Plasma pregnancy specific protein B (PSPB) in days 25, 26 and 28 in two beef cattle breeds

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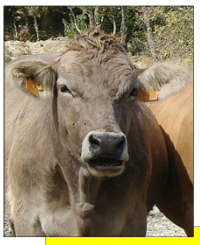
1 Introduction

Early detection of Pregnancy Specific Protein B (PSPB) could be an accurate pregnancy diagnosis method to reduce the calving interval in extensive beef cattle farming systems.

2 Objective

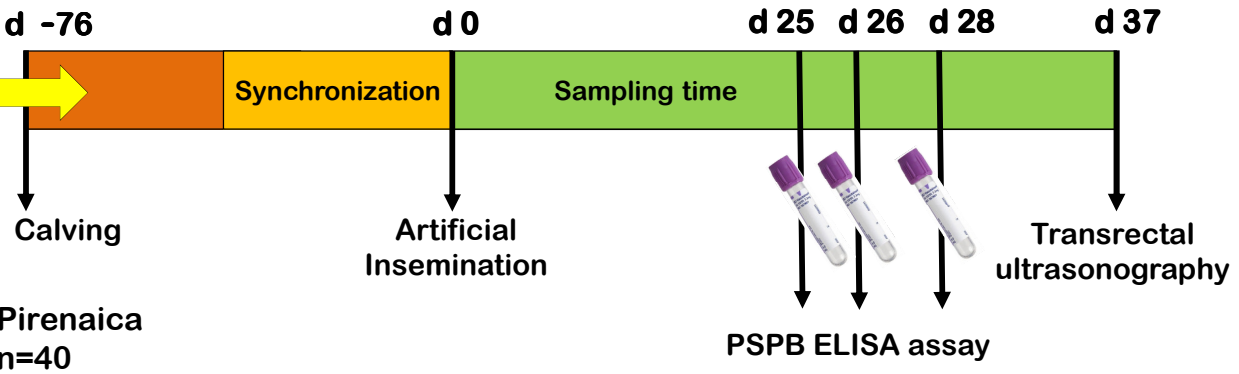
Determine, based on PSPB concentrations, the earliest day to accurately diagnose pregnancy in beef cows.

3 Materials and Methods



Parda de Montaña n=74

Pirenaica n=40



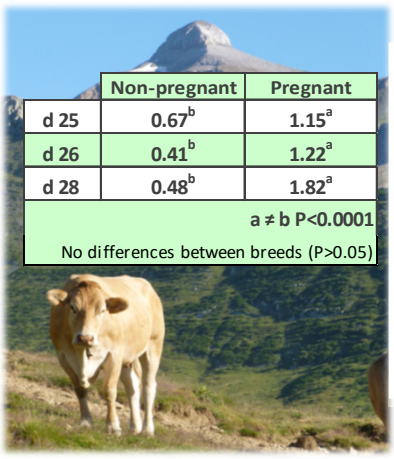
4 Results

4.1 PSPB concentrations (ng/ml)

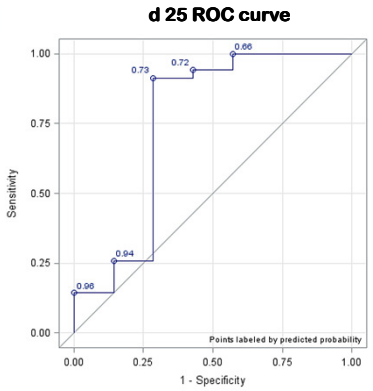
	Non-pregnant	Pregnant
d 25	0.67[b]	1.15[a]
d 26	0.41[b]	1.22[a]
d 28	0.48[b]	1.82[a]

a ≠ b P<0.0001

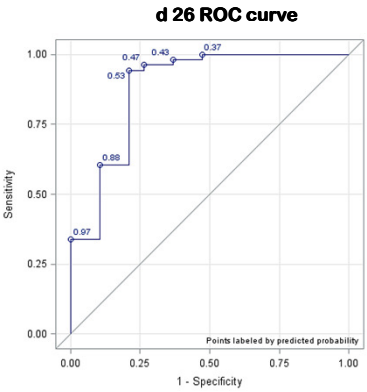
No differences between breeds (P>0.05)



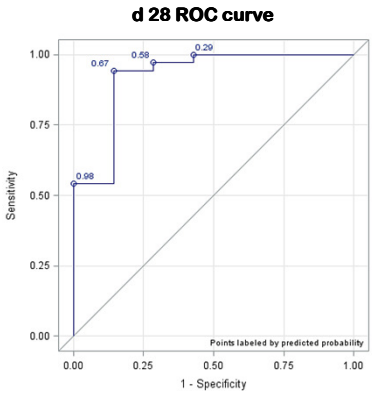
4.2 ROC curve analysis



Area under the curve (AUC): **0.79**
Cut-off value: **not determined**
Sensibility: **not determined**
Specificity: **not determined**



AUC: **0.88**
Cut-off value: **0.57 ng/ml**
Sensibility: **94.3%**
Specificity: **78.9%**



AUC: **0.93**
Cut-off value: **0.91 ng/ml**
Sensibility: **94.3%**
Specificity: **80.8%**

No differences between d26 AUC and d28 AUC (P>0.1)

5 Conclusion

Implementing the plasma PSPB analysis on day 26 could be useful for early pregnancy diagnosis, with a similar accuracy to that obtained on day 28 and avoiding the lack of precision obtained on day 25

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