Winter Grazing and Out\nWintering Pads for beef cattle

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Why?

- **Beef production systems economically sensitive**
  - production costs

- **Extending grazing during winter time**
  - allows to reduce housing and associated costs: feed providing, straw for litter, worktime

- **Condition required: managing animal location**
  - ability and easiness either to let the animals grazing loose on the swards or to keep them closed in the pads for several days if needed, according to weather conditions
What innovation?

**Linkage of two techniques:**

**Winter Grazing + Out Wintering Pads**

- WGz exists in some plain areas on gravel soil, but is mostly uncommon on clay soils, or in tough winter conditions
- Confining animals when poaching
- Providing fodder if required
  - not mainly an alternative to barns,
  - better a tool to preserve the sward
Several questions

**H:** Reduce by half the amount of fodder and straw for litter during wintertime?

**Q:** Which impacts on:
- Animal performance and welfare indicators?
- Grassland reaction: soil appearance, fodder production?
- Environment: production of leaching pollutants?
- Human welfare?

... according to different ways of managing grazing
An experiment on 3 spots

Innovations in grazing, Lublin, 3rd June 2012
3 situations / 6 « treatments »

1. Clay soil
   - Fodder available in racks
   - Continuous WGz vs Interrupted WGz
   - Shelter + OWP

2. Gravel soil
   - OWP vs Full WGz

3. Previous accumulation « on foot »
   - Cold / snow
   - High vs Low accumulation

Innovations in grazing, Lublin, 3rd June 2012
<table>
<thead>
<tr>
<th></th>
<th>Plain / clay</th>
<th>Plain / Gravel</th>
<th>Mid mountain</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Animals</strong></td>
<td>2 x 12 heifers 500 kg</td>
<td>2 x 10 pregnant cows</td>
<td>2 x 8 pregnant cows</td>
</tr>
<tr>
<td><strong>WGz period</strong></td>
<td>Déc – March 117 d</td>
<td>Déc – Féb 91 d</td>
<td>15 Nov – Jan 81 d</td>
</tr>
<tr>
<td><strong>Nb of days</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Feeding</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>If required only</td>
</tr>
<tr>
<td><strong>Stock rate</strong></td>
<td>3,0</td>
<td>3,0</td>
<td>2,5</td>
</tr>
<tr>
<td><strong>LU/ha</strong></td>
<td></td>
<td></td>
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</tbody>
</table>
First results

**Feeding**

<table>
<thead>
<tr>
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<th>① Plain / clay</th>
<th>② Plain / Gravel</th>
<th>③ Mid mountain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confinement on OWPs</td>
<td>0 – 7 d («free»)</td>
<td>0 – 7 d</td>
<td>27 d (Y1) – 7 d (Y2)</td>
</tr>
<tr>
<td></td>
<td>56 d («closed»)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feeding (DM) / Requirements</td>
<td><strong>77 – 88 %</strong></td>
<td><strong>67 – 81 %</strong></td>
<td><strong>8 – 35 %</strong></td>
</tr>
<tr>
<td>Grass height at the beginning (cm grassmeter)</td>
<td>7 - 10</td>
<td>11 - 15</td>
<td>20 – 24</td>
</tr>
</tbody>
</table>

*In regard to H «50 %»...*
First results

Height grazing

« On foot stock » quickly decreasing ... whatever the situation ...
### First results

Animal performances ....

<table>
<thead>
<tr>
<th>① Heifers</th>
<th>② Pregnant cows</th>
<th>③ Pregnant cows</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADG g/day</td>
<td>500 (Y1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>220 (Y2)</td>
<td></td>
</tr>
<tr>
<td>Body C. variation</td>
<td>≈ 0,0</td>
<td>- 0,3 to - 0,4</td>
</tr>
</tbody>
</table>

Compatible with breeding objectives
First results
Animal welfare....

- no injuries, no foot problem, animals healthy
- animal cleanliness ok ...
  ... whatever the aspect of litter
First results
Pasture and soil damaging

Evolution of % bare soil seems reversible

% bare soil

0 10 20 30 40 50 60
1/11 21/11 11/12 31/12 20/1 9/2 29/2 20/3 9/4

PSH 2
PSH 1
First results

Winter Grass and winter grazing....

<table>
<thead>
<tr>
<th>Estimated availability</th>
<th></th>
</tr>
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<tbody>
<tr>
<td>Tons DM / ha</td>
<td>1,0 – 1,5</td>
</tr>
<tr>
<td>Kg DM / head / day</td>
<td>2,1 – 3,3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Valued grass</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Kg DM / head / day</td>
<td></td>
</tr>
<tr>
<td>30/11 - 15/12</td>
<td>5,1</td>
</tr>
<tr>
<td>15/12 - 29/03</td>
<td>1,4</td>
</tr>
<tr>
<td>Tons DM / ha on winter grazing period</td>
<td>0,9</td>
</tr>
</tbody>
</table>
Other results coming

Leaching (under the OWP)

Animal behaviour

Accelero meter !!!
Questions to be solved

- Defining and managing previous « on foot stock »
- Managing rotation in wintertime