

Table 1. Model accuracy statistics (AUROC values, sensitivities, specificities, and error rates) for the prediction of estrus for days 4, 5, and 6 after weaning, based on changes in the percentage of observations of active postures¹, changes in vulva surface temperature², and day post-weaning.

Model	AUROC, % ³	Sensitivity, % ⁴	Specificity, % ⁵	Error rate, % ⁶
Day 4 Predictions ⁷				
Posture only	78.1	66.7	89.5	16.0
Temperature only	68.0	58.3	77.6	27.0
Posture + Temperature	71.9	58.3	85.5	21.0
Day only	71.2	54.2	88.2	20.0
Day + Posture + Temperature	71.2	54.2	88.2	20.0
Day 5 Predictions ⁸				
Posture only	73.4	68.8	78.1	23.8
Temperature only	68.0	56.3	79.7	25.0
Posture + Temperature	66.4	56.3	76.6	27.5
Day only	92.2	100.0	84.4	12.5
Day + Posture + Temperature	92.2	100.0	84.4	12.5
Day 6 Predictions ⁹				
Posture only	76.8	75.0	78.6	21.9
Temperature only	67.9	50.0	85.7	18.8
Posture + Temperature	67.9	50.0	85.7	18.8
Day only	92.9	100.0	85.7	12.5
Day + Posture + Temperature	82.1	75.0	89.3	12.5

¹Changes in daily means for the percentage of observations of active postures relative to a reference day (day 2 post-weaning up to the day of first standing estrus).

²Changes in daily means for vulva surface temperature between consecutive days (starting with the difference between day 2 and 3 post-weaning up to the day of first standing estrus).

³AUROC = area under the receiver operating characteristic curve, a measure of accuracy explained by the model.

⁴Sensitivity; percentage of sows that were correctly predicted in estrus.

⁵Specificity; percentage of sows that were correctly predicted not in estrus.

⁶Error rate = percentage of sows with incorrect predictions.

⁷The data used for prediction equations included all sows in the group; number of sows = 86.

⁸The data used for prediction equations included all sows not exhibiting standing reflex on day 4; number of sows = 57.

⁹The data used for prediction equations included all sows not exhibiting standing reflex on day 4 or 5; number of sows = 20.