Timed AI with or without Estrous Detection

21st ADSA Discover Conference: Improving Reproductive Efficiency of Lactating Dairy Cattle
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Defining 3 Reproductive Programs
Three reproductive programs

- **Double-Ovsynch**: 39% CR
- **D32 Ovsynch**: 30% CR
- **50% Estrous Detection**: 33% CR 1st Service 30% CR >1st Service

![Chart showing comparison of reproductive programs](chart.png)
Calculating the Value of Specific Reproductive Programs
\[ \text{NPV}_{\text{program}} = \sum_{s=1}^{S} \partial \text{EMV}_{\text{pregnant}} + \partial \text{EMV}_{\text{non-pregnant}} \]
Performance of Reproductive Programs
## 21-d PR and net present value

<table>
<thead>
<tr>
<th>Reproductive Programs</th>
<th>1st Service</th>
<th>2nd Service</th>
<th>21-d PR, %</th>
<th>Net Present Value, $/cow/yr</th>
<th>Value over ED, $/cow/yr</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Double-Ovsynch</td>
<td>D32-Resynch</td>
<td>Double-Ovsynch</td>
<td>Estrous Detection Estrous Detection</td>
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Economic Value of Including Estrous Detection
Before 1st TAI
ED (CR=33%) before 1st TAI

- Double Ovsynch Resynch
- D32–Resynch

Δ Net Present Value, $/cow/yr vs. Percent of cows AI at estrus, %
Between TAI
ED (CR=30%) between resynchs

![Graph showing the relationship between net present value and percentage of cows AI at estrus. The graph compares D32 Resynch and Double Ovsynch Resynch.](image-url)
Before and after 1\textsuperscript{st} TAI
50% ED before and after 1st TAI

![Graph showing the relationship between Estrous Detection Conception Rate and Delta Net Present Value, with Double Ovsynch and D32-Ovsynch compared to Double Ovsynch + Double Ovsynch.]
Thanks