IUCN-SSC Crocodile Specialist Group

Student Research Assistance Scheme Application Form

SUMMARY REPORT



Project Title

"Enriquecimiento dieta de Yacaré overo con Selenio y Vitamina E. Estrés, crecimiento y respuesta inmune.".

Student:

Lic. Guillermo Príncipe - guilleprincipe@yahoo.com.ar

Supervisor:

Dr. Pablo A. Siroski - cocokaima@hotmail.com

CSG Member:

Alba Imhof - albaimhof@hotmail.com

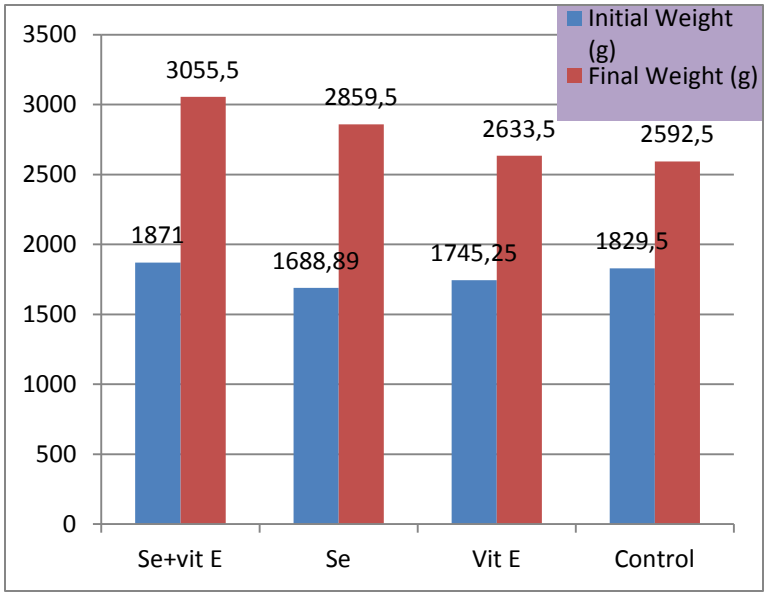
Proposed objectives in the project and result obtained.

Upon completion of the analysis of samples obtained in this study will be published in a scientific journal.

For the present work were used 8 pools belonging to Yacare Project facilities in Santa Fe, Argentina. Within each pool were placed 16 animals and were given Se + vit. E for couple of pools, the next pair were given was Se alone, the next pair vit. E alone and the last pair was not providing any additional complex. All animals were weighed and measured at the beginning and end of the experiment. They also took blood and meat samples to make the other studies.

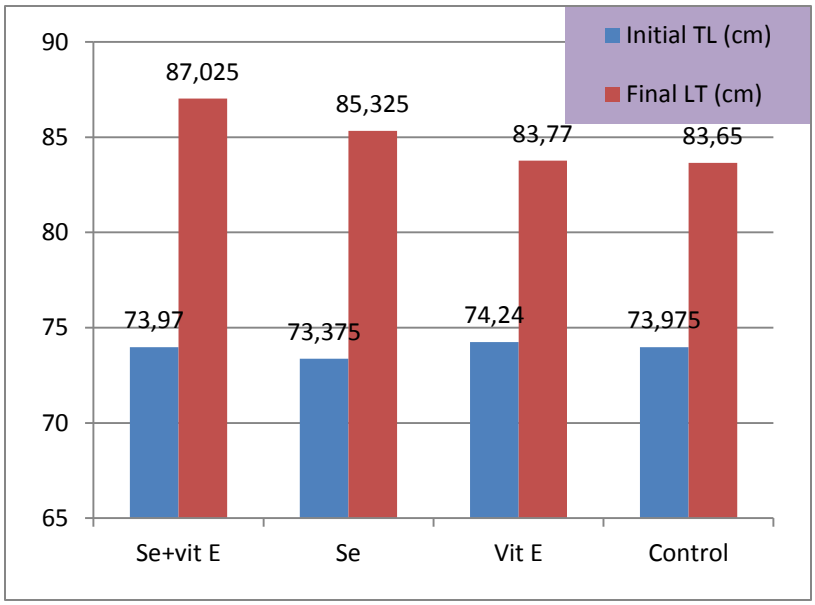
1. **Evaluate the effect of Se and vitamin E on the growth of *C. latirostris*.**
    - **Weight:**

We found significant differences between weight evidenced by the animals which were given the complex Se + vit. E respect to control. There weren´t significant differences between the complex with Se alone or vit. E alone. There weren´t significant differences between the control with Se alone and vit. E alone.



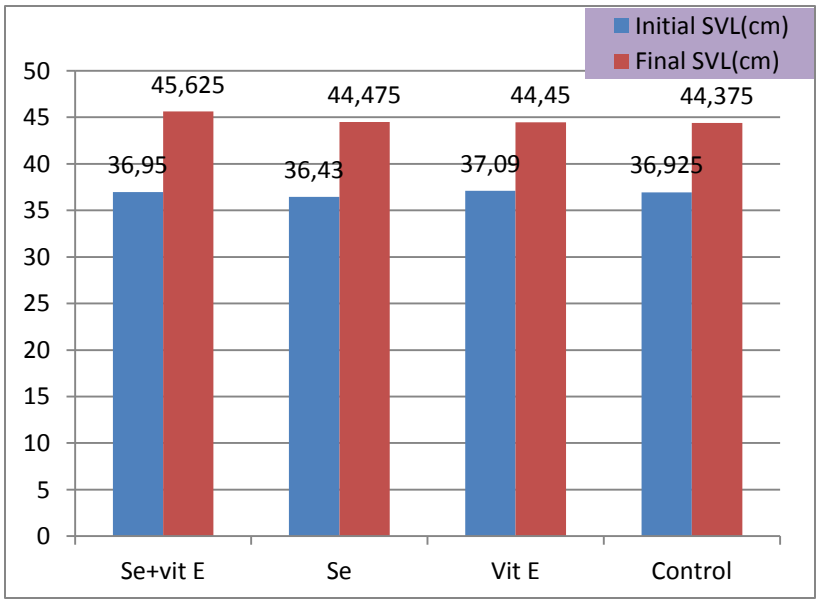
- **TL:**

We found significant differences between TL evidenced by the animals which were give the complex Se + vit. E respected to control. There weren´t significant differences between the complex with Se alone or vit. E alone. There weren´t significant differences between the control with Se alone and vit. E alone.



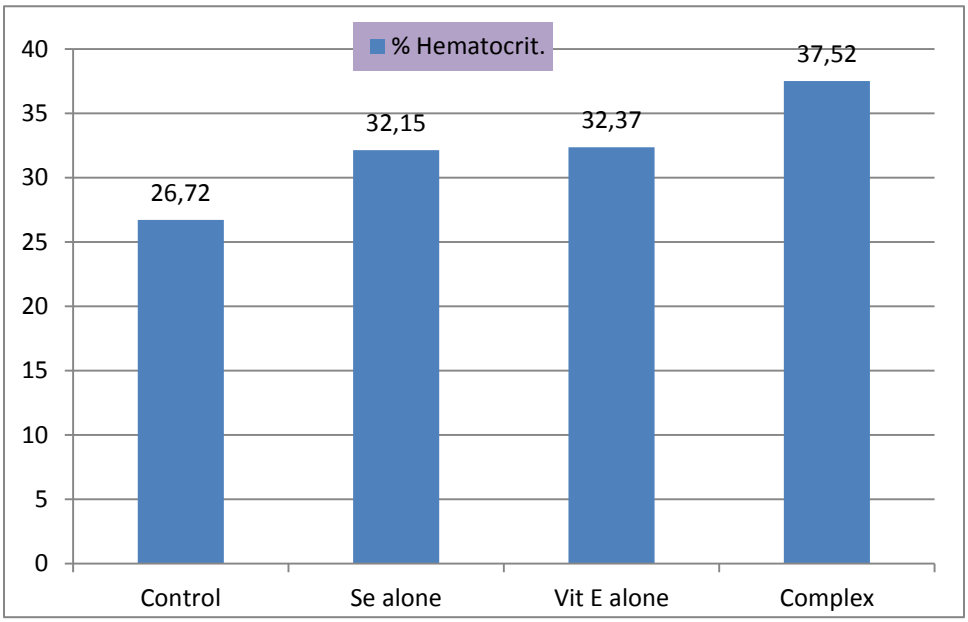
- **SVL:**

No significant differences were found between any of the SVL treatments.

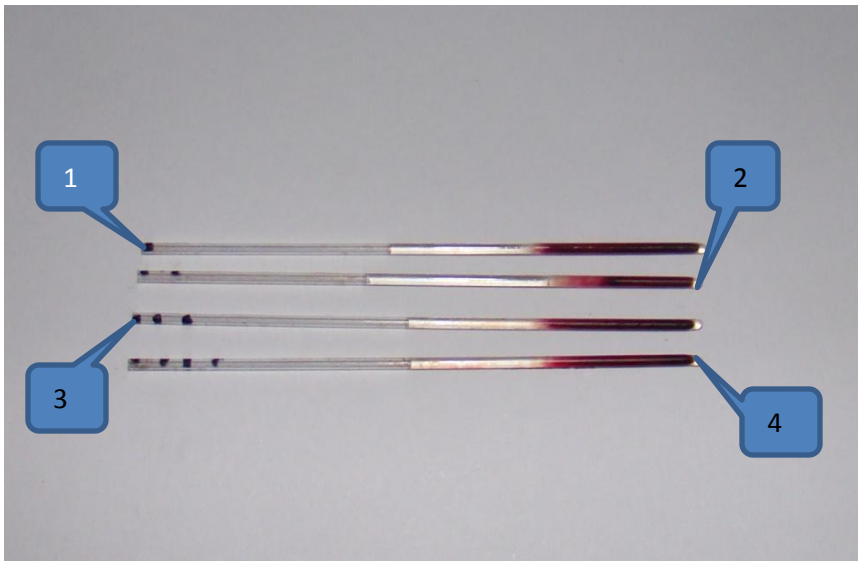


2. Evaluate effect of Se and vitamin E in hematological variables of *C. latirostris*

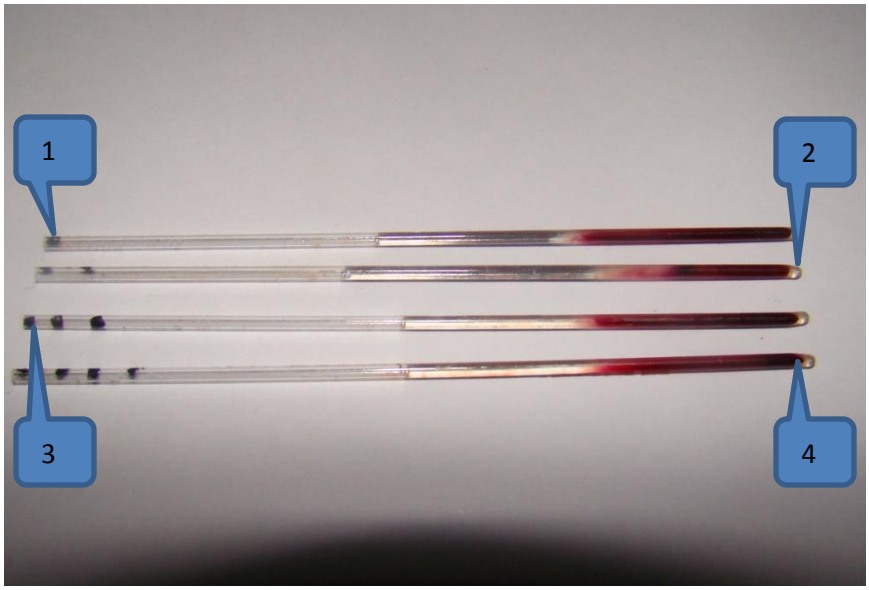
To determine the immune response of animals against various additives were made hematocrit of all animals of each treatment and obtained an average. The graph summarizes the data obtained is as follows:



Again, significant differences were found between the group that was supplied the complex versus the control group. There weren´t other significant differences between each treatment. Below are photos of two of the hematocrit obtained.



Hematocrit 1: 1) Vit. E alone, 2) Complex, 3) Se alone, 4) Control

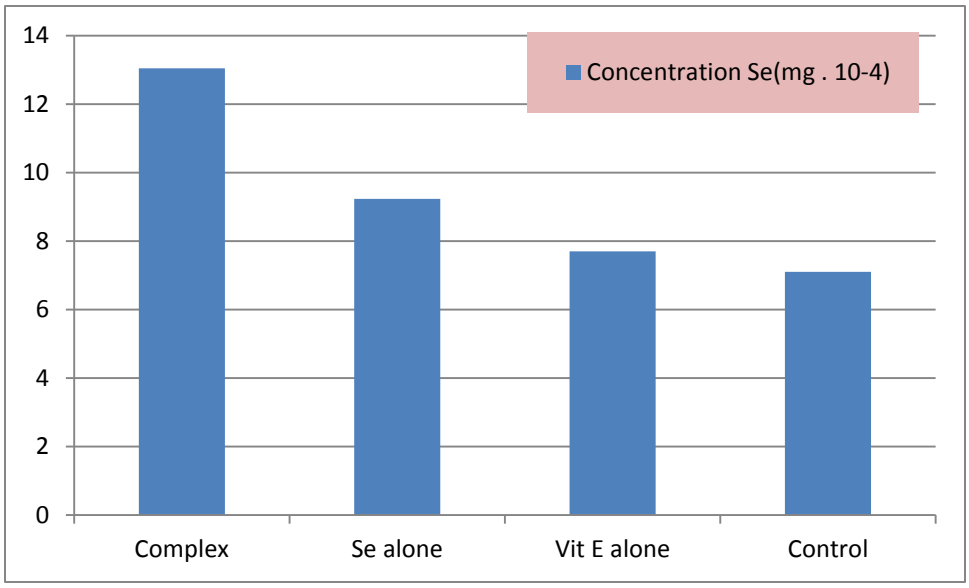


Hematocrit 2: 1)Vit E alone, 2)Complex, 3) Se alone, 4) Control

3. Assess the readiness and the accumulation of Se in meat of *C. latirostris.*

To determine the concentration of Se in meat of C. latirostris samples were sent to a laboratory where the determination made by incineration in muffle and concentrations found are as follows.

Treatment	Concentration Se (mg)
Se + Vit E	$13,04 \ . \ 10^{-4}$
Se alone	$9,23 \ . \ 10^{-4}$
Vit E alone	$7,7 \ . \ 10^{-4}$
Control	$7,1 \ . \ 10^{-4}$



It is for the time of publication the explanation of these results.

4. **Evaluate the effect of Se and vitamin E on plasma corticosterone *C. latirostris*.**

Corticosterone studies can not be made now due to missing finalize details of the determination technique. In addition to these studies is planned to conduct studies of glucose, then thaw the plasma for the determination of corticosterone is also made of glucose.

Expenses incurred with funding obtained.

We received $1000 USD exchange for Argentinian Pesos $ 4000 (acoording to the value of the dollar at the time). Whit this amount, we have bought.

Expenditures	Value in Pesos $
Disposable materials	657,16
Chemicals for extraction	220,33
Kid glucose determination	106,48
Complex Se + vit E	552,4
Se	540
Vit E	752,2
Detrmination of the concentration of Se in meat	1217,5
Total spent	**4046,07**

Nothing more to report for now, thank IUCN-CSG for the collaboration that made possible the realization of this work.



Guillermo Príncipe

Proyecto Yacaré, Argentina