Short-term supplementation with rice bran in pre-partum primiparous grazing beef cows

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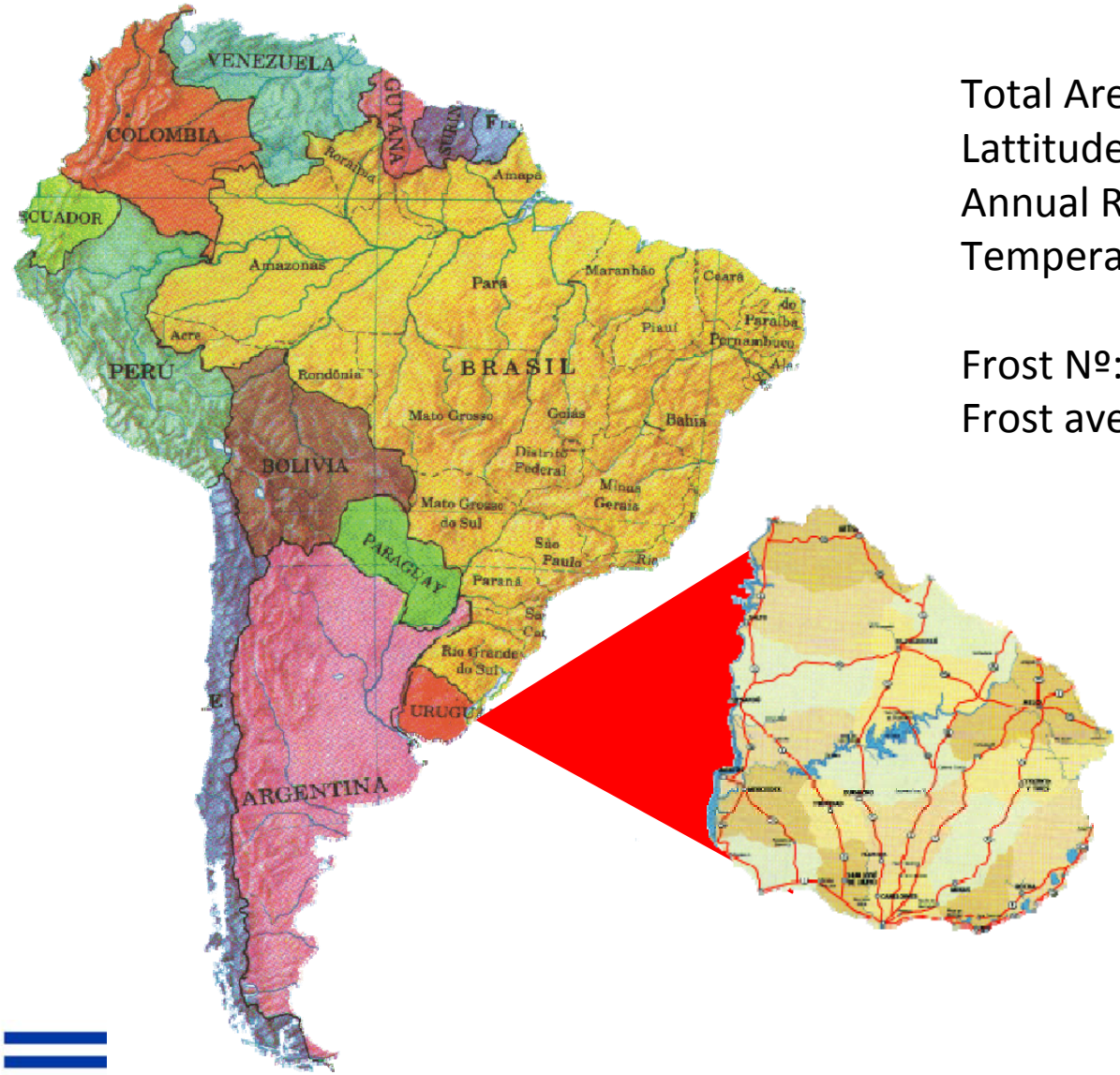
Bratislava, SLOVAKIA

South America
Uruguay



Total Area:	17.6 million ha
Lattitude:	30 - 35º South
Annual Rainfall:	1.175 mm ± 500
Temperatures:	Max. 28-33º
	Min. 6-9
Frost Nº:	10-50
Frost average/yr	21

INIA URUGUAY

Uruguay

- 6th beef exporter (400.000 ton/year)
- 61 kg beef meet/hab

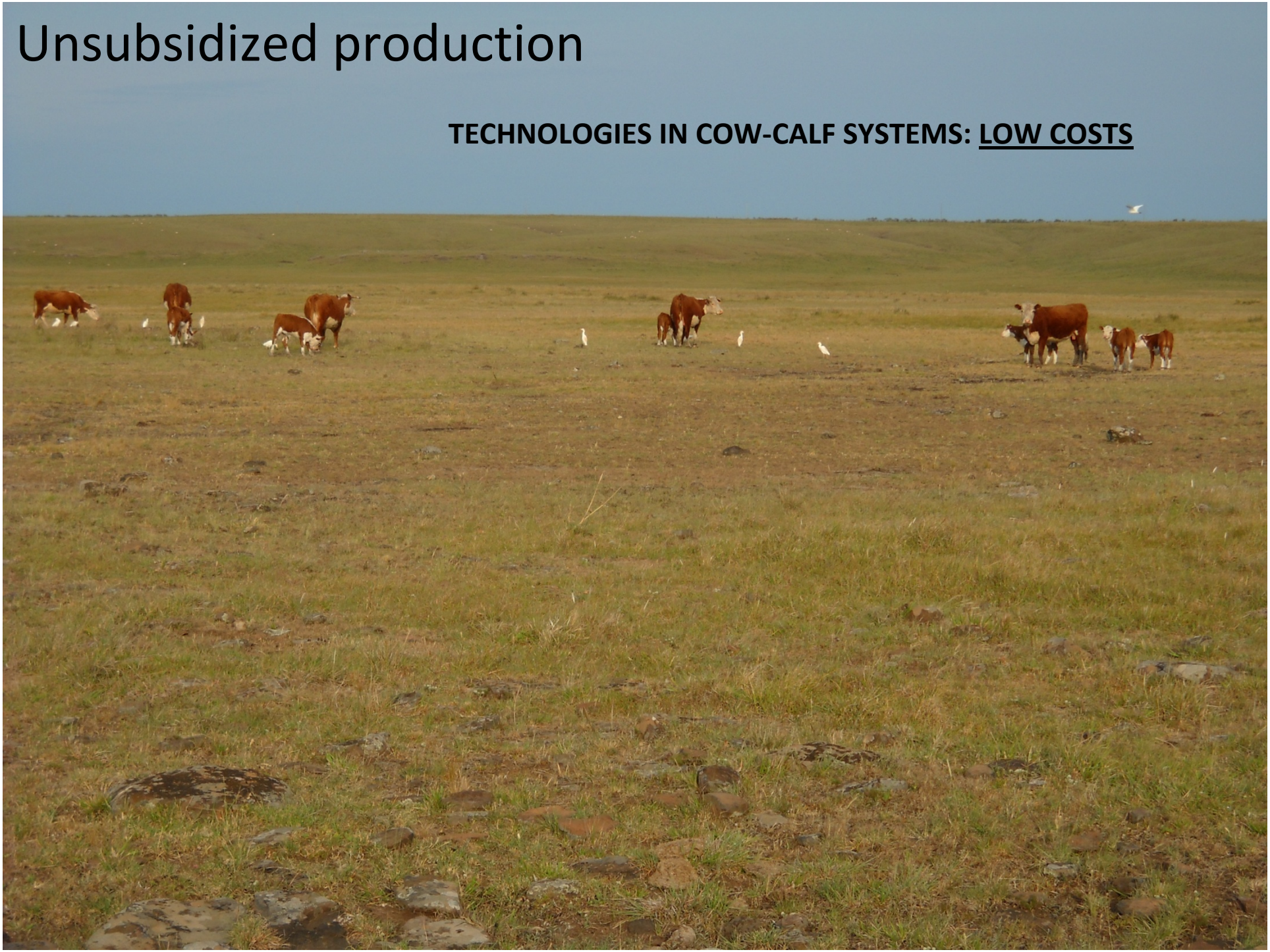
- Stock: 11 million head / 4 million cows
  7 million sheep
  11 million of hectares of native pastures

- Within the top 4 best football teams

Frequent climatic events
-“open sky” production-

Unsubsidized production

TECHNOLOGIES IN COW-CALF SYSTEMS: <u>LOW COSTS</u>



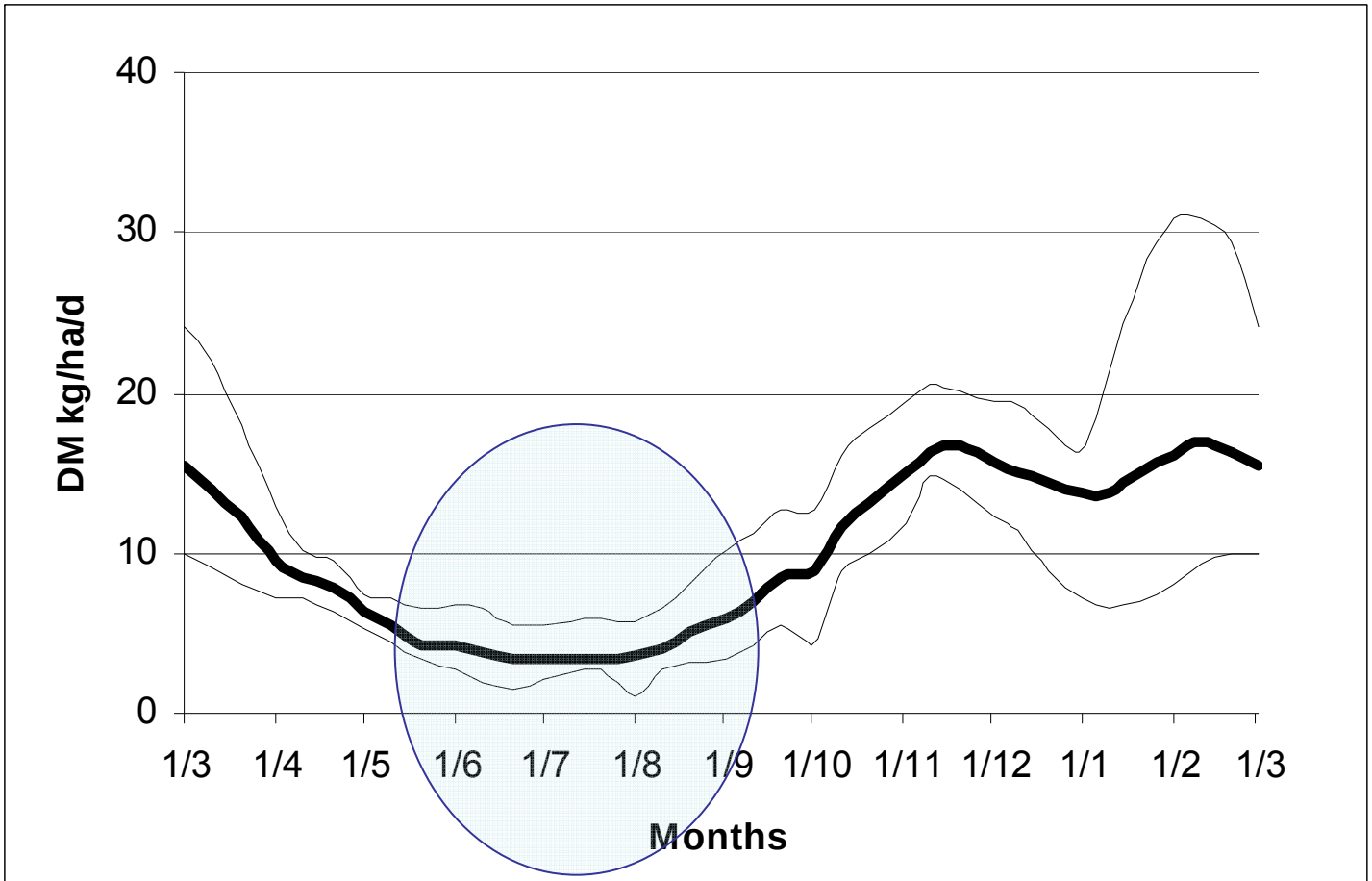

Self-feeding

In the same way of thinking……

Why pre-partum supplementation?

Why a short period?

Daily growing rate of native pastures



AUTUMN	WINTER	SPRING	SUMMER	TOTAL PRODUCTION
				DM (kg/ha/d)
23.40%	**9.70%**	**28.90%**	**38%**	**3626**

Ayala y Bermudez, 2005

Why pre-partum supplementation?

Why a short period?

$$$$$$

££ € € USD

Background

- In Dairy Cows:

Last 6 weeks prepartum with access to improvement grass decreased the length of post-partum anoestrous (Chagas et al., 2006)

Background

- In Beef Cows:

Exploratory experiments of short term period of supplementation prepartum (35-40d) had positive effects on mutiparous cows

Short-term supplementation with rice bran in pre-partum primiparous grazing beef cows

- **Objective:** evaluate short term supplementation with rice bran in pre-partum primiparous cows on their performance (cows and calves)

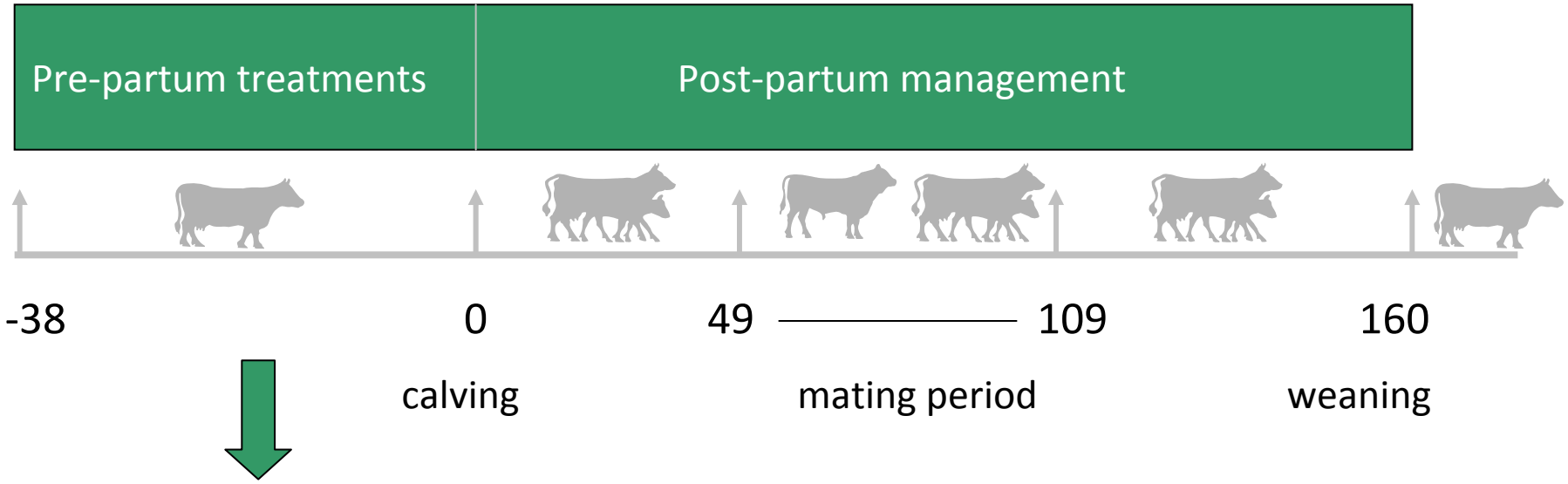
- **Materials and Methods:**

  SUP = 38 d of supplementation (until calving, Day 0=calving) ;

  n= 13; whole rice bran 0.75k/100 kg LW (aprox. 3 k/a/d)

  CON = grazed native pastures, n=12

Experimental design



Measurements

Pre-partum treatments	Post-partum management

-38 | 0 | 49 ——— 109 | 160

calving | mating period | weaning

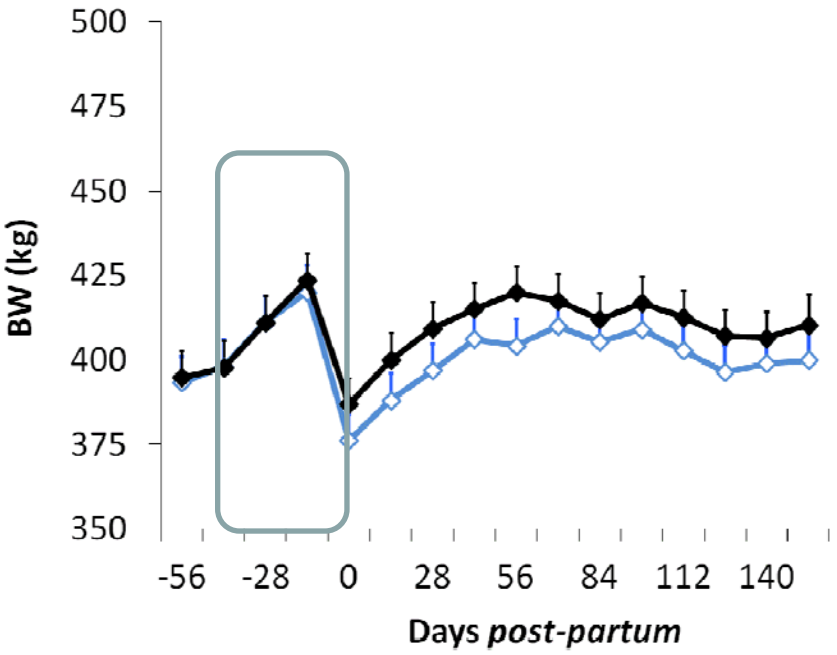
BW and BCS every 14 days

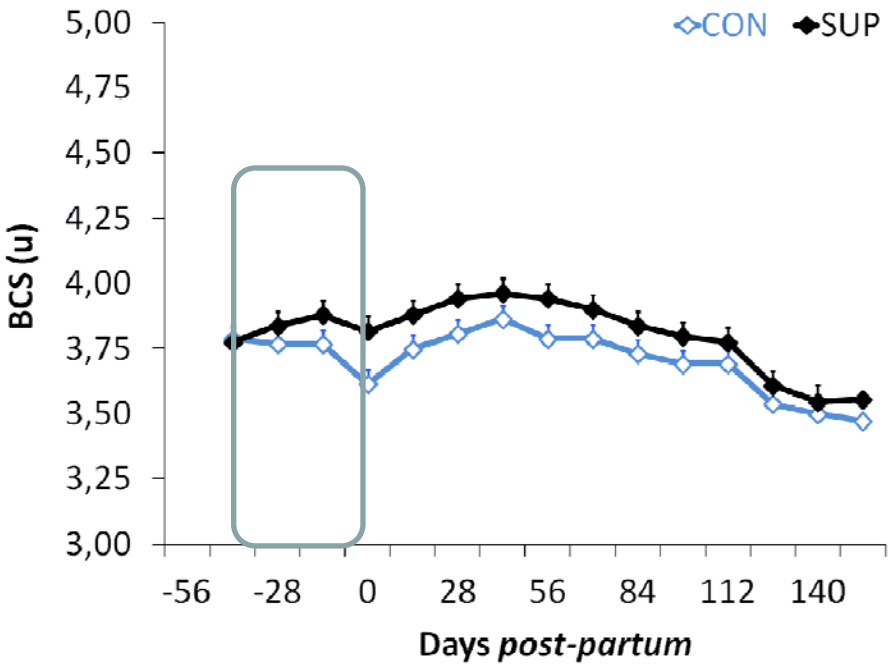
Milk production every 30 days

Blood sampling every 7 days

Results I

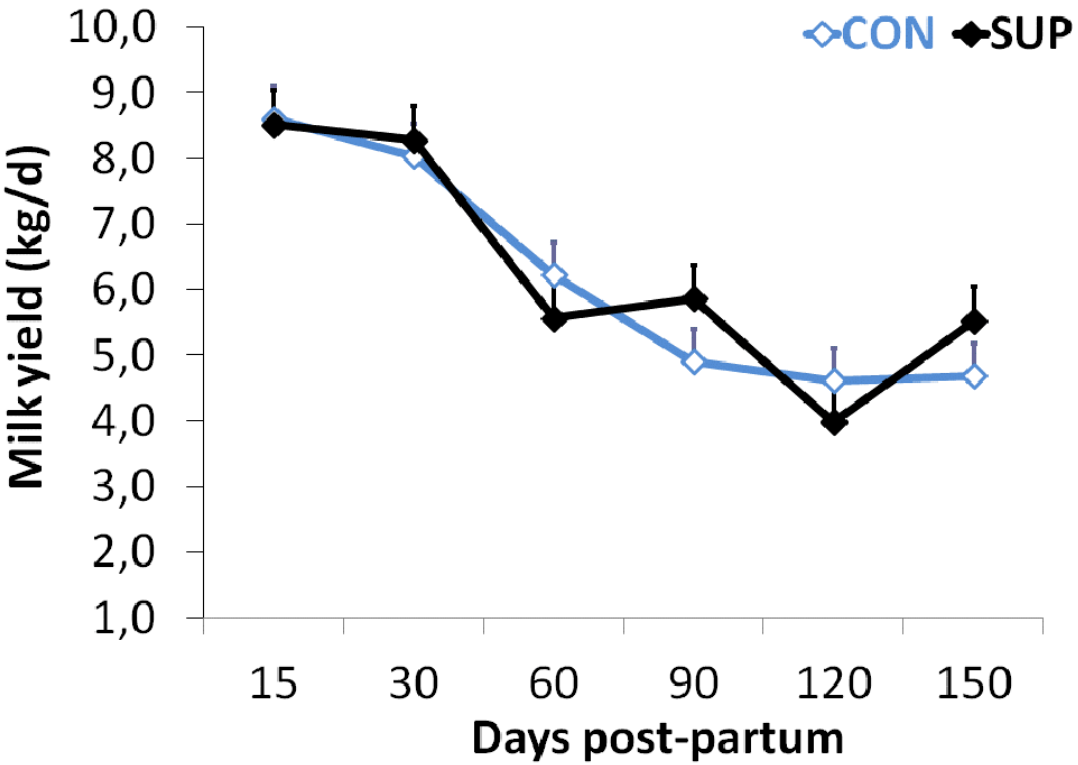
- BLW and BCS





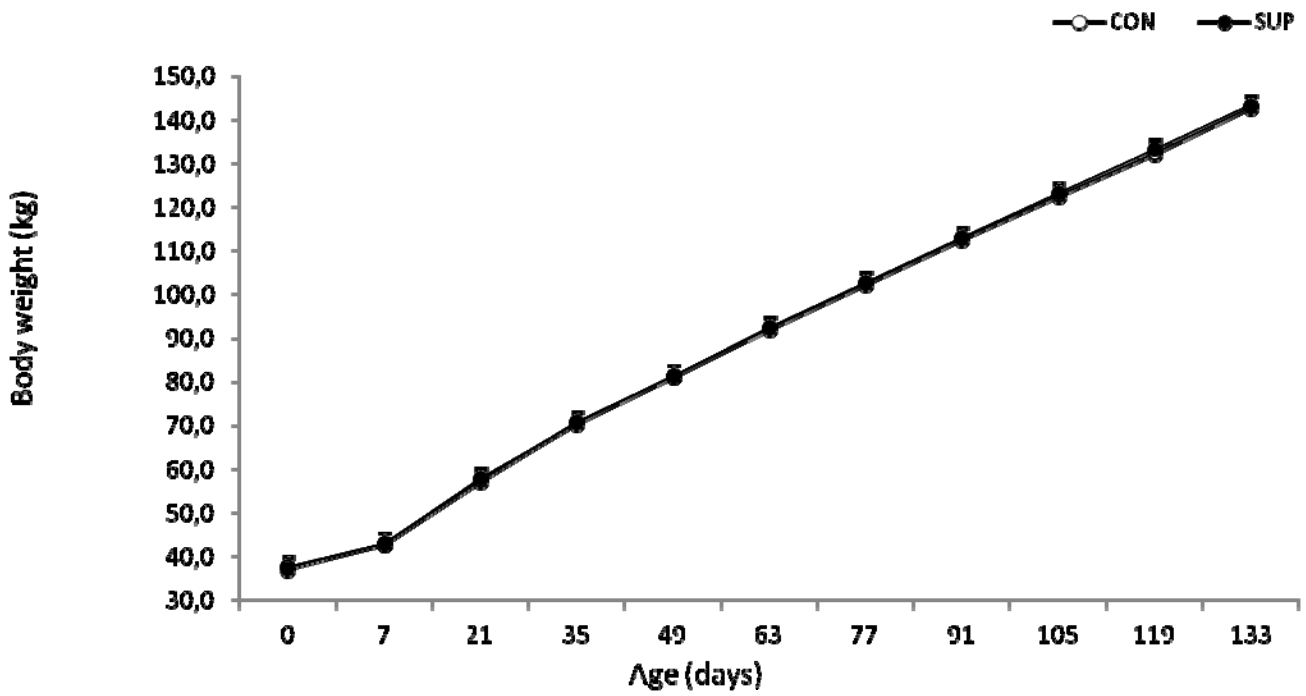
Results II

- Milk yield



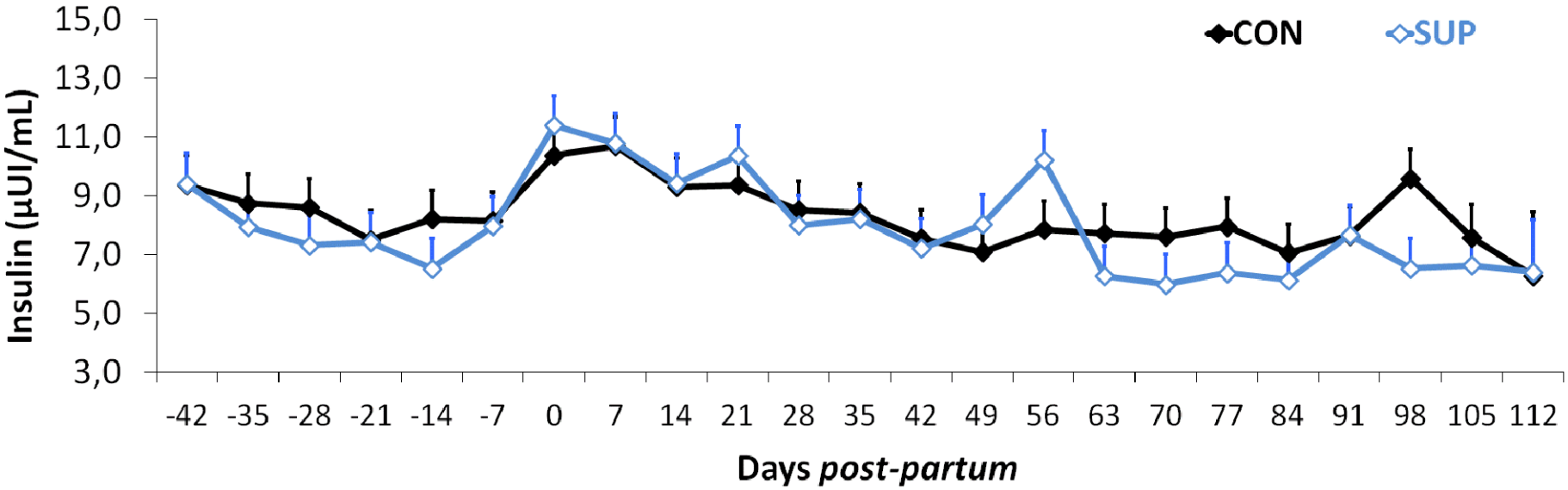
Results III

- Calves BLW



Results IV

- Insulin concentrations

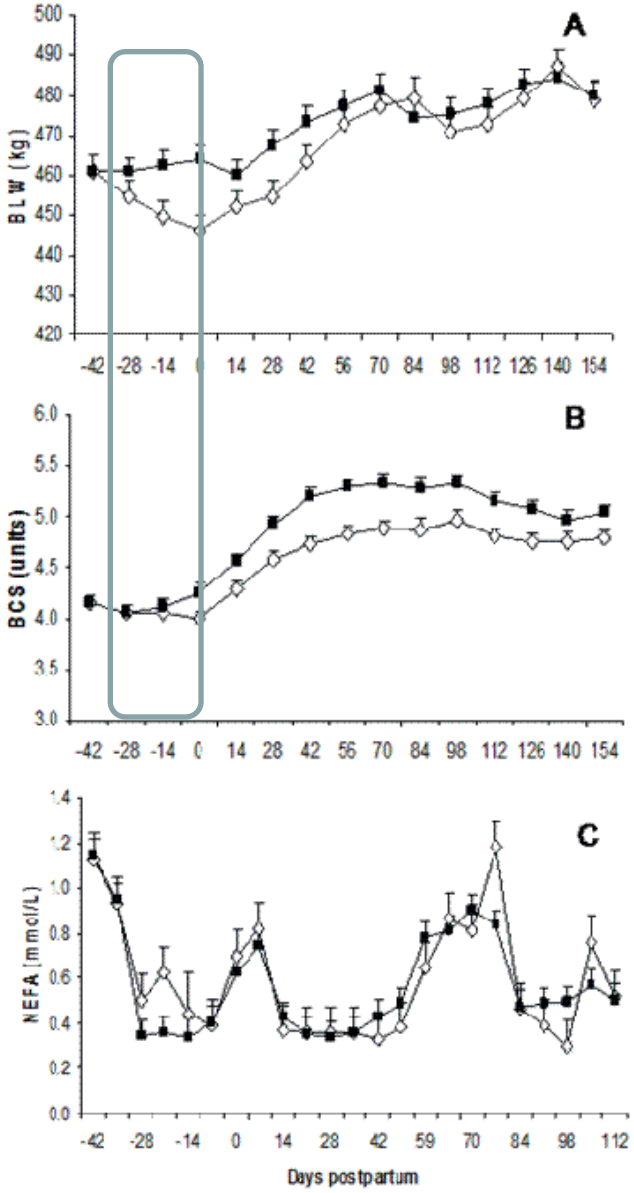


Results V

- Reproductive parameters

	CON	SUP	P
Post-partum period (days)	104	97	0.07
Probability of early pregnancy (%)	23	58	0.09

Discussion and Conclusions



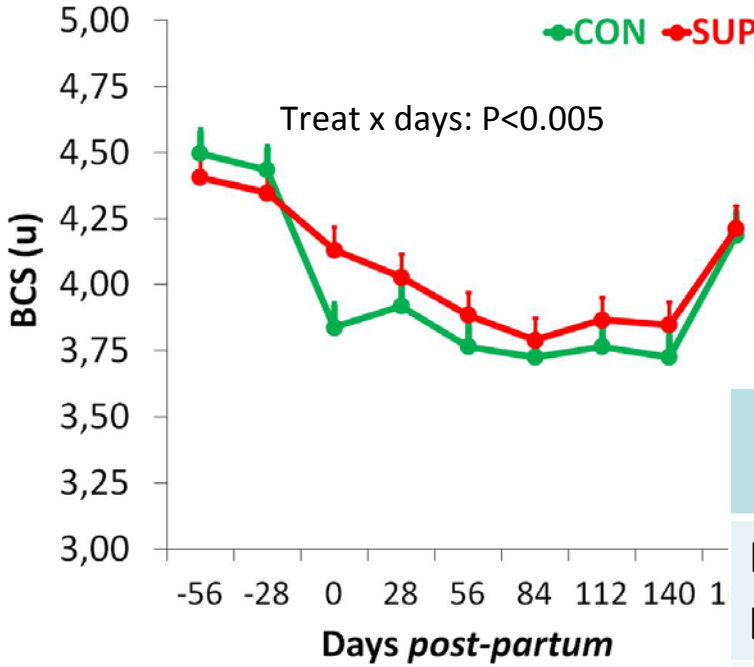
MULTIPAROUS BEEF COWS (Quintans et al., 2009)

Effects of short-term supplementation during the last month of gestation in winter on reproductive performance of MULTIPAROUS beef cows.

	Treatment			
	CON	SUP	SE	P-value
Number of cows	17	18		
Maximum follicle diameter at 60 DPP[2]; mm	10.5	11	0.7	0.625
Probability of cows with follicles =10 mm at 60 DPP; %	35	56		0.052
Probability of cows cycling during the first 90 DPP; %	65	83		0.084
Pregnancy rate;%	88	100		0.082

[1]CON = control cows; SUP = cows supplemented with 4.5 kg/animal per day of a mix of sorghum grain (0.67 as-fed basis) and protein concentrated (0.33 as-fed basis) from 33±1.4 d prepartum until calving.
[2]DPP = days postpartum

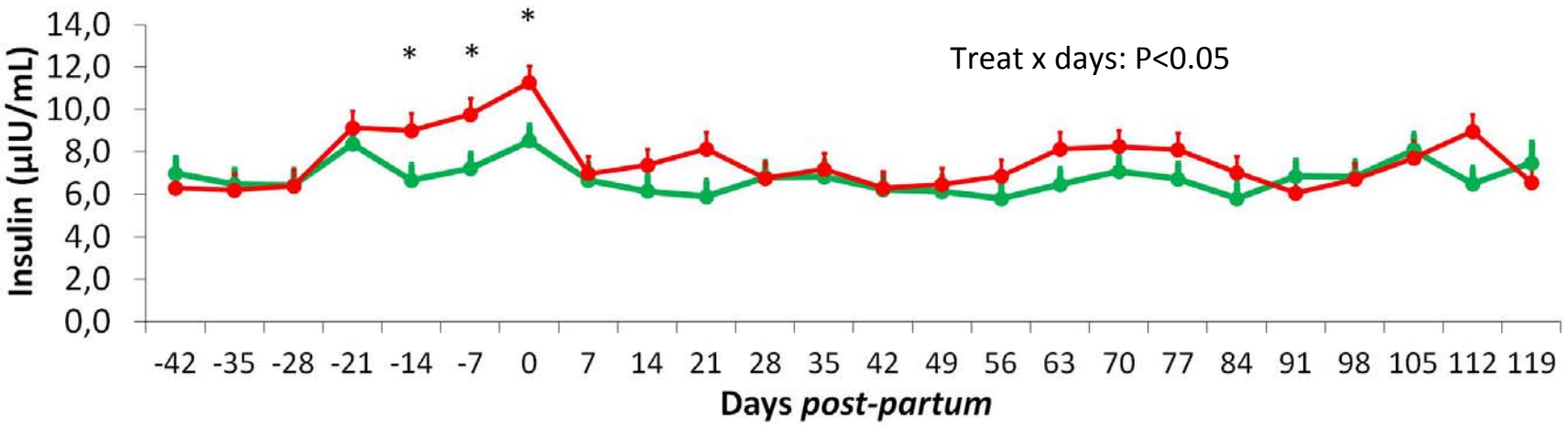
Control (◊),Supplemented (■)

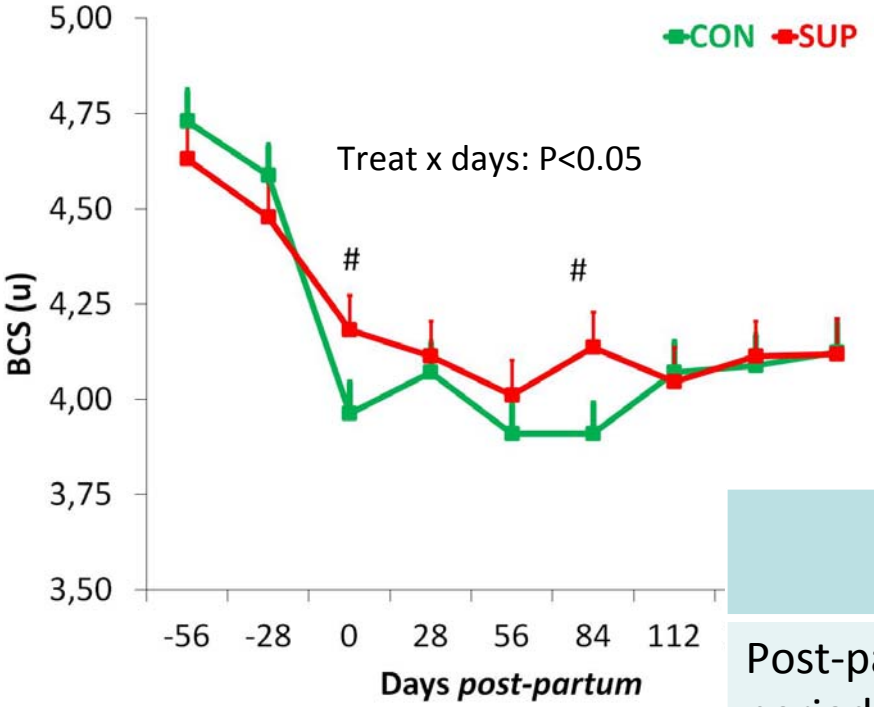


MULTIPAROUS BEEF COWS

(Scarsi et al, in press)

	CON	SUP
Post-partum anoestrous period (days)	**123a**	**88b**
Pregnancy rate (%)	**61a**	**83b**

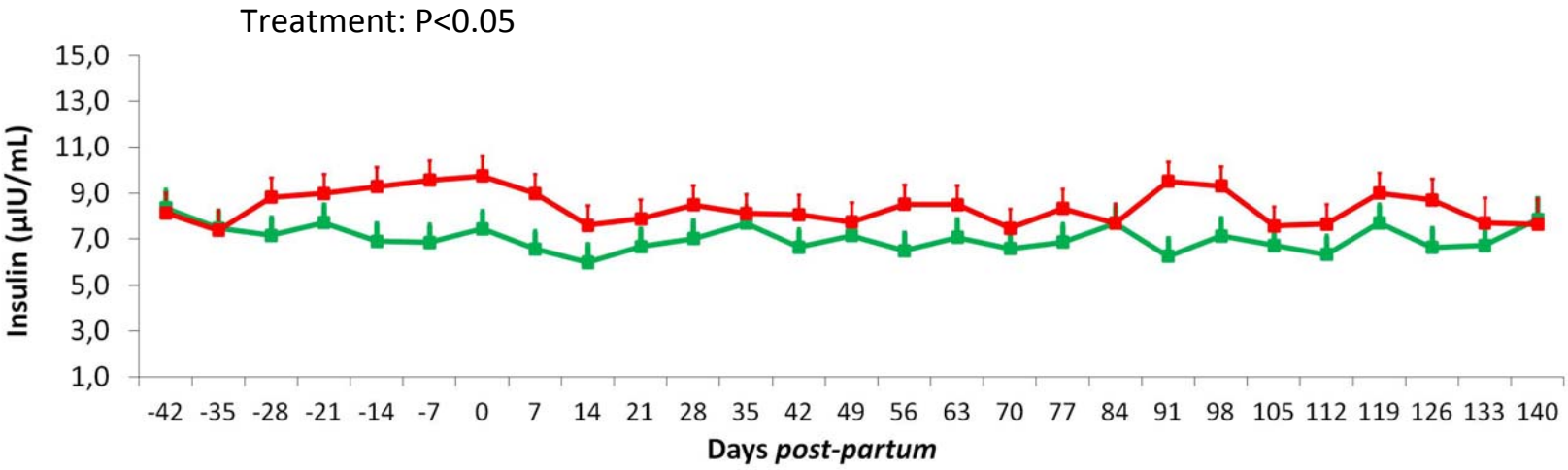




PRIMIPAROUS BEEF COWS

(Scarsi et al, in press)

	CON	SUP
Post-partum anoestrous period (days)	**126**	**125**
Pregnancy rate (%)	**36**	**36**



Results V

- Reproductive parameters

	CON	SUP	P
Post-partum period (days)	104	97	0.07
Probability of early pregnancy (%)	23	58	0.09

In this experiment short term supplementation during the last month of gestation tended to improve reproductive performance

Calves birth weight was not affected

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VĎAKA

Thanks!

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