The effect of **Dry Period Length** on Udder Health

Renny van Hoeij, DVM

1. Introduction

- Shorter DP -> Improved NEB\(^1\)
- Glucogenic diet -> Improved NEB\(^1\)
- Improved NEB -> Better immune function
- Immune function -> Low IMI & mastitis

Shorter DP -> Low IMI & mastitis?

\(^1\) Van Knegsel, 2014
1. Introduction

The effect of DP length and dietary energy source on:

- SCC of lactation
- SCC elevations
- Clinical mastitis
2. Experimental set-up

- 168 cows
- Dry period length: 0, 30, 60 days
- Ration: glucogenic (G) or lipogenic (L)
- Drying off (30-d or 60-d dry cows): 
  - 7 days before DP: dry cow ration
  - 4 days before DP: 1x daily milking
  - Drying off: intramammary antibiotic (Supermastidol)
2. Experimental set-up

- Concentrates (glucogenic/lipogenic):
  - 10 days prepartum: 1 kg
  - Postpartum: +0.5kg/d
  - 17 - 100 days postpartum: max 8.5 kg

- Concentrates (lactation)
  - 100 – 305 days postpartum

- Forages
3. Measurements

- **Data:** available on every dairy farm
  - Prepartum monthly milk production registration
  - Postpartum daily milk production, and weekly milk components
4. Results prepartum (complete lactation)

- SCC

\[105.000\]
4. Results prepartum (complete lactation)

- Elevations
  - (>200,000 cells/mL after 2 months SCC<200,000 cells/mL)
4. Results prepartum (complete lactation)

• Clinical mastitis
4. Results postpartum (complete lactation)

- SCC was different for dry period length 0 vs. 30 vs. 60

<table>
<thead>
<tr>
<th>Dry period</th>
<th>SCC Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>232.200</td>
</tr>
<tr>
<td>30</td>
<td>177.800</td>
</tr>
<tr>
<td>60</td>
<td>141.400</td>
</tr>
</tbody>
</table>

Dry period length 0-d vs. 30-d or 60-d p<0.01
4. Results postpartum (complete lactation)

- SCC was not different for ration

Ration p<0.48
4. Results postpartum (complete lactation)

- Elevations of SCC was not different for dry period length
  - (>200,000 cells/mL after 2 weeks SCC<200,000 cells/mL)

```
0  2.36  80%
30 2.33  82%
60 1.80  83%
```

DPL p=0.31
DPL p=0.93
4. Results postpartum (complete lactation)

- Elevations of SCC was not different for rations
  - (>200,000 cells/mL after 2 weeks SCC<200,000 cells/mL)

<table>
<thead>
<tr>
<th>Ration</th>
<th>Value</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>G</td>
<td>2.13</td>
<td>76%</td>
</tr>
<tr>
<td>L</td>
<td>2.20</td>
<td>80%</td>
</tr>
</tbody>
</table>

Ration p=0.53

Ration p=0.60
4. Results postpartum (complete lactation)

- Mastitis was not different for dry period length

<table>
<thead>
<tr>
<th>Dry Period Length</th>
<th>Mastitis Score</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1.46</td>
<td>27%</td>
</tr>
<tr>
<td>30</td>
<td>1.29</td>
<td>27%</td>
</tr>
<tr>
<td>60</td>
<td>1.21</td>
<td>26%</td>
</tr>
</tbody>
</table>

DPL p=0.94

DPL p=0.96
4. Results postpartum (complete lactation)

• Mastitis was not different for ration

DPL p=0.75

G

1.29

25%

L

1.45

27%

DPL p=0.82
5. Conclusions

- Ration -> no effect on udder health

- Cows with 0-d DP -> SCC higher

- DPL -> no effect on mastitis or elevations of SCC
TAKE HOME MESSAGE

Shortening DP

↑ NEB &

No negative effect on udder health