Development farm walk

Improving efficiencies to maximise profit

Friday, 19th May, 11am

Charlie Whiriskey, Kiltullagh, Co. Galway

Topics for discussion include:

Grassland
Breeding management
Land Development
Farm yard Development
## Farm Summary

### Land and Stock - 2017

<table>
<thead>
<tr>
<th>Land farmed (ha)</th>
<th>59ha</th>
<th>Current Cow numbers</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milking platform (ha)</td>
<td>52ha</td>
<td>Current Heifer calves 0-1</td>
<td>54</td>
</tr>
<tr>
<td>Overall stocking rate</td>
<td>2.2</td>
<td>Current Heifers 1-2</td>
<td>41</td>
</tr>
<tr>
<td>Milking platform SR</td>
<td>2.2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

19ha on the milking platform are closed for first cut silage so the stocking rate on the milking platform is currently 3.6LU/ha. Charlie intends to sell surplus heifers in the coming months which will reduce overall stocking rate.

### Milk production – annual and to date

<table>
<thead>
<tr>
<th>Year</th>
<th>Yield (L sold/cow)</th>
<th>Yield (L/cow/day)</th>
<th>Current (09-16th May)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>6100</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>kgMS sold/cow</td>
<td>kgMS cow/day</td>
<td>1.81</td>
</tr>
<tr>
<td>peak MS/day</td>
<td>1.85</td>
<td>peak MS/day</td>
<td>1.90</td>
</tr>
<tr>
<td>Protein %</td>
<td>3.34</td>
<td>Protein %</td>
<td>3.25%</td>
</tr>
<tr>
<td>Fat %</td>
<td>4.04</td>
<td>Fat %</td>
<td>3.82%</td>
</tr>
<tr>
<td>Meal fed/cow</td>
<td>1161kg</td>
<td>Meal fed/cow to date</td>
<td>551kg</td>
</tr>
</tbody>
</table>

An extra 27kg of milk solids were sold per cow in 2016 compared to 2015.

### Calving and Breeding 2016 vs 2017

<table>
<thead>
<tr>
<th>Year</th>
<th>6 week calving rate</th>
<th>14 day Submission rate - cows</th>
<th>14 day Submission rate – heifers</th>
<th>Replacement rate – Never served</th>
<th>Replacement rate – Served but empty</th>
<th>Breeding season length</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>59%</td>
<td>25%</td>
<td>48%</td>
<td>25%</td>
<td>19%</td>
<td>14 weeks</td>
</tr>
<tr>
<td>2017</td>
<td>69%</td>
<td>42%</td>
<td>96%</td>
<td>N/A</td>
<td>6%</td>
<td></td>
</tr>
</tbody>
</table>

### EBI

<table>
<thead>
<tr>
<th></th>
<th>EBI</th>
<th>Milk</th>
<th>Fert</th>
<th>Calv</th>
<th>Beef</th>
<th>Maint</th>
<th>Mgmt</th>
<th>Hlth</th>
<th>M kg</th>
<th>F kg</th>
<th>P kg</th>
<th>F+P kg</th>
<th>F%</th>
<th>P%</th>
<th>CI days</th>
<th>SU %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cows</td>
<td>87</td>
<td>5</td>
<td>52</td>
<td>30</td>
<td>-7</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>-34</td>
<td>1.2</td>
<td>0.1</td>
<td>1.3</td>
<td>0.05</td>
<td>0.03</td>
<td>-3.0</td>
<td>1.3</td>
</tr>
<tr>
<td>Predicted 2018 calves</td>
<td>165</td>
<td>52</td>
<td>75</td>
<td>38</td>
<td>-11</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>37</td>
<td>9.0</td>
<td>6.9</td>
<td>15.9</td>
<td>0.13</td>
<td>0.10</td>
<td>-3.9</td>
<td>2.2</td>
</tr>
<tr>
<td>Bulls used</td>
<td>242</td>
<td>98</td>
<td>98</td>
<td>47</td>
<td>-16</td>
<td>11</td>
<td>3</td>
<td>2</td>
<td>108</td>
<td>16.9</td>
<td>13.6</td>
<td>30.5</td>
<td>0.21</td>
<td>0.17</td>
<td>-4.9</td>
<td>3.1</td>
</tr>
</tbody>
</table>

Bulls used: AZG, SEW, Fr2249, Fr4099, Fr4102, Fr4103, AGH, Fr2232

Last year the cows had the genetics to produce milk with 4.07% fat and 3.47% protein and they produced 4.04% fat and 3.34% protein indicating that gains can be made in grassland management to achieve these solids.

### Grassland management

<table>
<thead>
<tr>
<th>AFC (kgDM/ha)</th>
<th>627</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cover/cow (kgDM/cow)</td>
<td>173</td>
</tr>
<tr>
<td>Pre-grazing yield (kgDM/ha)</td>
<td>1400</td>
</tr>
<tr>
<td>Demand (kgDM/day)</td>
<td>56</td>
</tr>
<tr>
<td>Growth (kgDM/day)</td>
<td>59</td>
</tr>
<tr>
<td>Meal (kg/cow)</td>
<td>3</td>
</tr>
<tr>
<td>Grass grown 2016</td>
<td>10.45 tonne/ha</td>
</tr>
<tr>
<td>1st rotation</td>
<td>11/02 – 28/04</td>
</tr>
<tr>
<td>Fertiliser</td>
<td>March – 1 bag of urea/acre on dry paddocks only April – 1 bag urea/acre everywhere and 2 bags of 0:7:30 May – 1 bag of CAN/acre</td>
</tr>
</tbody>
</table>

Ideally the first rotation on this farm should end the 15th April, this year it finished on the 28th. Last year it finished on the 10th May. The delay in fertiliser applications this spring saw a fall-off in growth in April even though the dry conditions suited the heavy land. Next Spring we will be focusing on getting the first rotation completed sooner and using a contractor to get out the fertiliser.
Farm progression

- Home block – 52ha
- Rented ground – 7.3ha
- SR – 2.45 LU/ha
- Stock
  - 100 cows
  - 41 heifers going to the bull
  - 54 calves
- Facilities
  - 7 unit milking parlour
  - 90 cubicles
Land development

Grass growth-2016

<table>
<thead>
<tr>
<th>Land area</th>
<th>Index 1</th>
<th>Index 2</th>
<th>Index 3</th>
<th>Index 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>46%</td>
<td>40%</td>
<td>14%</td>
<td>0%</td>
</tr>
<tr>
<td>K</td>
<td>92%</td>
<td>8%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Grassland

This 1400kgDM instead of That >2000kgDM

27kg MS more per cow  €85/cow  €7650
Meal purchased 2015 = €31777  Meal purchased 2016 = €27392  €4385

€12,035
Breeding

2016 Breeding season shortened Batch of heifers synchronised

Six week calving rate

59% 2016
69% 2017

Percent heifers calved each month

Calf births by Month

Replacement rate 27%

Synchronise all heifers
Improve submission rates
Distinct calving and breeding season

Farm progression

OPTION A

• 12 unit within existing building and extend holding yard
• Net cost ~€70,000
• €9000 annual repayments
• Planning restrictions

- Milk lorry route
- Cow route
- Silage feed
Farm progression

OPTION B

- 20 unit with holding yard
- Net cost ~€130,000
- €12000 annual repayments
- Greenfield

Farm yard development

24 months

Research Phase - 12 months

- Teagasc, discussion groups, farm visits, contact various suppliers
- Budget - Teagasc, Accountant, Bank
- Engineer - Planning Permission
- Grant Application - TAMS
- Finance/Bank Approval

Build Phase - 12 months

- Groundwork - slatted tanks, concrete work, etc.
- Shed - steel, sheeting, ventilation
- Overground concrete work - walls, cubicle beds, milking parlours etc.
- Internals - milking machine, barriers, cubicles, penning, doors, electrical, water, etc.
- Paperwork – cash-flow, pay suppliers, reclaim VAT, collect grant, etc.

Everyday farm workload

Workload from February to June

Weather

Suppliers peak work loads
Goals

Land development

- Improve soil indexes for P and K by spreading adequate amounts of compounds such as 10:10:20 and 18:6:12. On average the land needs 32 units of P and 84 units of K to meet buildup and offtake demands.
- Develop “new land” to deliver above average grass growth.

Grassland

- Aim to grow 13t of grass/ha within the next three years to allow expansion of cow numbers to between 110-120 cows (800kg meal/cow, MPSR of 2.5, 75% utilisation rate, 75% of silage requirement grown on silage ground).
- Get fertiliser out EARLY and consistently in spring.
- Finish the first rotation by the 15th April.
- Practice more on/off grazing in spring
- Change paddock layout

Breeding

- 12 week breeding season
- 85% 6 week calving rate
- All heifers synchronised
- 90% 21 day submission rate for cows

Farm yard development

- Milking parlour completed by September 2018

Any further developments on Charlie’s farm are halted by the limited milking facilities. Currently the amount of time spent milking is not sustainable. By improving milking facilities more time can be spent managing the farm to make it more profitable and more importantly will free up time for Charlie and his family.