Dairying – the external costs of doing business

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Evolution of milk production and component vs FoodHarvest Base

<table>
<thead>
<tr>
<th>Year</th>
<th>Milk Production (million lts)</th>
<th>Cow Numbers (million)</th>
<th>Milk Yield/cow (lts)</th>
<th>Fat %</th>
<th>Protein %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007/09</td>
<td>(FH Base)</td>
<td>4,932</td>
<td>1.005</td>
<td>4,469</td>
<td>3.81</td>
</tr>
<tr>
<td>2014</td>
<td></td>
<td>5,651</td>
<td>1.192</td>
<td>4,740</td>
<td>3.99</td>
</tr>
<tr>
<td>2015</td>
<td></td>
<td>6,399</td>
<td>1.295</td>
<td>4,938</td>
<td>4.03</td>
</tr>
<tr>
<td>2016</td>
<td></td>
<td>6,674</td>
<td>1.347</td>
<td>4,956</td>
<td>4.08</td>
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<tr>
<td>2017</td>
<td></td>
<td>7,251</td>
<td>1.381</td>
<td>5,249</td>
<td>4.09</td>
</tr>
<tr>
<td>2018</td>
<td></td>
<td>7,576</td>
<td>1.435</td>
<td>5,290</td>
<td>4.14</td>
</tr>
</tbody>
</table>

* Average of June and December

Family Farm Income (FFI): includes DPs 2011-2017

<table>
<thead>
<tr>
<th>Year</th>
<th>Dairy (€/farm)</th>
<th>Cattle rearing (€/farm)</th>
<th>Cattle other (€/farm)</th>
<th>Sheep (€/farm)</th>
<th>Tillage (€/farm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>65,000</td>
<td>90,000</td>
<td>45,000</td>
<td>30,000</td>
<td>50,000</td>
</tr>
<tr>
<td>2012</td>
<td>70,000</td>
<td>100,000</td>
<td>50,000</td>
<td>35,000</td>
<td>55,000</td>
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<tr>
<td>2013</td>
<td>75,000</td>
<td>110,000</td>
<td>55,000</td>
<td>40,000</td>
<td>60,000</td>
</tr>
<tr>
<td>2014</td>
<td>80,000</td>
<td>120,000</td>
<td>60,000</td>
<td>45,000</td>
<td>65,000</td>
</tr>
<tr>
<td>2015</td>
<td>85,000</td>
<td>130,000</td>
<td>65,000</td>
<td>50,000</td>
<td>70,000</td>
</tr>
<tr>
<td>2016</td>
<td>90,000</td>
<td>140,000</td>
<td>70,000</td>
<td>55,000</td>
<td>75,000</td>
</tr>
<tr>
<td>2017</td>
<td>95,000</td>
<td>150,000</td>
<td>75,000</td>
<td>60,000</td>
<td>80,000</td>
</tr>
</tbody>
</table>

* Average of June and December
The external costs

- Environment
  - gaseous emissions …
  - GHGs and Ammonia
  - water quality
  - biodiversity
- Calf welfare

Co-related solutions
The emissions challenge

- The national emissions target requires a reduction in the absolute level of emissions.
- Emissions have to be reduced by 10%-15% by 2030 while holding livestock numbers constant.
- Emissions = Numbers x Footprint.
But dairy cow numbers growth exceeds the decline in carbon footprint (2012=100)
Gaseous emissions – we know what to do – Teagasc MACC

7 Steps to Improving Farm Sustainability

1. Improved EBI and extending the grazing season
2. Substituting clover for chemical fertiliser
3. Changing to protected urea
4. Reducing losses from slurry
5. Improved energy efficiency and renewable energy
6. Incorporating forestry and hedgerows on farm
7. Using the ASSAP advisors to help improve water quality
But how to deliver these changes?

- Transformational change is required and it will cost farmers
- All of industry collaborative response needed… Agencies (Teagasc and Bord Bia); Industry (Dairy and Meat); DAFM
- Teagasc proposes an intensive advisory effort embracing 1) ClimateChange Demo/Signpost Farms (~100) and 2) intensive training programme for farmers, agri-business and consultants
- There is an urgency about delivery
Trends in dairy and beef cows

Source: CSO December Enumeration
Sustainability of current trends in calf disposals?
Calf welfare possible urgent actions

- Working Group to identify actions on calf welfare for next spring
- Brokerage system to facilitate an efficient flow of calves from dairy to rearing farms (role for the marts?)
- Transparently demonstrate calf value based on breed and genetics
- Develop a ‘best in class’ code of practice for calf rearing on dairy and beef farms focusing on animal health and welfare, nutrition and facilities
- Use sexed semen to reduce the number of dairy breed male calves and establish a sexed-semen laboratory in Ireland
- Implement a new specific KT programme on dairy beef systems, to include calf rearing
- Retain male calves on dairy farms for a minimum of 3-4 weeks (subject to adequate facilities)
Concluding remarks

- There is an urgency about addressing climate change and calf welfare
- In both cases a ‘whole of sector response’ is needed
- Dairy and beef need to be treated as an integrated circular system
- All dairy farmers must accept that the mitigation of gaseous emissions and enabling a viable dairy calf to beef enterprise are costs of doing business
Thank you