Wheat and oilseed production in Denmark vs. other key European players – A look behind agri benchmark data

by Crop Production Consultant
Michael Stensgaard Toft
Agenda

• An appetizer…
  – DLG Field days
• Why *agri benchmark*?
• *agri benchmark* data – Wheat
  – Yield
  – Cost structure
  – A little about frame conditions
• *agri benchmark* data – Rapeseed
  – Yield
  – Cost structure
• Some conclusions
DLG Field Days 2010 - Wheat

• 12 participants from 7 countries
• All participants have a competition variety and a demo variety
• Seeding day and harvest day are the same for all participants
Main results DLG Field Days 2010 - Wheat

- Yields: 5.63 t/ha – 8.60 t/ha
- Protein content 10.25 % - 14.64 %
- Hectoliter weight: 70.71 kg/hl – 79.44 kg/hl
- Sales prices: 160 EUR/t – 240 EUR/t
- In a high price marked - Spread in sales prices can be significant!!
- Gross margin 2: 708 EUR/ha -1261 EUR/ha
Why *agri benchmark*?

- To be able to benchmark cash crop production results between countries
- To gain insight into productions conditions, production methods and production systems in other countries
- To get data analysis of current crop production issues
- To obtain knowledge to be a leader in the industry!
- …Let us jump into the database…
The winter 09/10 was relatively severe in Denmark.
Wheat yield, 2010

DKaverage: Data from Operating analysis 2010/2011 preliminary results.
Wheat yield, average 2008-2010

DKaverage: Data from Operating analysis.
Wheat yield, average 2008-2010

- BG4040PLE
- CZ1200IM*
- DE1300MB*
- DK1200SL*
- HU1100TC
- PL2000ST*
- RO640TR*
- UK800CAM*

8.90 t/ha
4.56 t/ha
Total cost and gross revenue wheat, average 2008-2010
Even when decoupled payments are included the Danish farm is not profitable on 3 year average!!!

...but remember, the land cost is priced according to the land rents in the typical region and not the present cost at the farm!
Direct cost wheat, average 2008-2010

EUR/t

- Pesticides
- Fertilizer
- Seed

BG4040PLE
CZ1200JM*
DE1300MB*
DK1200SL*
HU1100TC
PL2000ST*
RO640TR*
UK800CAM*
Nitrogen input wheat, average 2008-2010

- BG4040PLE
- CZ1200IM*
- DE1300MB*
- DK1200SL*
- HU1100TC
- PL2000ST*
- RO640TR*
- UK800CAM*

kg N/ha

0 50 100 150 200 250

[Graph showing nitrogen input for different varieties of wheat, average 2008-2010]
Nitrogen price, average 2008-2010

EUR/kg N

BG4040PLE
CZ1200JM*
DE1300MB*
DK1200SL*
HU1100TC
PL2000ST*
RO640TR*
UK800CAM*
Pesticide cost wheat, average 2008-2010

The diagram shows the average pesticide cost for wheat across 2008-2010, comparing various types of pesticides: other pesticides, insecticides, fungicides, and herbicides. Each bar represents a different variety, with the colors indicating the breakdown of costs by type. The costs are measured in EUR per ton.
Operating cost wheat, average 2008-2010

[Bar chart showing the breakdown of operating costs by type for different models.]

- Other energy
- Diesel
- Machinery
- Contractor
- Labor
Working hours per ton wheat, average 2008-2010
Salary for farm labor, average 2008-2010

EUR/h

BG4040PLE, CZ1200JM*, DE1300MB*, DK1200SL*, HU1100TC, PL2000ST*, RO640TR*, UK800CAM*
Total land cost wheat, average 2008-2010

EUR/t

<table>
<thead>
<tr>
<th>Variety</th>
<th>Cost (EUR/t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BG4040PLE</td>
<td>20</td>
</tr>
<tr>
<td>CZ1200JM*</td>
<td>15.16</td>
</tr>
<tr>
<td>DE1300MB*</td>
<td>20</td>
</tr>
<tr>
<td>DK1200SL*</td>
<td>77.06</td>
</tr>
<tr>
<td>HU1100TC</td>
<td>30</td>
</tr>
<tr>
<td>PL2000ST*</td>
<td>25</td>
</tr>
<tr>
<td>RO640TR*</td>
<td>15.16</td>
</tr>
<tr>
<td>UK800CAM*</td>
<td>20</td>
</tr>
</tbody>
</table>
### Economical differences per hectare wheat due to framework conditions

<table>
<thead>
<tr>
<th>Framework Conditions</th>
<th>Denmark</th>
<th>Sweden</th>
<th>Germany</th>
<th>England</th>
<th>France</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrogen Norm for Feed Wheat</td>
<td>74 EUR</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Fee on Nitrogen</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Fee on Pesticides</td>
<td>27 EUR</td>
<td>5 EUR</td>
<td>-</td>
<td>-</td>
<td>4 EUR</td>
</tr>
<tr>
<td>Fee on Fuel</td>
<td>5 EUR</td>
<td>16 EUR</td>
<td>21 EUR</td>
<td>10 EUR</td>
<td>4 EUR</td>
</tr>
<tr>
<td>Property Tax</td>
<td>70 EUR</td>
<td>11 EUR</td>
<td>3 EUR</td>
<td>32 EUR</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>176 EUR</strong></td>
<td><strong>21 EUR</strong></td>
<td><strong>32 EUR</strong></td>
<td><strong>13 EUR</strong></td>
<td><strong>40 EUR</strong></td>
</tr>
</tbody>
</table>

Source: Peter Borreby for Borsen Magazine 2010
Decoupled and coupled payment, 2010

EUR/ha

- Coupled payment
- Decoupled payment
Rapeseed yield, 2010

[Bar chart showing yield per t/ha for different varieties, with DE1300MB* having the highest yield.]
Rapeseed yield, 2010

DKaverage: Data from Operating analysis 2010/2011 preliminary results.
Rapeseed yield, average 2008-2010

2.67 t/ha

4.56 t/ha
Total cost and gross revenue rapeseed, 2010

- Miscellaneous
- Landcost
- Buildings
- Operating cost
- Direct cost
- Gross revenue
Total cost and gross revenue rapeseed, average 2008-2010
Total cost and gross revenue rapeseed, average 2008-2010
Direct cost rapeseed, 2010

DKaverage: Data from Operating analysis 2010/2011 preliminary results.
Direct cost rapeseed, average 2008-2010
Operating cost rapeseed, average 2008-2010

EUR/t

- Other energy
- Diesel
- Machinery
- Contractor
- Labor

BG4040PLE
CZ1200JM*
DE1300MB*
DK1200SL*
HU1100TC
PL2000ST*
RO640TR*
UK800CAM*
Conclusions

• High spread in yield
• High spread in costs
• Especially the Danish farm have problems with high land costs
• European wheat and oilseed production can be profitable…
• Only data from single farms – But the data from these farms are very robust and data for three years are available