Development, strategies and challenges in the German dairy sector

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German dairy production in the world/ in the EU (2015)

- 4,284,639 dairy cows
  - No. 15 in the world = 2% of all dairy cows
  - No. 1 in the EU = 18% of all EU dairy cows

- 32,684,600 t milk produced
  - No. 5 in the world = 5% of all milk produced
  - No. 1 in the EU = 20% of all EU milk produced

- And in Germany:
  - 27% of the agricultural farms keep dairy cows (74,680 dairy farms)
  - Milk production: 19% of the production value of German agriculture

Source: AMI (2016); BLE (2016); Statistisches Bundesamt, Fachserie 3, Reihe 4, Viehbestand und tierische Erzeugung (2016); own calculations.
Structural change in the dairy sector

Index (1999 = 100)

Source: BLE (versch. Jahre); Statistisches Bundesamt, Fachserie 3, Reihe 4, Viehbestand und tierische Erzeugung (versch. Jahre); own calculations.
Dairy production in Germany 2015 – key facts

• 32.7 million kg of milk – 46% produced in 2 federal states

• Average herd size: 57 cows/farmer
  – Eastern Germany: 187 cows/farmer
  – Western Germany: 50 cows/farmer

• > 4 million dairy cows: ~ 2/3 pure dairy breeds (thereof 96% HF)

• Average milk yield: 7 616 kg/cow/year
  – In 2014: 7 352 kg/cow/year (Black and white HF: 8 865 kg/cow/year; German Fleckvieh: 7 243 kg/cow/year)

Source: BLE (2016); own calculations.
Dairy production within Germany (2015)

Milk production in kg/ha UAA

- ≤ 500
- > 500 - ≤ 1 000
- > 1 000 - ≤ 1 500
- > 1 500 - ≤ 2 000
- > 2 000 - ≤ 3 000
- > 3 000
- unknown

Source: BLE (2015), Statistisches Bundesamt, GENESIS–Online Datenbank (2015); own calculations.
Dairy: mainly in grassland areas

Source: BLE (2015); Statistisches Bundesamt, GENESIS–Online Datenbank (2010); own calculations.
Shift towards dairy production in grassland areas

Change in milk quota (07/07 to 11/14)

Kilogram per hectare

- ≤ -160
- >-160 bis ≤ -80
- > -80 bis ≤ -40
- > -40 bis ≤ 0
- > 0 bis ≤ 40
- > 40 bis ≤ 80
- > 80 bis ≤ 160
- > 160

Source: Quotenbörsendaten des BMELV, own calculations Lassen, TI (2015)
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Source: AMI (2016)
Large herd size differences in Germany (2015)

Source: Statistisches Bundesamt, Fachserie 3, Reihe 4.1, Viehbestand (2015); own calculations.
Higher milk prices in the southern part

Source: Statistischer Monatsbericht NR. 10334.

p = provisional
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Source: AMI (2016); FAO Stat. ZMB (2014); ADR (2013)
Differences in dairy breeds in Germany (2015)

Source: Statistisches Bundesamt, Fachserie 3, Reihe 4.1, Viehbestand (2015); own calculations.
Milk processing in Germany: regional overview (2006)

Source: Friedrich et al. (2008)
Milk processing: concentration in progress

Total No. of Dairy Processors

<table>
<thead>
<tr>
<th>Year</th>
<th>Total No.</th>
</tr>
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<tbody>
<tr>
<td>1997</td>
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<td>2009</td>
<td>193</td>
</tr>
<tr>
<td>2012</td>
<td>147</td>
</tr>
</tbody>
</table>

No. of Dairy Processors per size

- Volume of processed milk in 1,000 t
  - 0-50: 70
  - 50-100: 20
  - 100-300: 10
  - > 300: 5

German Processors among Top 20 worldwide

Source: own graphs based on ZMB 2015
Main challenges for the German dairy processors

• International markets play an important role for dairy processors → Half of the processed milk goes into export
• Exploit added-value potential (product innovation and brands)
• Discussion about instruments for risk management, e.g. Commodity futures exchange
• Further development of the relationship between dairy processors and farmers
Main challenges for German dairy farmers

- Increasing milk price fluctuations → risk management
- Increasing land prices
- Availability of (qualified) labour
- Consumer Demands/NGOs/Politics
  - Politics: e.g.: fertilizer ordinance, dehorning, tethering in discussion
  - Retailer set up a list of requirements for the milk production
    - In discussion: e.g.: Grazing, tethering of cattle, use of antibiotics, dehorning
  - Sustainability campaigns of Dairy Processors/Research
    - E.g. milkmaster (DMK), Thünen-project
Demonstration in Berlin 2016
Social issues

• „The image of dairy production is positive, but the society becomes more and more critical.“
  (Spiller, 2014)

• Almost every second German citizen believes that cows aren’t happy and don’t feel comfortable in modern stables.
  (Result of a representative survey in Germany, Spiegel 4/9/2015)
Main challenges for German dairy farmers

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Example: milkmaster concept DMK (Germany)

- On farm level: System of confirmation, consultation and bonus payment since 2016

Source: http://www.dmk.de/en/sustainability/sustainability/agriculture/
Thünen-Institute: Sustainable Dairy Farming

- “Status-quo” case studies in Lower Saxony and Schleswig-Holstein
- Development of QM- “Sustainability Module”
Take Home

- Germany is the biggest milk producer in the EU
- Continuous structural change
- Dairy production increase mainly in grassland areas
- Large differences within the country (herd size, breeds, milk price)
- High importance of export for the German dairy sector
- Increasing requirements for dairy companies and farms (sustainability, animal welfare,...)
- Implementation of first sustainability concepts
Thank you for your attention

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