

Diagnosis of ovarian activity: a powerful tool to manage beef cows under extensive grazing conditions

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URUGUAY



URUGUAY: A “LIVESTOCK COUNTRY”

**11 MILLION BEEF CATTLE
(4 MILLION BEEF COWS)**

3,5 MILLION PEOPLE



Bioma pampa: 70 million of hectares (Soriano et al. 1991)

Uruguay: more than 80 % of area with native pastures

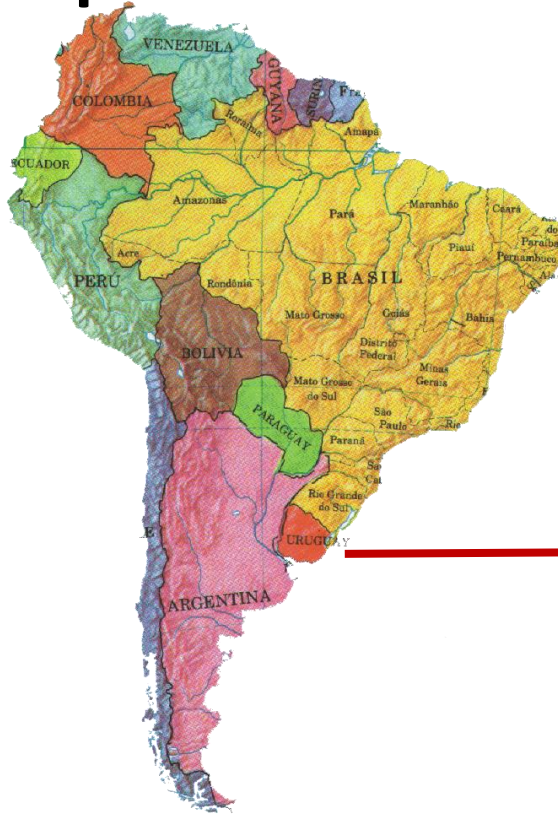


Figura 1. Pastizales del Río de la Plata y sus subregiones: A. Pampa Ondulada, B. Pampa Interior, C. Pampa Austral, D. Pampa Inundable, E. Pampa mesopotámica, F. Campos del Sur, G. Campos del Norte. Tomado de León (1993).

NATIVE PASTURES

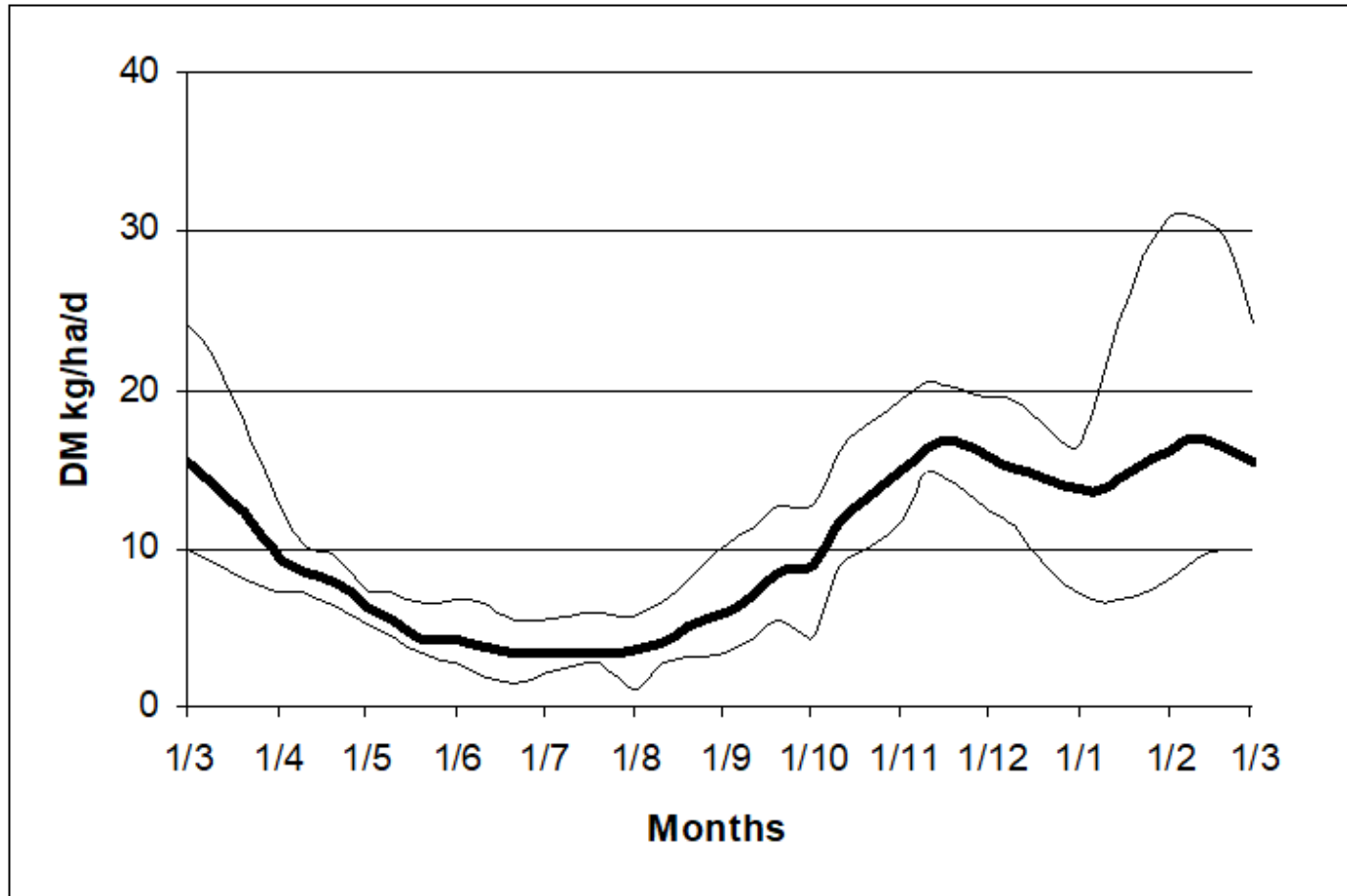
Main resource of food for cows and calves



- Crude Protein = 8 -10 %

- Digestibility = 45 – 55 %

Daily growing rate of native pastures



High variability of forage production along the year and between years

- Winter: last trimester of gestation
very low pasture production (low growth rate)
- Spring: calving period
high growth rate of pasture, better quality
- Summer : mating period
high dependent on raining pattern



CALVING: NOT ADEQUATE BCS.....NEGATIVE ENERGY BALANCE

Long postpartum anoestrous interval.....
low pregnancy rate



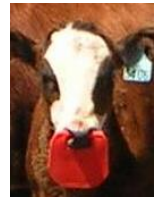
Factors affecting length postpartum anoestrous:

- Nutrition

- Suckling restriction



Temporary calf removal



Early weaning



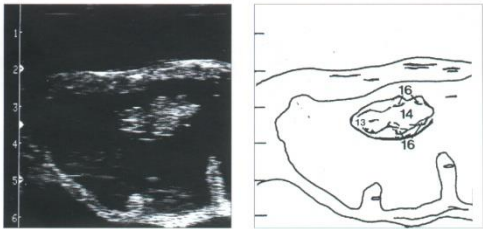
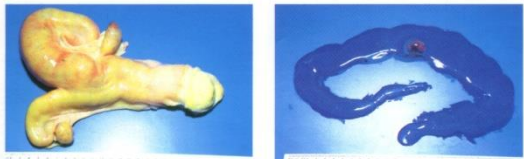
When mating period start:
high proportion of animals are in anoestrous



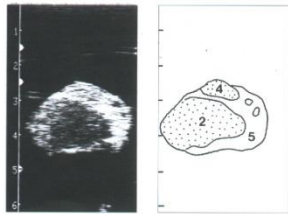
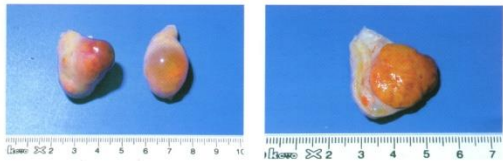
Ovarian Activity Diagnosis

- ✓ What is it?
- ✓ When it should be done?
- ✓ To which cows?
- ✓ For what?

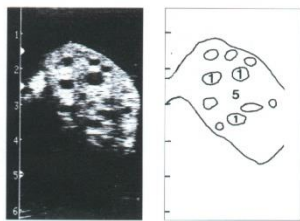
Ovarian Activity Diagnosis: what is it?



embryo : Pregnant

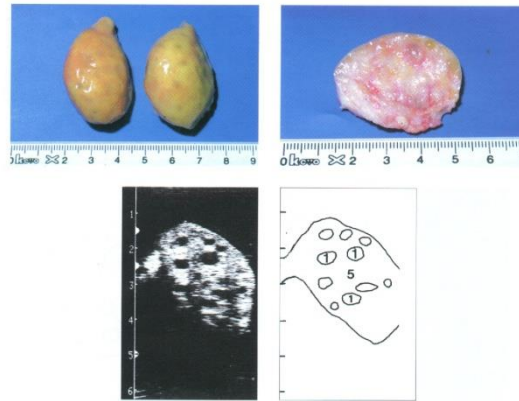


corpus luteum : Cycling



only follicles:
Anoestrus

Ovarian Activity Diagnosis: what is it?



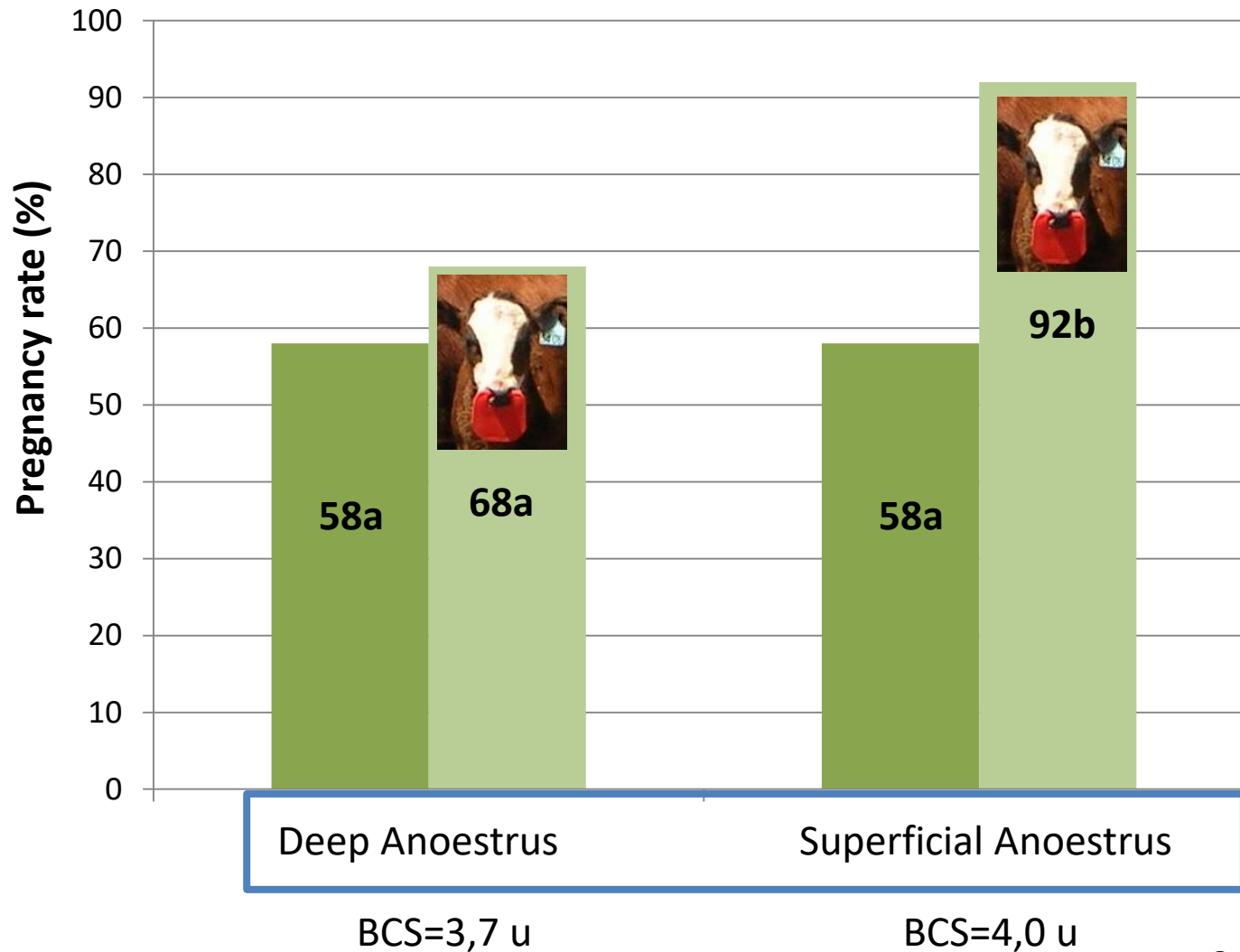
$MFD \geq 8\text{mm}$ SUPERFICIAL ANOESTROUS

$MFD \leq 7\text{ mm}$ DEEP ANOESTROUS

MFD: maximum follicle diameter

- **When?** During the mating period (in the middle or even in the beginning)
- **To which cows?** All, those in problems, a sample of each herd,
- **What do we do with the information?** Decide which management do (suckling restriction?)

Effect of calves temporary weaning on Cows Pregnancy rate (%) based on ovarian activity diagnosis (OAD)



OAD in draught 2017-2018 in primiparous cows (n=64)

		Pregnancy rate (%)
60%	SUPERFICIAL Anoestrous	
	CONTROL	
	Temporary Calf Removal (nose plates)	
40%	DEEP Anoestrous	
	CONTROL	
	Early Weaning	

OAD in draught 2017-2018 in primiparous cows (n=64)

	Pregnancy rate (%)
SUPERFICIAL Anoestrous	
CONTROL	25
Temporary Calf Removal (nose plates)	65
DEEP Anoestrous	
CONTROL	
Early Weaning	

OAD in draught 2017-2018 in primiparous cows (n=64)

	Pregnancy rate (%)
SUPERFICIAL Anoestrous	
CONTROL	25a
Temporary Calf Removal (nose plates)	65b
DEEP Anoestrous	
CONTROL	9a
Early Weaning	79b

BCS: 4,2 u

In summary, Ovarian Activity Diagnosis:

- Predict the probability of pregnancy rate of a herd
- It is a tool that HELPS the management of beef herds
- It allow to change a potential negative result of pregnancy rate
- It has been validated in farms



Thanks!

