Summer Internship 2019
Internship in a nutshell
✅ ~7,000 miles
✅ 20 dairies
✅ 5 consultants
✅ 4 states
- Arendt's Hostein Resort
- Brickstead Dairy Farm
- Cederberg Dairy
- Clark Farms
- Country Aire Farms
- Creamery Creek Dairy
- Dairy Dreams
- Deer Run Dairy
- Ebert Dairy Enterprises
- El-Na Farms
- Emerald Spring Dairy
- Nyhof Dairy
- Orthland Dairy Farm
- Pagel's Ponderosa
- Pond Hill Dairy
- Quarry Hill Dairy
- Seven Oaks
- Shiloh Dairy
- Sioux River Dairy
- Wayside Dairy LLC
Start-up milk: impacts of nutrition and management
What can start-up milk tell us?

- Lactational success is controlled by environmental and non-environmental (genetic) factors
- Metrics help indicate future success of the herd
- Traditional methods
  - Peak milk
  - This is at 80-85 days
  - Considerable lag
  - No way to diagnose the problem area
- Start-up milk
  - At only 50 DIM, there is an 89% (Lact = 1) and 91% (Lact = 2+) correlation between all test-days and 305-d milk yield
**Initial benchmarks for start-up milk**

<table>
<thead>
<tr>
<th>Herd Milk, lbs</th>
<th>Lact=1</th>
<th></th>
<th></th>
<th>Lact=2+</th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Wk 2</td>
<td>Wk 4</td>
<td>Wk 8</td>
<td>Wk 2</td>
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<td>88</td>
<td>100</td>
<td>113</td>
<td>129</td>
<td>137</td>
</tr>
</tbody>
</table>

- Week 2 → Week 4  
  Lact 1 = 10-15 lbs  
  Lact 2+ = 12-16 lbs

- Week 4 → Week 8  
  Lact 1 = 8-10 lbs  
  Lact 2+ = 6-8 lbs
GPS Dairy Consulting herd data

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<td>100</td>
<td>76</td>
<td>86</td>
<td>93</td>
<td>107</td>
</tr>
</tbody>
</table>

Week 2 → Week 4  Lact 1 = 10 lbs  Lact 2+ = 16 lbs
Week 4 → Week 8  Lact 1 = 7 lbs  Lact 2+ = 3 lbs
What can start-up milk tell us?

• Week 2: indicator of pre-fresh cow environment and nutrition
  • Close-up ration:
    – DCAD
    – Magnesium
  • Fresh cow ration:
    – Metabolizable protein
    – C18:0
• Close-up stocking density
What can start-up milk tell us?

• Week 4: indicator of fresh cow environment and nutrition
  • Fresh cow ration:
    – Metabolizable protein
    – Vitamin E
  • High cow ration
    – C16:0
What can start-up milk tell us?

- Week 8: indicator of high cow environment and nutrition
  - Fresh ration:
    - Metabolizable protein
    - Vit E
    - Phosphorus
  - High cow ration:
    - C16:0
- SCC
Internship Takeaways

- Diverse group of individuals
- Diverse set of skills
- Networking
- Soft skills
- “Day in the life” of a GPS Consultant