

CALVING MONITORING IN DAIRY CATTLE

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- Calving monitoring is essential to ensure breeding progress. With increasing size of herd, monitoring tools are in expansion.
- The Vel'Phone® system is based on the analysis of temperature variation using a vaginal thermometer. It sends out alerts to the farmer by SMS: probable calving within 48 hours, calving expected within 48 hours or thermometer expulsion with the breaking of the foetal membranes.
- Three assays were conducted in the experimental farm « Les Trinottières (CA49) » from November 2010 and December 2012. In total, 55 heifers and 151 Prim'Holstein cows were concerned.

RESULTS

Time implementation

- 11 heifers and 21 cows were not fitted with Vel'Phone® due to early calving.
- Interval between introduction of the thermometer and expected full-term calving: 9.3 ± 4.5 days in heifers (n=44) and 6.2 ± 3 days in cows (n=130).
- Interval between introduction of the thermometer and real calving: 5.4 ± 3.3 days in heifers (n=44) and 4 ± 3.2 days in cows (n=130).

> Table 1 Interval (in hours) between alerts of the Vel'Phone® and calving in heifers and cows

Alert	Probable calving			Expected calving			Thermometer expulsion		
	n	Mean ± SD	Min - Max	n	Mean ± SD	Min - Max	n	Mean ± SD	Min - Max
Parity									
Heifers	9	60.7 ± 62.7	3,4 - 168.0	26	39.2 ± 42.2	2.8 - 160.0	33	2.5 ± 1.1	0.8 - 6.1
Cows	37	46.0 ± 44.2	7.7 - 220.0	42	22,0 ± 9.5	3.2 - 50.3	69	1.4 ± 0.8	0.0 - 3.8

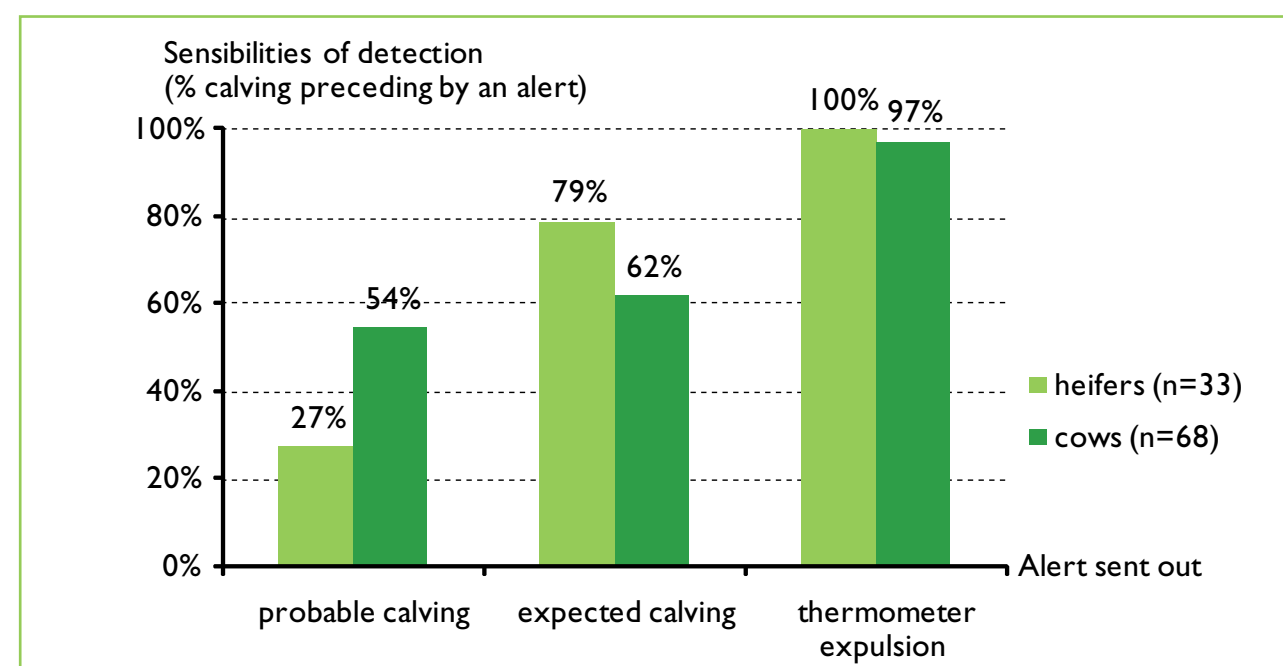


The Vel'Phone® is an interesting device to reduce the constraint of supervision and thus to improve the comfort of the farmer.

Sensibility of detection

> Figure 1 : Sensibilities of detection of the Vel'Phone® according to the alert sent out.

Calculated on animals fitted with the system for at least 72 hours.



- Positives predictives values (% alert followed by a calving): 100% whatever alert and parity.
- Interval between alerts and calving: Table 1.

MAIN CONCLUSIONS

- Optimal time to place the thermometer is difficult to determine because of the delay between expected and real calving (manufacturer's recommendation: implementation 7 to 10 days before expected full-term calving).
- The alert expulsion of the thermometer is a good calving predictor.
- The sensibility of detection is more variable for predictive alerts (probable calving and expected calving).
- A special supervision of the cow is advised if the alert is sent out since more than 2 hours.