Calving Heifers at 24 Months

*Is it an Option?*
Why Should We Consider It?

• Lifetime output of the cow is increased
• Leads to potentially faster genetic progress
• A lower proportion of non productive females in the herd
• Done successfully already on a small number of farms
• Less stock groupings on the farm
• Less likely to have an extended calving spread
### ICBF – Heifer Calving Facts (2011 Calved Heifers)

<table>
<thead>
<tr>
<th>Age at 1st Calving (mths)</th>
<th>Avg Calving Interval Overall (days)</th>
<th>% Calving for a Second time</th>
<th>Avg Calving difficulty of bulls used on heifers</th>
<th>% of Heifers Calving Unassisted</th>
<th>% Mortality at 1st Calving</th>
</tr>
</thead>
<tbody>
<tr>
<td>23-26mths</td>
<td>383 days</td>
<td>85%</td>
<td>4.7%</td>
<td>50%</td>
<td>3.2%</td>
</tr>
<tr>
<td>27-30 mths</td>
<td>394 days</td>
<td>84%</td>
<td>5.1%</td>
<td>53%</td>
<td>2.8%</td>
</tr>
<tr>
<td>31-35 mths</td>
<td>392 days</td>
<td>88%</td>
<td>5.2%</td>
<td>58%</td>
<td>2.6%</td>
</tr>
<tr>
<td>36-40 mths</td>
<td>386 days</td>
<td>86%</td>
<td>5.2%</td>
<td>57%</td>
<td>2.0%</td>
</tr>
</tbody>
</table>

- No major difference in fertility with age of calving
- We are using bulls with too high calving difficulty on heifers
- All Heifers require a high level of supervision and assistance
## Trial from US

<table>
<thead>
<tr>
<th>No. Of Heifers Starting</th>
<th>Age at First Calving</th>
<th>2 Years</th>
<th>3 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>59</td>
<td>60</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No. Remaining 12 years Later</th>
<th>23</th>
<th>22</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Total No. Of Calves Weaned</th>
<th>533</th>
<th>481</th>
</tr>
</thead>
</table>

**Key Point – 10% Extra Calves Produced from 2 Year Old Calvers**
Research/On Farm Data

DARD Herd Glenwherry
- 93% of 2yo Heifers calved again as 3yo
- 10 week breeding season

Teagasc/Farmers Journal BETTER Farm

<table>
<thead>
<tr>
<th>Age @ 1st Calving</th>
<th>Average Calving Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 27mths (n=26)</td>
<td>372 days</td>
</tr>
<tr>
<td>&gt; 28mths (n=30)</td>
<td>383 days</td>
</tr>
</tbody>
</table>

Source: H Eggert 2011
Perceived Downside to Calving @ 24 Months

- Farmer Resistance
- Stunts the growth of the Heifer
- Calving Difficulty
- Won’t go back in calve as second calvers
- Won’t be big enough at 15 months to bull
- Smaller calves at weaning
Weanling Heifer

• Now is the time to select potential replacements

• Have you got weaning weights?

• Target heifers of good cows that have achieved 1.1kg/day or better since birth

• At 6 -7 months (weaning 200 days) should be a minimum of 260 kg
  • At housing mid November 300-320kg

• Have they been dosed for worms/ fluke
Managing the Heifer Over the 1st Winter

• Need targeted Performance of 0.6-0.7kg/day

• What is your silage quality like?
  Even after a good year some silages are coming back in the low 60’s for DMD.

<table>
<thead>
<tr>
<th>DMD</th>
<th>Very poor (55%)</th>
<th>Poor (62%)</th>
<th>Average (68%)</th>
<th>High (72%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADG = 0.6 kg</td>
<td>3.5</td>
<td>2.5</td>
<td>2.0</td>
<td>1.0</td>
</tr>
</tbody>
</table>

• Need to be clean of parasites going into the winter
• Housing Conditions- Stocking density, ventilation, feed space are all critical
• Don’t over rely on Compensatory Growth
• Early turnout is essential
Bulling the Heifer @ 15 Months

- Typical turnout weights should be 380-400kg for continental type heifers
- Two months out from breeding give booster or vaccinate heifers (BVD & Lepto)
- 4-6 weeks at grass pre-mating should mean heifers are comfortably 420-440kg at bulling

- Have you observed heifers ‘on heat’ pre bulling
  - Heifers not observed should be checked out
  - Prid or Cidr will stimulate heifers not already cycling

Select AI sires or stockbull with low calving difficulty < 4.5% (Dairy <2%)
Breeding season should last no longer than 10 weeks
Scan heifers 5 weeks after bull is removed

Heifers may need a worm dose for stomach worms but particularly hoose in mid summer
The 2nd Winter – The In-Calf Heifer

• Heifers that are scanned in calf should be weighing around 530-560kg

• Heifers should typically gain 0.4kg/day over the 2nd winter

• If Fluke is a problem dose them going into the winter

• 65%+ DMD Silage given ad lib should suffice ‘Fit not Fat’

• 6-8 weeks pre-calving introduce minerals

• Don’t starve heifers precalving – Knock on effect on rebreeding

• Heifers will need supervision and assistance at calving irrespective of age
Management after Calving

- Management will vary depending on how close to turnout they calve

- Should ideally be penned separately from older cows

- If housed for more than 2 weeks after calving Good quality silage + 2kg of Meal

- Cannot afford to allow heifers to go back in condition after calving

- Grange experience has shown that some heifers may need a worm dose after calving if they are seen to be losing condition

- You can expect heifers calves to be 20-30kg lighter at weaning than those of mature cows
<table>
<thead>
<tr>
<th>Event</th>
<th>Weight</th>
<th>Age (mths)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weaning weight</td>
<td>268</td>
<td>7</td>
</tr>
<tr>
<td>1&lt;sup&gt;st&lt;/sup&gt; winter</td>
<td>390</td>
<td>11</td>
</tr>
<tr>
<td>Turnout – Bulling</td>
<td>402</td>
<td>15</td>
</tr>
<tr>
<td>Bulling to Housing</td>
<td>543</td>
<td>19</td>
</tr>
<tr>
<td>Weaning 1&lt;sup&gt;st&lt;/sup&gt; calf</td>
<td>555</td>
<td>30</td>
</tr>
<tr>
<td>Weaning 2&lt;sup&gt;nd&lt;/sup&gt; Calf</td>
<td>633</td>
<td>42</td>
</tr>
</tbody>
</table>

Source: DARD NI

**Calving @ 2 years - Weight Targets**
Main Points - TWO YEAR OLD CALVING

• Heifers selected from the best cows in the herd and be sired by bulls with strong maternal traits.

• Born early in the calving season to allow them to be heavier at bulling

• Need to achieve a daily liveweight gain of 1.1-1.3kg/day up to weaning.

• Have to achieve 60-80kg liveweight over the first winter - good quality silage plus 1-2kg of concentrates.

• Turned out early in spring to grass

• Reach 60% of their mature weight by bulling.

• Be bred to a known easy calving sire

• Reach 80% of their mature weight by time they calve down

• Require preferential treatment as first and second calvers.
Summary

• The most profitable age to calve heifers is 24 months. For a 50 cow herd calving 10 heifers, each additional month that calving is delayed costs €490. (*Grange 2013*)
• Achieving good weight for age at all stages is critical
• Use sires with known calving difficulty – ideally < 4.5%
• Pen 1st Calvers Separately and supplement with concentrates if they are going to be housed for longer than 2 weeks post calving
• In well run herds breeding their own replacements 2 Year old Calving is an option