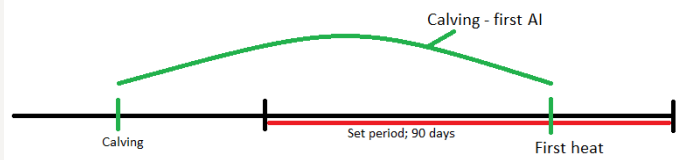
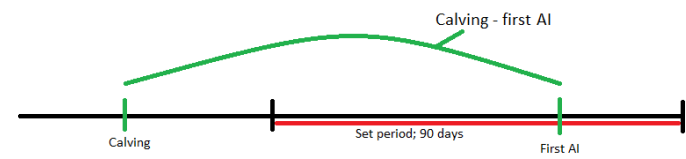
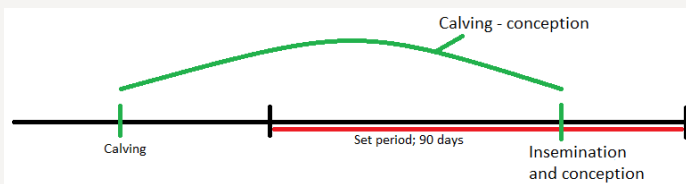


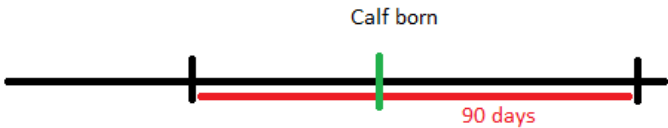
OnePager: Reproduction Analysis on herd level – Lely Horizon



FMS Digital Farming

Basic rules			
✓ 90 days' (Quarter) period as example ✓ Explained calculation on cow level ✓ Culled animals are included if culled after registered results (pregnant, inseminated, etc.) ✓ Analysis is based on average herd level ✓ Youngstock excluded ✓ Last event happened in selected period ✓ Start time period; 56 days ago, to scan if conception happened ✓ Timelines overlap when analyzing different periods 			
Parameter	Includes	Calculation	Timeline
Interval calving – first heat	Cows with a registered heat (heat registration or auto heat)	$Interval = First\ heat\ date - Calving\ date$	
Interval calving – AI	Cows with a registered insemination (AI, DIY AI, etc.)	$Interval = First\ AI - Calving\ date$	
Interval calving – conception	Cows with repro status 'pregnant' or 'auto-pregnant' ✓ insemination date is used as conception date	$Interval = Conception - Calving\ date$	
First Service Conception Rate	Cows that are pregnant or auto-pregnant from the 1st insemination *Excluding: ✓ inseminations within 4 days ✓ abortions after conception	$Conc\ rate = \frac{no\ cows\ pregnant\ after\ first\ service}{total\ no\ of\ cows\ that\ received\ a\ first\ service} * 100$	

Inseminations / conception	Cows that are pregnant or auto-pregnant animals ✓ Conception date = insemination date ✓ All inseminations within selected time period ✓ All conceptions within selected time period	$\frac{\text{Inseminations}}{\text{conc}} = \frac{\text{Total no. of inseminations for all cows}}{\text{Total no. of conceptions}}$	A horizontal timeline with a red segment labeled '90 days' starting from a vertical green line labeled 'Insemination and Conception'.
% pregnant at 100 or 150 DIM	Cows pregnant at 100 DIM	$\% \text{ preg at day 100} = \frac{\text{no. of cows pregnant at 100 DIM}}{\text{total no of cows at 100 DIM}} * 100$	
Predicted calving interval	Cows that are pregnant or auto-pregnant	$\text{Pred calving interval} = \text{predicted calving date} - \text{last calving date}$	A horizontal timeline showing 'Last calving' at the start and 'Predicted calving' at the end. A green arc above the timeline represents the 'Predicted calving interval'. An 'Insemination' point is marked with a vertical green line, and a red segment below the timeline indicates a 'Set period; 90 days'.
Actual calving interval	Cows with any repro status and a calving date in the selected time period <i>*Excluding:</i> ✓ Heifers	$\text{Interval} = \text{Last calving date} - \text{Previous calving date}$	A horizontal timeline showing 'Previous calving' and 'Last calving' as vertical green lines. A green arc above the timeline represents the 'Actual calving interval'. A red segment below the timeline indicates a 'Set period; 90 days'.
Age at first calving	Heifers that go from lactation 0 to 1	Age at first calving	A horizontal timeline with a red segment labeled '90 days' starting from a vertical green line labeled 'First calving'.

Calves born dead	Cows that aborted and started with a new lactation. And calves that were entered as born dead in the calving modal	$\text{Calves born dead \%} = \frac{\text{no.of calves born dead}}{\text{total no of calves born}} * 100$	
Pregnancy rate			
Eligible cows	Included: - Cow must have repro status open, open cyclic, inseminated - All inseminated animals - Cow must be on farm, at the end of the 3 weeks, to be eligible - Cows past the VWP (as set in lactation settings) Excluded: - Excluding keep open cows - Excluding youngstock - Excluding cows >200/500 days in lactation	Inseminated cows	<u>All</u> cows in lactation inseminated in the time period - All inseminations, also for cows that 'were not eligible' - Including keep open cows (if inseminated)
Pregnancy rate	>90% of available data from inseminated cows. - Available = a heat, insemination, a preg check. - If a cow is culled before a result, she counts as unavailable data	$\text{Preg rate \%} = \frac{\text{No. of Pregnant cows}}{\text{No.of eligible cows}} * 100$	