

Supplementary Material

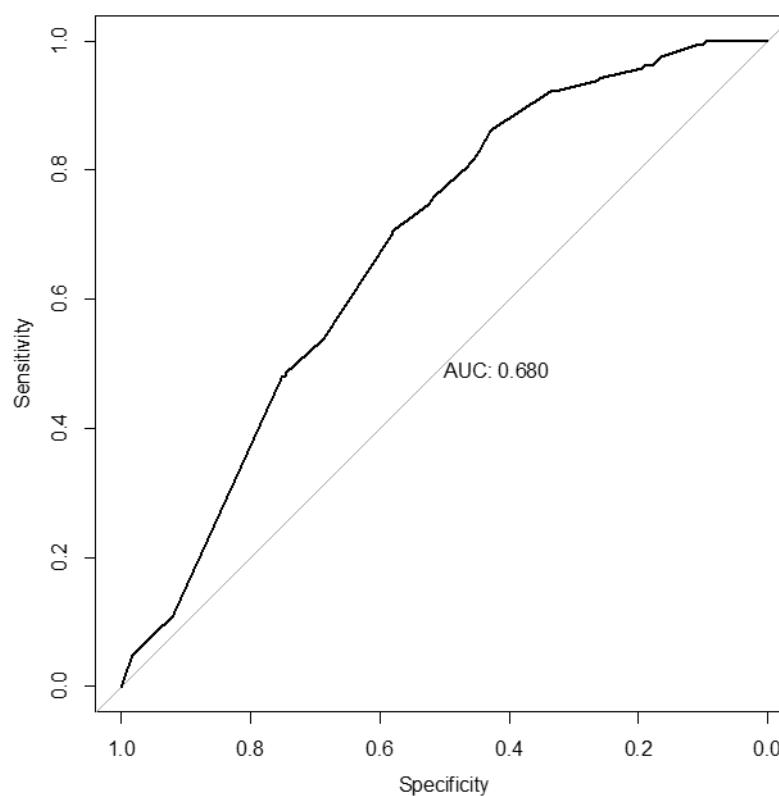


Figure S1. Receiver Operating Characteristics (ROC) graph of the final mixed binomial logistic model.

	Cross Validation	Confusion Matrix
Accuracy	64.4%	68.0%
Sensitivity	51.9%	56.0%
Specificity	75.7%	79.5%
Positive prediction	65.8%	71.1%
Negative prediciton	63.6%	66.8%

AUC= Area under the curve.

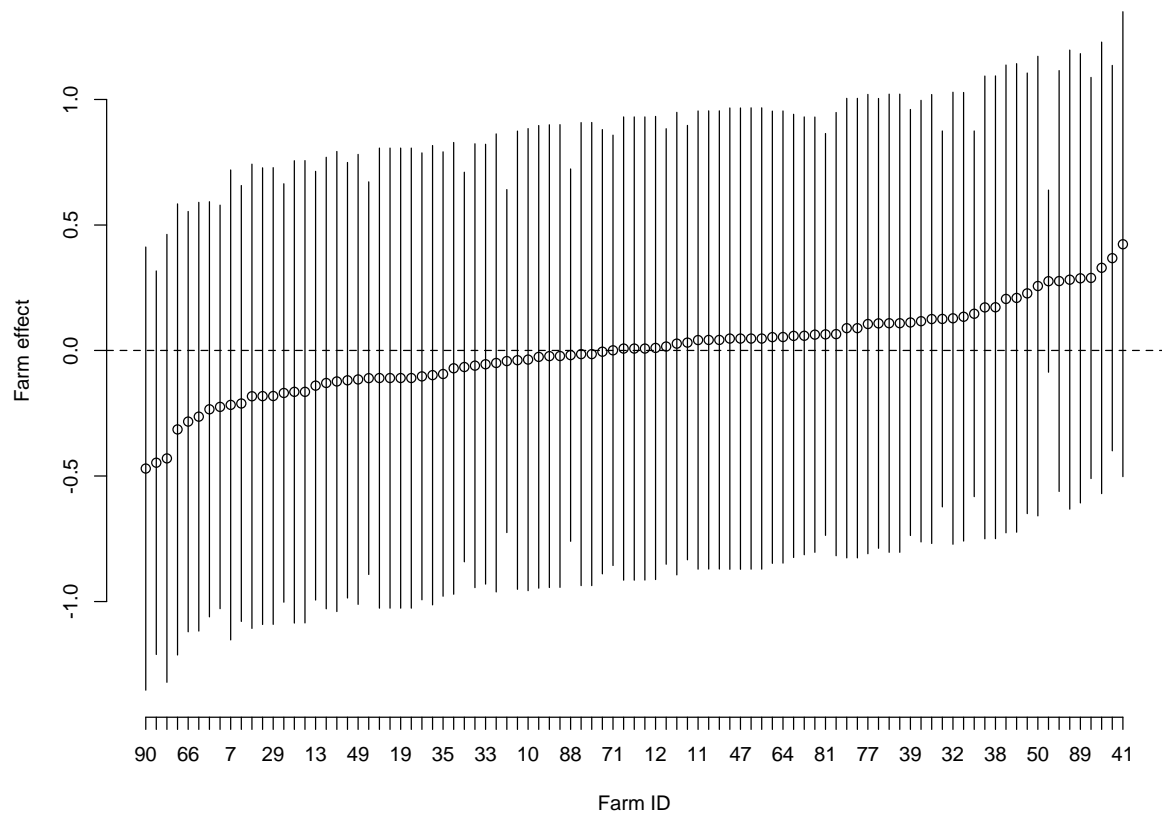


Figure S2. Estimated random intercepts and 95% prediction intervals for random effect farm based on the cumulative link mixed model.

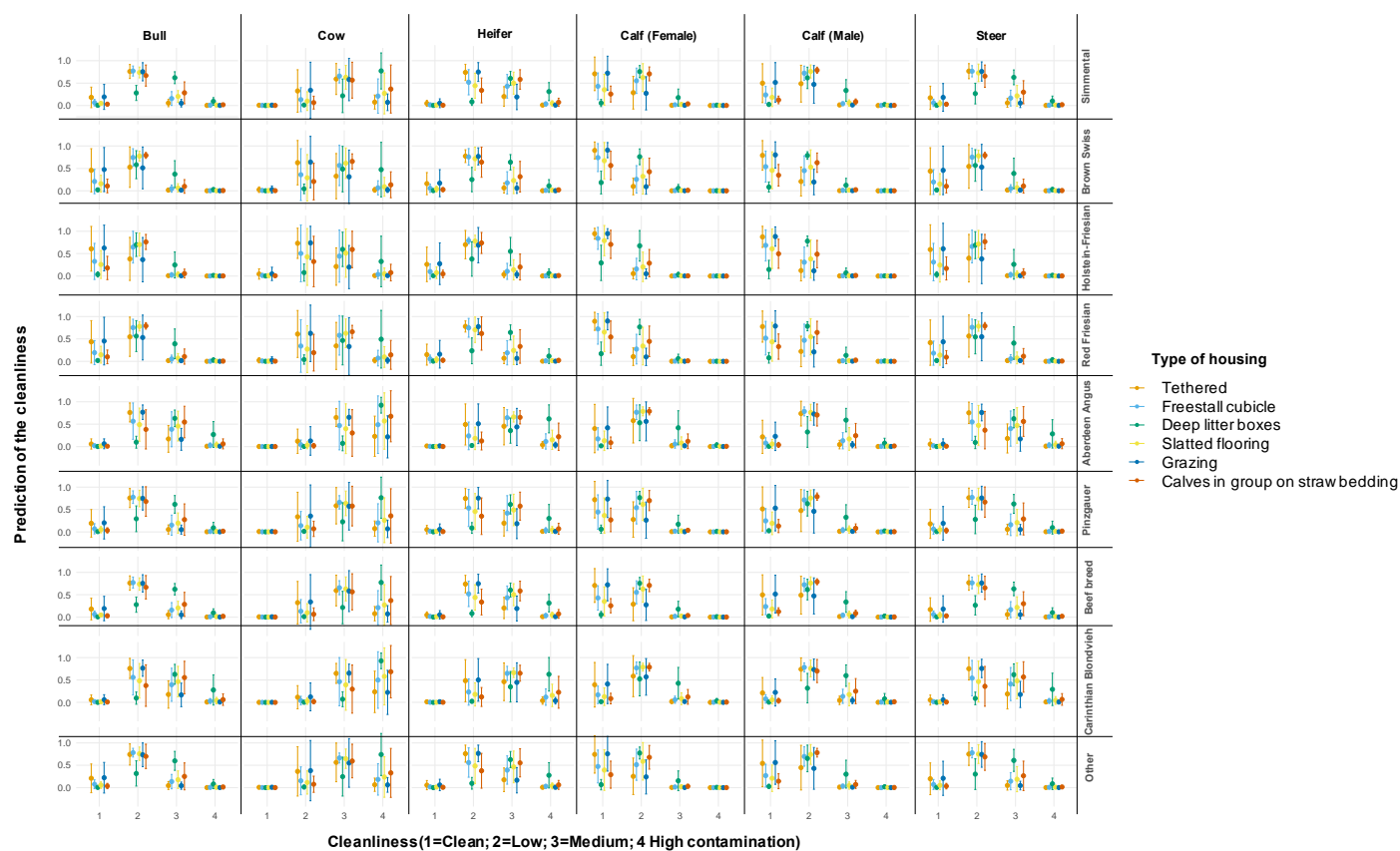


Figure S3. The expected probability (range: 0-1) for a cleanliness level depending on type of housing stratified by sex and breed of the slaughtered cattle.