

## A post-mortem study of physiopathological characteristics of genital tracts of culled dairy cows in South Vietnam

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### INTRODUCTION

To reduce calving interval (444 days on average in Vietnam) and so to increase the average milk production (3880 kgs) it's necessary to describe the frequency of reproduction pathologies and their risk factors. Such kind of study has not yet been done in Vietnam.

Our objective: to describe the frequency of some genital pathologies and analyse the influence of age and body condition score (BCS).

### MATERIALS AND METHODS

The study was carried out from february to august, 2012 in a slaughterhouse (Ho Chi Minh city, Vietnam) using 507 culled dairy cows crossbred Holstein Friesian and with average age 8.5 years ( $\pm 4.1$ ).

*Antemortem examinations* : Age determination (dentition), Body condition score determination (BCS : Scale from 1 to 5), vaginoscopy.

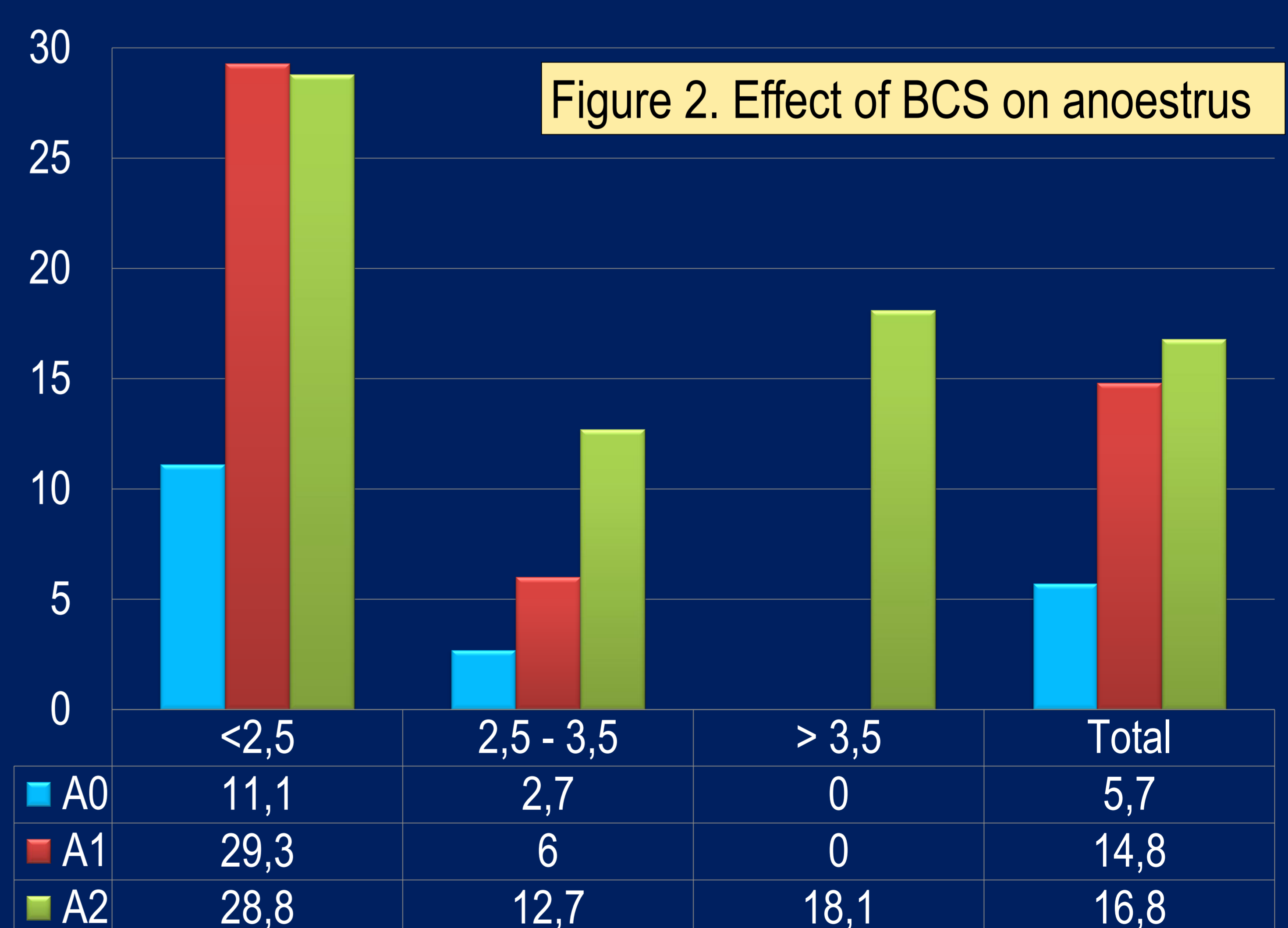
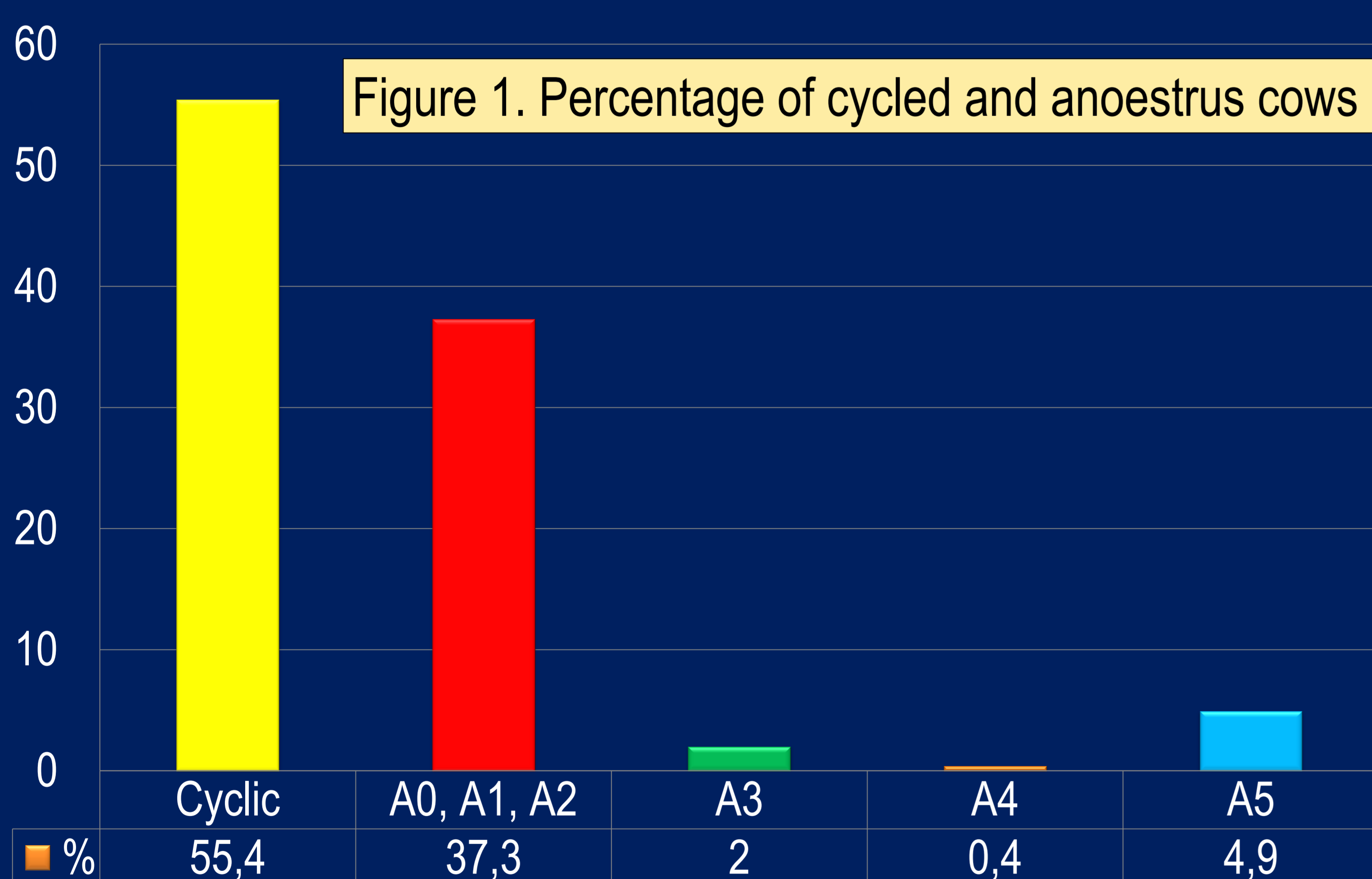
*Postmortem examinations* : identification of ovarian structures by echography, identification of uterine contents by visual inspection.

The different types of anoestrus were classified according to Peter et al. (Theriogenology, 2009, 71:1333-1342)

Types of anoestrus	Characteristics	Types of anoestrus	Characteristics
Type 0 (A0)	Absence of cavitory follicle ( $\geq 2$ mm)	Type 3 (A3)	Ovarian cyst
Type 1 (A1)	Presence of cavitory follicles ( $< 8$ mm)	Type 4 (A4)	Pyometra
Type 2 (A2)	Presence of a dominant follicle ( $\geq 8$ mm)	Type 5 (A5)	Pregnancy

### RESULTS

- Relatively low frequency of abnormal **vaginal discharges** and **uterine contents** : respectively 12.1% and 5.4%.
- High prevalence of cows with **low BCS** ( $< 2,5$ ) : 44,4 %.
- High frequency of **pneumovagina**: 33.1%, more frequent in old ( $> 10$  y) (40.6%) than in young ( $< 6$  y) (28,6 %) cows ( $P < 0,05$ ).
- High frequency of **urovagina**: 14.7%, more often observed in cows with low ( $< 2,5$ , 24.9%) than with high BCS ( $> 3,5$ , 3,0 %) ( $P < 0,001$ ).
- High prevalence of **not cycled** cows (A0,A1,A2) : 37,3 % (Figure 1).
- Higher prevalence of **A0 anoestrus** in cows aged  $\leq 6$  years (9.1%) than in cows aged  $> 10$  years (2.9%;  $P < 0,05$ ).
- Major negative impact of **low BCS** ( $< 2,5$ ) on the frequency of the three types of anoestrus (A0,A1,A2) (Figure 2) ( $P < 0,01$  and  $P > 0,001$ ).



### CONCLUSION

Our study has described the frequency of different genital pathologies in culled cows in Vietnam.

The high frequency of cows with low BCS , pneumovagina and anoestrus condition reflect the necessity to improve nutrition.

Milk production and reproduction performances can be improved through a better cooperation between farmers, technicians and vets.

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