors on financial success across a range of systems
• Explore potential to develop a decision support tool
Data analysis

- Looking at historic data
- Trends over time, related to changes in management, within a season, between herds
- Within herd variation
- Explore correlations between KPIs and financial performance (Stocktake)
- Case studies
Farmer attitudes

• Farmer attitudes to data recording and performance monitoring
• Telephone survey
• Identify barriers
• Exploration of use of technology to facilitate data capture
Grower/finisher Performance indicators

• Feed use
  • kg feed per kg gain
  • £ of feed per kg gain

• Area use
  • kg gain per shed area
  • kg gain per hectare

• Apply indicators to:
  • Pens
  • Batches
  • Breeds
Finishing KPIs (overseas)

- Days on feed
- Stocking rate
- Weight gain
- Carcase weight & grade
- Saleable meat yield
- Mortality
  - Feed costs as % total expenses
  - Labour + management expense as % total revenue
Which feed KPI?

A. Feed conversion ratio
B. Daily liveweight gain
C. Concentrate usage per head
D. Days on feed
E. Dry matter intake
F. Finishing ability off grass
Which carcase KPI?

A. Carcase grade
B. kg beef sold
C. Abattoir condemnations
D. kg produced/ha
E. Carcase weight
Which financial KPI?

A. Gross margin
B. Fixed costs
C. Feed & bedding costs per day
D. Cost of production
Please rank according to value as enterprise KPI

A. Feed conversion ratio
B. Mortality
C. Gross margin
D. Carcase grading
E. DLWG
Please rank according to likelihood of being recorded

A. Feed conversion ratio
B. Mortality
C. Gross margin
D. Carcase grading
E. DLWG
My clients are asking me about KPIs

A. True
B. False
My clients want targets to compare their own businesses against

A. True
B. False